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Full Name of Author — Nom complet de l'auteur

Gregory Francis Finnegan

Date of Birth — Date de naissance

Aug. 13th. 1956

Country of Birth — Lieu de naissance

CANADA

Permanent Address — Résidence fixe

207 Mill Street (Upper)
London, Ontario
N6A-1P8

Title of Thesis — Titre de la thèse

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John Clarke, Ph.D.

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COGNIZANCE OF LAND QUALITY:
SURVEYOR, SPECULATOR, AND SETTLER
IN FITZROY TOWNSHIP, ONTARIO, 1822-1861

by

Gregory F. Finnegan B.A. (Hons.)

Department of Geography

Submitted in partial fulfillment of the
requirements for the degree MASTER of Arts.

Carleton University
Ottawa, Ontario
1984

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"COGNIZANCE OF LAND QUALITY; SURVEYOR, SPECULATOR, AND SETTLER
IN FITZROY TOWNSHIP, ONTARIO 1822-1861"

submitted by GREGORY F. FINNEGAN, B.A. (HONS.)
in partial fulfilment of the requirements for
the degree of Master of Arts.

THESIS SUPERVISOR

CHAIRMAN, DEPARTMENT OF GEOGRAPHY

Carleton University

January 10, 1985

ABSTRACT

This thesis investigates the interpretation of land quality in an Ontario township, between 1822 and 1861. From surveyor to speculator and finally to settler the results of land quality interpretation and selection upon land settlement and land improvement are studied. Land quality interpretations made by the surveyor are found to be highly congruent with modern soils survey studies. That the surveyor directed speculators and settlement using his knowledge of the environment and his social and political connections is confirmed. The relationship between initial land quality selection and subsequent rates of development for farmers is found to be significant, although factors of personal land tenure, the availability of labour and the role of the speculator are found to be factors modifying the relationship.

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Over the course of time spent in the Department of Geography I have had the opportunity to acquire an excellent and enjoyable education. For this I would like to thank the numerous members of the Department who have over the years provided me with the base necessary upon which to build this thesis. I would also like to thank the Department for giving me the opportunity to share my experience and knowledge through the numerous teaching positions I pleasantly filled. Personally I would like to thank Dr. John Clarke who wore many hats during my terms at Carleton, educator, mentor, and friend. Finally, I take pleasure in thanking Beverley Harrison for her personal guidance.

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ABBREVIATIONS

A.C.	Agricultural Census of Canada West
A.I.D.	Abstract Index to Deeds; for Fitzroy Township
A.O.	Archives of Ontario
Asmt.	Assessment Rolls, Fitzroy Township
C.U.E.L.	Children of United Empire Loyalists
E.C.	Enumeration Census of Canada West
F.T.P.	Fitzroy Township Papers
J.D.L.B.	Johnstown District Land Board
M.U.	Manuscript Group, Archives of Ontario
P.A.C.	Public Archives of Canada
R.G.	Record Group, Archives of Ontario, Public Archives of Canada

CHAPTER 1

INTRODUCTION

Land was the primary source of wealth in nineteenth century Ontario. To own "good land" readily ensured one's prosperity, but what was considered "good land" by the early settlers? This thesis addresses the questions which arise from this premise. We must ask, how did the nineteenth century Ontarian recognize "good land" and upon what assumptions did he base his understanding of the environment? If such an understanding, based on specific factors, can be shown to have existed, a number of questions can be asked. How universal was this method of interpretation? Did all settlers have equal capacity to recognize and judge the potential of the various environments they encountered? If the knowledge of land quality was not universal then how was this knowledge gained? How was it disseminated through the population? Furthermore, who would have had first access to such information and to what extent did this awareness of the environment profit them? With the expansion and maturity of land settlement by mid-nineteenth century to what extent did knowledge of the environment become common place? Finally, what was the long term effect upon agricultural land settlement and land development that the initial selection of land quality accounted for?

This series of questions linking the nineteenth century settlement of Ontario with the individual and group appraisal of land quality is supported by an active and healthy academic literature. These questions have often been dealt with separately for specific time periods for various areas of Ontario. In this thesis the question of the early appraisal of land quality is addressed and developed towards an understanding of the effect upon an advanced and mature nineteenth century rural economy of the initial and on going analysis of land quality for agriculture.

The various and not always homologous views of historical geographers on the topic of land appraisal, land selection, and of the role of land quality upon rural settlement and land development patterns, is reviewed in chapter two. As revealed in the literature the most commonly accepted means of understanding the nineteenth century Ontarian's perception of his environment, is to begin by reconstructing the original landscape as it existed and was recorded by the surveyor. In this thesis Fitzroy Township in Carleton County provides the vehicle for the analysis. Chapter three reveals the methodology required to reconstruct the landscape and the results of this undertaking. The chapter also confirms this initial interpretation of the environment, using contemporary and modern sources. From an understanding of the means of interpreting good land and a strong perception of what good land as a concept involved, the thesis looks at an individual lot desired and through somewhat devious means acquired by the surveyor. This fourth chapter firmly establishes the role of the surveyor as a major land speculator and closely links him to those involved in large scale land speculation. The lot in question also expands the concept of good land

beyond that of merely fertile agricultural land. On this occasion, the desirability of the lot was based upon its commercial value as a mill-seat and harbour frontage rather than its potential for agriculture. The legal dispute over its ownership clearly establishes the identities of the two major land speculation groups who dominated the township through to mid-century.

The interaction of surveyor, speculator, and government direction of land settlement prior to 1840, is presented in the fifth chapter. Who acquired land in Fitzroy and the quality of that which was acquired is analysed using a variety of social, political and economic divisions of the land grantees. The significance of the relationships between the status and assumed position of the grantees with the quality of land acquired is tested using statistical analysis. The theme of initial advantage acquired through land quality selection is addressed in chapter six. Land clearance rates are compared through time with land quality as it was interpreted in the nineteenth century. Both the validity of the means of interpreting the environment and the initial advantage derived by farmers of accurate land interpretation is borne out. It is found though, that land quality is but one variable affecting the rate of land clearance in the township.

Fitzroy Township: Vehicle for Analysis

Fitzroy Township is an approximately ten mile square township north-northwest of Ottawa, fronting on the Ottawa river, in Carleton County. Today the township is included in the Township Municipality of Carleton West and is typical of rural Ontario townships suffering heavy

outmigration, a considerable dependency upon a major urban centre and a need to join with neighbouring townships in order to cut administrative overhead. In the period 1822-1824 Fitzroy was the most promising agricultural township that had recently been opened in Eastern Ontario. By 1831 its viable agricultural acreage was dominantly in the hands of non-resident and resident speculators. Yet by 1861 a substantial percentage of the township was in local hands and the non-resident speculator had passed from dominance (Map 1.1).

The selection of Fitzroy Township was not an idiosyncratic decision. The analysis of the role of the natural environment upon the land selection and advancement of settlement has for the most part been carried out in South-Western Ontario and in the vicinity of the Lake Ontario-Lake Simcoe area.⁽¹⁾ By investigating the questions raised in these studies it is possible to present a study which will lead to the comparative analysis of the role of the environment across Ontario. One such analysis at the township level can not alone bridge this spatial disparity in the literature, but it is a beginning. Three major factors led to the selection of Fitzroy Township for the present analysis, variation in physiography, availability of documents, and its timing of settlement. This last factor, timing of settlement allowed for comparison of early and later settlement patterns and insured that the township would be surveyed by an experienced surveyor. By 1822 a number of experienced and proven surveyors existed in Upper Canada. Fortunately one of these men, Reuben Sherwood, acquired the contract to survey Fitzroy Township. Settlement of Fitzroy was rapid with the earlier settlers from the St. Lawrence front and a healthy number of immigrants being granted land as early as 1823. However, a lack of suitable pre-

**Study Area: Fitzroy Township;
Southeastern Ontario**

Map 1.1

1842 assessments or census material hampered early lot location analysis. This problem was adequately overcome by a wealth of land granting material and early letters and documents found in the Township Papers. The only surviving Census for Carleton County which is lot specific for 1842 was indeed Fitzroy Township's. The survival of this geographic record and the excellent 1851 and 1861 Census of Canada West and Assessment Rolls enabled a complete reconstruction of land occupation and advancement through three decades.

The factors of timing of settlement and survival of records would have been of little consequence, given the thesis topic if the original land base of Fitzroy Township had not forced the settlers to make accurate decisions concerning land selection or be forced to pay for their errors. All too often land selection studies appear to be based on dichotomized environments where settlers' decisions fall into one of two categories. The physiographic base of Fitzroy Township with its mixture of coniferous and deciduous tree species stands in striking contrast to the almost featureless broad clay and sand plains of south Western Ontario with their Carolinian quality forest cover. Furthermore, the variation in land quality given visual changes in the landscape in Fitzroy must be considered much more subtle than the abrupt variation in the landscape of either the Oak openings or the Niagara Escarpment which have to now attract the attention of scholars reviewing the question of land settlement in relation to land quality. Chapman and Putnam note that the fertile clay plains of Fitzroy Township are highly interrupted by limestone plains and Canadian Shield. Further complicating settlers' decisions would be the irregularity of the surface of the limestone plains which has allowed clays to be deposited in

the depressions.⁽²⁾ Remnants of old marine beaches, which additionally cover the limestones provide areas of soil deep enough for cultivation but of inherently low fertility.⁽³⁾ Those settlers capable, or fortunate enough, to avoid the Shield and three extensive areas of limestone plains still had the need to select between poor to moderately drained clay plains and the less fertile yet better drained sand plains. Overall Fitzroy must be considered an excellent testing ground for the use of nineteenth century methods of interpreting land quality, of the resulting occurrences of land occupation and acquisition and finally of the resultant patterns of land improvement.

The period 1822 to 1861 covers not only a forty year span of time but also a transition from forest to frontier to a commercial agricultural economy. Through this transition the thesis progresses, stressing the changing role of the dominant character through time, from surveyor to speculator and by 1861, the common settler. These are not though clearly defined roles, each merges with the other. The surveyor is found to be an agent of land speculation, the speculator often fulfills the role of settler, and the settler is in reality the ultimate surveyor and analyst of the environment.

To show that the settler could and did evaluate his environment using specific criteria of land quality and that this initial decision had long term repercussions for the rates of land improvement is the purpose of this thesis.

ENDNOTES

- (1) A review of this work is presented in Chapter Two, in particular see footnote 8.
- (2) L. J. Chapman and D. F. Putnam, The Physiography of Southern Ontario. (Toronto: University of Toronto Press, second edition, 1973), p. 338.
- (3) Chapman and Putnam, 1973, p. 338.

CHAPTER 2

THE SURVEYOR AND LAND INTERPRETATION IN THE NINETEENTH CENTURY

In the initial phase of land settlement in Upper Canada the factors of soil fertility and land accessibility may be judged as amongst the primary variables in the settler's locational decision. In this part of the thesis, the land surveyor's influence upon the settler's decision making process will be reviewed. A literature review is presented, in order to gather the opinions of various researchers regarding the hypothesis that: the land surveyor's assessment of a township's suitability for agricultural settlement influenced government officials, speculators and prospective settlers in their land selection process.

Understanding the Land Survey as a Primary Document

This chapter introduces the surveyor's reports and field notes relevant to the reconstruction of the original landscape of Fitzroy. The applicability of these documents for this task is revealed through a review of the literature. A brief introduction of the field notes precedes the review and introduces the primary assumptions relating to their use. Through this presentation the validity of the surveyor's assessment of Fitzroy for agricultural settlement is established and the influence of the surveyor upon land settlement judged.

An Introduction to the Field Notes

The primary records under discussion in this chapter are the surveyors records, particularly his field notes and reports.⁽¹⁾ These records were compiled as he laid out the township's boundaries and concession lines and have provided considerable grist for academic consideration. An example of Fitzroy Township's field notes will provide a base for discussion of the primary assumptions upon which subsequent investigations are based (see Table 2.1).

Table 2.1 is generally typical of land surveys in the early nineteenth century in Ontario. Some are more specific with regards to soil conditions. Many use "ditto," to assure the reader that the seeming lack of description exists due to similarity with previously mentioned descriptions. The surveyor commonly used abbreviations when listing a series of land comments or tree species. On Lot 1 at 25 chains we find the abbreviated coding "Good Land" with maple, elm, oak to a creek flowing north-east. Such abbreviations allowed for rapidity of recording and for the generally small hand-held size of the notebooks.

From various sources we can conclude that the surveyors were primarily involved in accurate measurement and posting of boundaries.⁽²⁾ Secondary to this task, but not necessarily of limited consequence was the description and judgment of the lots for agricultural settlement. The quality of timber for forestry and millseats for development are also of some consequence; although neither are noted in the Sherwood survey of Fitzroy.⁽³⁾ Lot assessment is assumed to be accomplished through tree species interpretation; cedar in swamp, maple, beech, and oak on good lands and, in the case of pine with oak and elm, that no qualitative judgment has been provided. Constant reference is also made

Table 2.1

An Example of a Surveyor's Field Notes

<u>Conc.</u>	<u>Lot</u>	<u>Chains</u>	<u>Links</u>	
8			50	Road allowance
	1	25	-	G.L. Ma, Elm, Oak; to a creek B.F., N.E.;
		5	-	Ditto
	2*	10	50	G.L. ditto with pine; to a creek B.F., N.E.;
		15	-	15 Ditto to another creek B.F., N.E.;
		2	-	Cedar Swamp
	3	30	-	Ditto
	4	30	-	Ditto
	5	30	-	Ditto
		1	-	Road
	6	7	-	Cedar Swamp
		8	-	Pine, Oak, Elm; another creek B.F., E.-
		15	-	Pine Oak Elm;
				Source: A.O. Fitzroy Report and Field Notes of R. Sherwood, Vol. 13, No. 400, p. 177, 1823.

* Lot 2 is three chains short in measurement; such errors are not frequent but do exist.

to drainage conditions. Indeed, the surveyor's notes are most useful, indicating with remarkable accuracy the location and direction of even the minutest of creeks.⁽⁴⁾

The value of these lot descriptions is dependent upon our acceptance of their limitations. The descriptions provide only benchmark observations running in this case north to south throughout the township along twelve concession lines. Although J. D. Wood confidently states upon this subject: "as any student of the land surveying in Upper Canada knows, these surveyors were thoroughly familiar with the whole countryside they traversed" the temporal factor mitigates against the surveyor doing more than was required.⁽⁵⁾ As a successful surveyor, Sherwood had other contracts demanding his attention. As a farmer he had work to do on his own lands, as a mill owner he would have had a business to see to. Add to these his social and political commitments and it becomes doubtful that he ventured far from his line of march to ensure continuity of the forest cover.

What we are left with is a stratified series of data points, along predetermined lines of march which are set at predetermined intervals. To interpolate between such points is a common and accepted exercise for cartographic illustration. At each of these observation points the surveyor made an ordered assessment of the forest about him. Unfortunately, no precise legislative statement concerning the reason and purpose for this system exists prior to the 1861 Report of the Commission of Crown Lands. In the report it was specifically stated that: "the surveyor was to describe the land ... with timber naming each kind of timber in the order in which it is most prevalent."⁽⁶⁾ It is likely that such instructions were based upon the existing practices of the

superior surveyors. The timber observations themselves were the most regular comments. Tree species observations can be assumed to represent both the interests of the lumbering industry and the Government's interest in land quality assessment. Timber then can be assumed to have been used as a surrogate for land quality assessment. As will be argued below they were the primary indicators used in judging the land quality. From these assumptions comes the interpretation of changes in vegetation descriptions as marking boundaries not only in forest cover but also land quality. Although a transitional stage likely existed between any two forest association groupings, it can be assumed that the surveyor would note the major changes as they become prominent, particularly as these were being used for analysis of the land fertility.

These mark the basic assumptions upon which the researchers using the surveyor's notes work. They have been outlined here as an introduction to the literature review but are also essential to the interpretation of Fitzroy Township's survey records.

Literature Review

Regardless of the nature of the land settlement study being undertaken, few researchers have completely overlooked the role of the surveyors' interpretation of the area in question. The decision to acquire land presupposes a location decision by the speculator or settler. It is commonly assumed that the initial decision is based upon site factors, amongst which land quality is a dominant factor.⁽⁷⁾ But from where does knowledge of site factors for individual lots come? Certainly the surveyor's field notes and reports provide a likely source.

This linkage between surveyor, site factors and the decision making process assumes the following:

- 1) the surveyor accurately interpreted the landscape;
- 2) that his interpretation was available to prospective lot purchasers;
- 3) that the surveyor's interpretation of the landscape was not contradictory to the practical observations being made by prospective settlers, in other words a widely held forest lore existed which bonded surveyor to settler, and settler to surveyor.

As we progress through the literature review it will become apparent that unanimity amongst the extant historical geographers of Ontario does not exist.

Research in Ontario's historiography by Gentilcore, Harris, Clarke, Brunger, Kelly, Wall, C. Wood, L. Wood, D. Wood, Osborne, Widdis, and Wightman provide a substantial base upon which to interpret the role of surveyor⁽⁸⁾. The primary questions relating to the surveyor's role in land settlement are two fold. The first series of questions relates to the surveyor's interpretation of the land. Specifically these are:

- 1) His ability to adequately interpret the land for agricultural land use?
- 2) The method which he used to interpret the land?
- 3) The consistency of his methodology?

Only after these questions have been addressed can the surveyor's influence in the government's directing of settlers⁽⁹⁾ or influence upon individual settler's locational decisions be assessed. As Osborne intimates: "It is interesting to see the extent to which these assignments

of the land quality influenced the ensuing locational decision of settlers."⁽¹⁰⁾

Answers for these two broad categories of questions spanning the interpretation of the surveyor's work through to possible connections with speculators and settlers can be found in the extant records of the township. The first broad category of questions dealing with the relationship of the surveyor with site factors and the decision making process of settlers will be dealt with in chapter five. In the present chapter the impressions of geographers on the viability of the surveyors records as a means of interpreting past landscapes will be discussed. The analysis of the surveyor's work will be addressed in chapter three.

But, why spend time sifting through large quantities of historic data if a fairly logical explanation exists? Today's soil surveys and particularly land inventories represent not only present day conditions in the physical landscape but also a learnt and conditioned interpretation of the environment based upon present technological and economic conditions.⁽¹¹⁾ Cruickshank notes that soils "... as late as the nineteenth century, in Western Europe, were being described in terms of the texture of its cultivated surface." He continues ... "it is curious that so little attention was given to soil mapping and that there was no significant advance in understanding soil processes in an age of agricultural improvement."⁽¹²⁾

Soil in the time period under consideration was primarily understood from the top down, namely from the nature of the top soil and concomitant plant growth structures. As we shall see below the surveyors of Upper Canada gave their individual attention in lot description to the forest cover. Wightman notes that as late as 1864,

surveyors on Manitoulin Island suffered considerable confusion in ordering the forest to land quality relation. He stated that tree species indicators of land quality commonly used in southern climes "did not work on the Manitoulin, as the earliest settlers were to discover sometimes to their cost."⁽¹³⁾

We can assume the surveyor's methods would appear not to have changed much during the nineteenth century nor to have been very different from methods employed in Western Europe. The surveyor's field notes provide a direct link with commonly held nineteenth century perceptions of the land. We assume, yet must still prove, that the surveyor's perceptions were not idiosyncratic but are fairly representative of those commonly held in Upper Canada. The reconstruction of the township's landscape as it existed prior to settlement is possible through the processing of the surveyor's records. In essence, the surveyor's assessment of a township provides a benchmark by which to measure and interpret early land acquisition and subsequent developments.

The questions raised here are not original. Interpretation of the surveyor's role in land settlement has often been discussed in the literature, but not always with anything approaching unanimity. Historical geographers have employed various methods, upon differing record groups, over a range of physiographic regions and at various scales, attempting to understand the man-land relations inherent in the survey to settlement phase of Ontario's historiography.

Gentilcore provides us with a strong starting point with which to investigate the three major questions at hand. For Ontario as a whole Gentilcore informs us that:

Occupance was indiscriminate of physical conditions. It took place on all types of land surfaces, both along the lake shore and in the interior.⁽¹⁴⁾

This statement at the macro-scale negates a relationship between settlement and land quality in Upper Canada. Yet the statement is qualified by the following rejoinder:

In the initial stages of settlement, environmental advantages, even when perceived, were outweighed by other considerations such as accessibility and governmental direction. As settlement matured the situation changed and choice and initiative were increasingly directed to the physical environment.⁽¹⁵⁾

It is the early period of settlement during which one should expect that the surveyor's interpretation of the landscape would be in greatest demand. The virgin forest though did not make for easy reconnaissance, while in the latter period the land owner would have been provided with improved communication and movement. Were the surveyors records not in use in the former period? Was government direction of settlement that much of a factor, or are the surveyor's records spurious? Gentilcore again provides an answer to the questions raised through the application of a correlation analysis upon the three matrices consisting of surveyors reports, assessment rolls and inspection reports from a sample of 31 townships. As regards the surveyors' report matrix, he concluded that:

The limited number of high coefficients indicates that the surveyors' reports are not a particularly useful guide to the quality of land. The relationships which appear are very obvious ones, such as that between swampy land and cedar vegetation.⁽¹⁶⁾

Were we to accept this as a final statement by Gentilcore on the matter at hand we would overlook a fairly contradictory statement relating to the inspection reports for the mid-century period. Here the findings indicate relationships between the better class C.L.I. soils, vegetation indicators and improved acreage.⁽¹⁷⁾ It can be asked then if the relationship exists between soil quality, vegetation and improved acreage, why would the surveyors' reports not provide adequate evidence of the vegetation-land quality relationship? Is it that the settlers entering the townships were incapable of making correct decisions relating to vegetation land quality? Did government officials purposely direct settlers to poorer quality land? Or is it the wide range of surveys being sampled which resulted in the former opinion?⁽¹⁸⁾

In contrast to Gentilcore's approach, J. D. Wood and C. J. B. Wood investigated the "Oak-openings" or plains regions of Southern Ontario.⁽¹⁹⁾ Using surveyor's records, the "Oak-openings" were located and related to existing settlement patterns. This early research posed questions relating to the man-land relationship but did not directly apply itself to the question at hand. The analysis of surveyor's reports for the Kingston hinterland by Osborne indicated that a relationship existed between specific tree species and land quality.⁽²⁰⁾ Harris et. al. provided the following description of the tree species-land quality relationship as gleaned from the survey of Mono Township:

Thick tangles of cedar or tamarack covered swamps; the driest sandiest areas along the edge of the glacial spillway were dominated by hemlock and a few pine trees. Deciduous broadleaf species predominated on the sites between these edaphic extremes.⁽²¹⁾

Elsewhere Harris noted that local accessibility, the settler's appraisal of land quality, and the influence of the speculator were probably the most important factors affecting the pattern of land settlement.⁽²²⁾

Kelly's investigation of the prevailing forest lore, in relation to good quality lands for cultivation, suggests that a wide range of advice was available to the incoming settler.⁽²³⁾ Good lands were generally to be found under mixed hardwoods, but various combinations of tree species could be viable given financial considerations. For Simcoe County he notes that settlers located on land under mixed hardwoods growth or on the less fertile but easily cleared beech-maple uplands;⁽²⁴⁾ wet lands being generally devoid of settlement. Echoing Gentilcore's statement, Kelly concluded that more testing was necessary before:

One can use with any degree of conviction maps showing early nineteenth century land evaluations as a partial basis for the explanation of agricultural settlement patterns or of farm productivity.⁽²⁵⁾

Clarke and Brunger using different statistical methods to study the significance of the relationships between survey and soil in south western Ontario, provided contrasting conclusions. Clarke concludes:

That there was a definite difference between vegetation of the well drained, light textured loams and the poorly drained, heavily textured clays, a difference which establishes the possibility that vegetation was used as an index of suitable land for settlement.⁽²⁶⁾

These findings based on two sample township surveys are substantiated by recent research which demonstrates that the value judgments of the surveyors of good, low, and poor lands, do correspond strongly (using chi-square tests) with the vegetation indicators. Further tests demonstrated significant relations between vegetation indicators and modern

land classification.⁽²⁷⁾ Certainly these results are aided by the consistency of reporting by a single surveyor over a large area, during a relatively short time period; while the relatively uniform physiography of Essex County may also be a factor. An analysis of the contemporary newspapers and the Township Papers for Essex County revealed limited occurrences of settlers asking for lands with specific reference to either tree indicators or surveyor's reports. Clarke and Finnegan conclude that land selection using vegetation is a reasonable conclusion but that more research is necessary.⁽²⁸⁾

A two stage analysis of this vegetation theme by Brunger used cluster analysis. In the first stage individual lot observations were compared with the observations of all other lots in the sample population, with specific reference to their similarity in vegetational characteristics.⁽²⁹⁾ Although the main cluster consistently contained a higher proportion of good land indicators than bad land indicators the difference was deemed insignificant.⁽³⁰⁾ For the London District, Brunger found that specific tree species were not exclusively located on good or bad lands. For this area at least, use of tree species as indicators of land quality may have been either an unnecessary condition for land evaluation or indeed dangerous and erroneous.

Stage two of Brunger's evaluation of the survey searched in vain for a relationship between the surveyor's land quality indicators and settlement location. Using Chi-square tests and cluster analysis to test locations made in 1818 and 1827, he concluded:

No significant differences between date of settlement on land of varying quality suggest that settlers were unable to discriminate between the indicators of land quality described.⁽³¹⁾

Could the settler interpret the land via the tree growth it supported? Were the surveyors adequate interpreters of the land? Surely the existing research in this field does not suffer from any notable predilection. In all likelihood no two surveyors, nor settlers were exactly alike in their opinion of what constituted the best lands. To understand these varied opinions regarding the role of surveyor in land settlement one must recognize the physical variation in the areas under investigation. Certainly the internal contrasts of good, fair, and poor lands in one district are not uniform with those in another. Given effort, time and money, even the worst lands in Essex County have been drained and made agriculturally viable. The creation of viable soils in the Shield may even be too long a process for historical geographers to document.

Complications with the comparability of surveyors' reports need not be attributed only to variation in scale and location. Indeed personal motive may well have entered into the surveyor's field notes. Wall notes that surveyors in the Muskoka District over-estimated good land either from lack of ability, sheer optimism, or self interest.⁽³²⁾ A surveyor making a favourable impression on the government by including a more positive picture of the landscape than that which he witnessed could strengthen his position for future employment!

Conclusion

This review presents the opinions of historical geographers regarding the use of the surveyor's reports for landscape reconstruction and their feasibility in explaining locational decisions. Gentilcore and Brunger seem to question not only the applicability of the

surveyor's reports in locational decision making, but even their inherent logic and consistency in lot to lot descriptions.

J. D. Wood, L. J. Wood, C. J. B. Wood, and Harris generally conclude that the physical environment affected land settlement in the early period. Their studies generally deal with unique physiographic regions and their related botanical conditions. Kelly used settler's guides and related literature, and revealed the prevalent forest lore of the nineteenth century and its probable use by settlers. He assumed that rules of thumb gained from these sources and practical experience with the assistance of the field notes would allow the settler to obtain lots suitable to his needs. In contrast Brunger stated that good land-forest indicators were as likely to appear on poor quality lots as they were on good quality lots in the area which he scrutinized.⁽³³⁾ The inherent logic of the field notes and their positive relationship with modern land assessments is upheld by Clarke and Finnegan. Specific tree types did provide reliable indicators of land quality in Essex County. Furthermore, they found the nineteenth century surveyor's reports to be highly compatible with present day assessments. Wightman noted that complications ensued when set tree species indicators applicable in southern Ontario were indiscriminately applied to the variant conditions of Manitoulin Island. Wall went so far as to question the integrity of surveyors when faced with expanses of poor quality settlement lands. Widdis presented evidence of the direct link between surveyors and speculators; they being one and the same.⁽³⁴⁾

Are these various opinions necessarily irreconcilable? Need the opinions of Gentilcore or Brunger be considered invalid in comparison to the work of Clarke, Clarke and Finnegan, or Kelly; or depending on one's

interpretation vice-versa? This author believes not. That various researchers have arrived at different conclusions regarding the viability of the surveyor's records and their applicability for interpreting the locational decisions of settlers is a healthy academic situation. Certainly, it is indicative of independent research, changing methodology, and an expanding level of understanding. Given that rigorous and logically sound research is at the base of these variant conclusions, we can assume that they are indicative of the relationships between surveyors, settlers, and their perceptions of the land for both the areas investigated and the periods of investigation. That differing results could be derived for differing places at the same time or the same place at different periods in time is both probable and understandable. Knowledge of the environmental relationships and man's ability to alter the environment to his requirements is just as likely to make one man's swamp another's fertile field. Likewise there are neither correct nor incorrect interpretations in the literature reviewed; although, the rigorousness of analysis and a priori assumptions of the variant studies can not be attested to. Knowledge of the environment, be it the physical or an academic quest, can not be seen as static; if specific tree species indicators of land quality were found to be spurious in time period one in all likelihood an altered perception would be passed on to neighbours, and family. Likewise this evaluation of the literature and forthcoming analysis of the surveyors' reports is based on over two decades of academic reporting.

What is apparent from this varying literature is that future researchers must continue to weigh the necessity of analyzing the relationship between surveyor, settler, and the perception of the Upper

Canadian environment. We can be fairly accurate in stating that the average settler and surveyor did use tree species as indicators of land fertility. That they did so accurately and consistently across the Colony and through time is a subject requiring a much broader and more intensive analysis than has been presently conducted. We can not be sure of the settler's priority in land selection; particularly in light of the arguments supporting physical access via roads and waterways and to settlement nodes. Nor, can we ignore the role of government direction of individual settlers to specific lots or areas.

Further adding to our understanding of the relationships presented here will be the expansion of our knowledge of nineteenth century communication mechanisms and the application of new concepts to old questions. Clarke and Finnegan's application of Maycock's interpretation of the role of the water continuum in the development of tree species patterns is an example of the latter.

The researcher investigating the surveyor's role in the settlement process is wise to heed Gentilcore's statement that "the entries in the field notes vary in value." One must be prepared to test for within-sample variations and change through time in the survey's applicability to settlement patterns. The following chapter will reveal the method of the survey and will investigate the internal logic of the survey, testing it against land inspection reports and modern day soil surveys. The next chapters will reveal the linkage between the surveyor, land speculation and settlement, progressing from a particular case study and moving to the broader township settlement pattern.

ENDNOTES

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- (2) J. L. Tyman, "Subjective surveyors: The appraisal of farm lands in Western Canada, 1870-1930," in Images of the plains: the role of human nature in settlement, B. W. Blonet and M. P. Lawson (eds.), (Lincoln: University of Nebraska Press, 1975), p. 80.
- (3) R. L. Gentilcore, "Lines on the land: Crown survey and settlement in Upper Canada," Ontario History, Vol. 61, (1969), pp. 57-73; p. 70.
- (4) Comparative mapping of the drainage recorded by Sherwood for Fitzroy prove to be highly complementary to that shown on National Topographic System of Canada, Sheet 31F/8 - Arnprior.
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- (7) A. G. Brunger, "Settler location in the Talbot Settlement, Upper Canada." Paper presented to the Canadian Association of Geographers Annual Meeting, 1973, [b], p. 2; K. Kelly, "The impact of nineteenth century agricultural settlement on land," in Perspectives on landscape and settlement in nineteenth century, J. D. Wood (ed.), (Toronto: McClelland and Stewart Ltd., 1975), pp. 64-77; p. 64.
- (8) Gentilcore, 1969, pp. 57-73; Gentilcore and Donkin 1973, pp. 1-24; "Settlement," in Ontario, R. L. Gentilcore (ed.), (Toronto: University of Toronto Press), 1972 [a]; "Change in settlement in Ontario (Canada), 1800-1850: a correlation analysis of historical source material," in International Geography, W. P.

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- (9) Gentilcore, 1972 [a], p. 24; 1972 [b], p. 419.
- (10) Osborne, 1974, p. 9.
- (11) Clarke, 1970, p. 80.
- (12) James G. Cruickshank, Soil Geography (Newton Abott: David and Charles, 1972), p. 14.
- (13) Wightman, 1982, p. 64.
- (14) Gentilcore, 1972 [a], p. 24; 1972 [b], p. 419.
- (15) Gentilcore, 1972 [a], p. 24.
- (16) Gentilcore, 1972 [b], p. 418.

- (17) Gentilcore, 1972 [b], p. 419.
- (18) Gentilcore, 1969, p. 70.
- (19) J. D. Wood, 1961, pp. 43-49; C. J. B. Wood, 1966, pp. 7-26.
- (20) Osborne, 1974, p. 8.
- (21) Harris, et. al., p. 3.
- (22) Harris and Warkentin, 1974, p. 119.
- (23) Kelly, 1970, pp. 57-58.
- (24) Kelly, 1970, pp. 63-64.
- (25) Kelly, 1970, p. 64.
- (26) Clarke, 1970, p. 79.
- (27) Clarke and Finnegan, p. 127.
- (28) Clarke and Finnegan, p. 135.
- (29) Brunger, 1972, p. 401.
- (30) Brunger, 1972, p. 402.
- (31) Brunger, 1972, p. 402.
- (32) Wall, 1977, p. 231.
- (33) Brunger, 1973, p. 176.
- (34) Widdis, 1982, pp. 443-458.

CHAPTER 3

LANDSCAPE RECONSTRUCTIONIntroduction and Sources

In this chapter Reuben Sherwood's 1822 survey of Fitzroy Township will be analyzed in order to determine its accuracy. Using the surveyor's field notes, letters, and maps this chapter reconstructs the forest landscape and provides evidence for the relationship between forest cover and land quality.⁽¹⁾ The questions of methodology, consistency, and the adequacy of the surveyor's interpretation of lots for agricultural settlement will be answered.

The chapter begins with a description of the surveyor and the task with which he was involved during the 1822-1823 period.⁽²⁾ The methodology which Sherwood employed is scrutinized in section two with particular attention to the use of tree species indicators. Once a conclusion has been reached relating to the internal consistency of his work, its consistency with other nineteenth century surveyor's interpretations can be tested. For this purpose the Crown and Clergy Inspectors Reports of 1828 and 1840 will be employed.⁽³⁾ Finally, Sherwood's ability to interpret the landscape for agricultural settlement particularly as regards soil fertility will be analyzed, through a comparison with the Carleton County Soils Survey.⁽⁴⁾

"And on this side of the Chain Reuben Sherwood, D.L.S."

At the beginning of November 1822 Reuben Sherwood began the survey of Fitzroy Township.⁽⁵⁾ This would be the twenty-ninth survey of his career⁽⁶⁾ and for all intents and purposes led to his demise as a deputy land surveyor.⁽⁷⁾ After the Fitzroy surveys he did partial surveys of Nepean, North Gower, and possibly Goulbourn Township, which he had contracted for in May of 1822. In a letter posted prior to going "up-country" Sherwood reminded the Surveyor-General of this request for work and in the same breath informs him of the completion of three township surveys and predicted the completion of Fitzroy and Torbolton by the end of December 1822.⁽⁸⁾

Although Sherwood is mainly known for his work in Leeds, Lanark, and Carleton Counties, he had wide geographical experience. Between 1795 and 1824 he had worked in a variety of areas, from Halton County west of Toronto, and east to Hawkesbury Township on the Quebec border.⁽⁹⁾ Sherwood was a man of considerable achievement. Widdis regards him as a land speculator noting his 300 acre United Empire Loyalist grant and his subsequent ownership of 331 acres in 1825.⁽¹⁰⁾ Between 1809 and 1824 he was also an active agent of land settlement, owning and operating various mills in Eastern Ontario.⁽¹¹⁾ In his later years as a surveyor he assisted in the training of several surveyors including: John Stroughton Dennis, Richard Birdsall, John McNaughton, and W. Harry Kilborn;⁽¹²⁾ the latter assisted him in the Fitzroy survey.⁽¹³⁾

Sherwood was a competent, technically recognized and steadily employed surveyor. His contracts brought him in contact with some of the roughest land in Southern Ontario. From his reports we know that he

recognized the limited quality of such areas for settlement and the problems which would befall settlers directed to them.

The Fitzroy survey is part of a five township contract running west to east, from Lavant Township through to Torbolton Township on the banks of the Ottawa River.⁽¹⁴⁾ These five townships represented a new northern tier of land for development in 1824. Their opening would provide immigrants and the sons of settlers along the St. Lawrence front with new lands for speculation. They would also provide adequate lands for the numerous holders of military landscript and grants received for service to the Crown and in lieu of financial payment.

Sherwood's report of 1823 stressed the agricultural and settlement requirements for the townships. He provided ample description of inferior quality lands in Lavant, Darling and Pakenham, stressing their weakness for wheat cultivation.

As the soil cannot be deemed sufficient as a grain country and some years must lapse before they have the land sufficiently opened and stocked to be called a grazing township ... the first cultivators must resort to potash making.⁽¹⁵⁾

Sherwood describes these townships as rough, stony and broken lands comprising but a small portion of good land.⁽¹⁶⁾ This good land was limited to level uplands and associated with a covering of mixed hardwoods, primarily maple, beech, black oak, ash, ironwood, and some basswood.⁽¹⁷⁾ He reports that the lowlands are:

chiefly vallies between the rocky hills and frequently terminate in swamps or marsh. The best of the swamps are those covered with ash and cedar timber which might answer well for railings.⁽¹⁸⁾

Scant information is provided for the eastern most four concessions of Pakenham. "Good land and well timbered with the best being along the Mississippi River"⁽¹⁹⁾ concludes his opinion of this area. Sherwood's enthusiasm for Fitzroy Township is in marked contrast to the report's opening statements. Good land, river frontage, and millseats are the order of the day.

The township of Fitzroy altho partly broken and swampy, still contains more good land than any of the other townships and in point of situation exceeds the whole having the outlet of the Mississippi and Carp River and the Chats Rapids in front with many a good mill seat.⁽²⁰⁾

Torbolton's potential for agricultural settlement was perceived as being weak with the best lands along its northwest boundary with Fitzroy; much of the rest being comprised of broken wetlands.⁽²¹⁾

A strong impression of the northern tier of townships being opened by Sherwood can be drawn from his report. With the exception of Fitzroy and environs, this was not land fit for grain cultivation. Nor was the area west of Fitzroy likely to achieve prosperity even as a grazing area, without years of hard labour and limited financial returns. The question remains as to what constituted good land? Certainly the good lands of Darling, Lavant, and western Pakenham Townships, being limited to upland sites, do not compare with the extensive good lands of Fitzroy, but existed as good lands in relation to the overwhelmingly poor lands in these townships. What is good land then can be assumed to be relative to each township's situation. In Fitzroy, good land was understood to be capable of general agriculture as practiced at the time of the survey. To understand what constitutes good land in Fitzroy, and

to test Sherwood's classification one must turn to the actual field notes which are the base of his report.

"In the Woods with Reuben"

Sherwood's field notes provide information on the quality of land, drainage conditions, and vegetation. The Fitzroy survey entails complete observations at 378 locations in the 325 lot township. This relatively small sample of observations is due to Sherwood's all too common habits of using ditto, grouping like lots into one observation and occasional lack of any mention whatsoever of a lot's site factors.

This necessitates the employment of the assumption that a description once employed by the surveyor is continuous until negated.⁽²²⁾ In the survey Sherwood makes use of twenty-three land descriptions. Four of these; good land, lowland, rocky land, and swamp account for 71 percent of all observations. These four categories provide the primary land description in a four fold typology; good lands, lowlands, rough and rocky, and wetlands (Table 3.1). One term used by Sherwood - dry Cedarland - is not used in the analysis. For this area the term appears to be a contradiction; while its limited frequency of observation (0.5 percent) will not disrupt the analysis.

A perusal of the inventory of land types (Table 3.1) indicates that Sherwood's impression of Fitzroy noted in his report, is adequately represented in his field notes. Certainly, broken and swampy lands were in existence, covering 40.2 percent of the township. The good lands grouping, which is contained in fairly extensive and contiguous blocks of land, included 44.4 percent of the township. Adding the 15.1 percent

Table 3.1

Inventory of Land Types as Indicated in the
Fitzroy Field Notes, 1822

<u>Absolute Frequency</u>			<u>Group Characteristic</u>
	<u>Number of Observations</u>		
Good Land	145	38.4	The Good lands Group 44.4% of all lands judged
Excellent Land	19	5.0	
Handsome Land	1	0.3	
Level Land	3	0.8	
Lowland	56	14.8	The Lowlands Group 15.1% of all lands judged
Low Badland	1	0.3	
Rocky Land	43	11.4	The Rough and Rocky Group Generally broken infertile lands 25.6% of all lands judged
Rough Land	14	3.8	
Burnt and Rocky Land	9	2.4	
Burnt Land	8	2.1	
Ridge Land	6	1.6	
Hilly Land	5	1.3	
Barren and Flatrock	3	0.8	
Limestone Land	3	0.8	
Highland	2	0.5	
Deep Valleys	1	0.3	
Ravines	1	0.3	
Broken Land	1	0.3	
Swamp	26	6.9	Wetlands Group 14.6% of all lands judged
Marsh	16	4.2	
Swale	6	1.6	
Beaver Ponds and Meadows	7	1.9	
Dry Cedar Land	2	0.5	Not Applicable
Total Observations	378		

Source: A.O., D.L.F., Fitzroy Report
and Field Notes of R. Sherwood,
No. 400, 1823.
Compiled by author.

of the township represented by the lowlands grouping provides for a fairly extensive area of land for settlement.

A major element of the field notes and the literature review is based upon the role of vegetation observations. The Fitzroy survey includes 962 observations of individual tree species. The first four species, in order of magnitude are pine, maple, elm, and basswood. These represent 61.9 percent of all observations (Table 3.2). Following these four species are cedar, ash, and oak each with less than 10 percent of the sample. When these three species are combined with the

Table 3.2

Tree Species as Observed by the Surveyor

	<u>Number of Observations</u>	<u>Rank</u>	<u>Frequency in Township</u>	<u>Cummulative Frequency</u>
Pine	166	1	17.3	17.3
Maple	159	2	16.5	33.8
Elm	140	3	14.6	48.4
Basswood	130	4	13.5	61.9
Cedar	74	5	7.7	69.6
Ash	65	6	6.8	76.4
Oak	55	7	5.7	82.1
Spruce	33	8	3.4	85.5
Hemlock	31	9	3.2	88.7
Beech	22	10	2.3	91.0
Balsam	18	11	1.9	92.9
Alder	18	11	1.9	94.8
Poplar	18	11	1.9	96.7
White Oak	9	14	.9	97.6
Fir	9	14	.9	98.5
Bush Growth	8	16	.8	99.3
Tamarack	4	17	.4	99.7
Birch	2	18	.2	99.9
Black Ash	1	19	.1	100.0

962 Observations

Source: A.O., D.L.F., Fitzroy Report
and Field Notes of R. Sherwood,
No. 400, 1823.
Compiled by author.

four primary species, 82 percent of the ingredients of the Fitzroy forest are accounted for. This corresponds favourably with Clarke and Finnegan's Essex County study where the top seven species account for 84 percent of all observations,⁽²³⁾ but the comparison ends there. The tree species represented in the Fitzroy forest, as indicated by Sherwood, number only 19 compared to the 44 species noted by Essex County surveyors and the 36 species presented by Brunger in the south London District.⁽²⁴⁾ Sherwood's limited number of observations is representative of the more northerly forest of the Great Lakes - St. Lawrence region.⁽²⁵⁾ Unlike the Carolinian forest of south-western Ontario, this is an area with a mixture of white and red pines, yellow birch, and eastern hemlock, along with certain dominant broad leaved species common in the former areas.⁽²⁶⁾

The question then arises as to the frequency with which one species occurs with another. The relative frequency of one species with another is presented on Table 3.3. The relatively limited number of primary vegetation indicators, those species first recorded in a series of species, can be observed on Table 3.4. Maple at 32.6 and pine at 28.7 dominate the first observed category. After these two only elm at 10.6% is of note, the remaining eight species representing in total only 28 percent of the sample.

Of the 116 occurrences of maple first, basswood occurs in 69 percent of the observations, elm 28 percent and pine 32 percent.⁽²⁷⁾ When pine occurs first no specific species dominates the associations. Four species, elm, maple, cedar and basswood occur between 29 percent and 22 percent of the time with pine. Elm shows strong relations with basswood, oak, and maple. When ash is the primary observation it shows

a very strong relation with elm but a weak association with cedar. Cedar as a primary is strongly related with ash as well as balsam and spruce. Basswood occurs most frequently with elm and maple as secondaries. A summary of the primary tree species with their major secondaries is provided in Table 3.4. From this table a significant grouping of maple, basswood, and elm can be observed. Oak, and to a lesser extent pine, occur occasionally within this grouping. Elm also occurs frequently with the primary ash which is a common wetlands indicator. Ash in contrast does not occur as a secondary species in association with the primary elm. This seemingly contradictory situation can be explained by the nature of elms. Elms survive in varying moisture ranges, from white elms on rich, moist, soils with high water tables, to the rock elms which prefer dry limestone ridges but are also found on

Table 3.4

<u>Primary Observations</u>		<u>Major Secondaries</u>
Maple	116	Basswood 69%; Elm 38%; Pine 32%;
Elm	38	Basswood 47%; Oak 42%; Maple 39%;
Basswood	18	Elm 78%; Maple 50%;
Ash	25	Elm 80%; Pine 20%;
Cedar	18	Ash 50%; Spruce, Balsam 39%; Poplar 33%; Pine 20%
Pine	102	Elm 29%; Maple 25%; Cedar 23%; Basswood 22%

Source: Compiled by author
from Table 3.3.

heavy clay soils, rich moist streambanks and on dry soils. Many of the species found with elm are much less resilient to soil moisture conditions; others, such as cedar, are as equally tolerant.⁽²⁸⁾ Following P. F. Maycock's argument that soil moisture is a key factor in the ecological tolerance of individual tree species it is possible to conclude that the surveyor's notes provide a measure of fertility and drainage conditions based on vegetation.⁽²⁹⁾

Further insight into the ways in which trees occurred in conjunction with one another and into the special importance of soil moisture can be gained from the terminology of the surveyors regarding land quality.⁽³⁰⁾ A fairly strong impression of this relationship can be gathered from Table 3.5. The good lands grouping is dominated by basswood, white oak, beech, oak and maple. In general these species prefer rich moist soils with moderate to good drainage. Upon the lowlands, a term which can be inferred to mean poorly drained areas with probable agricultural potential, are most commonly found ash, cedar, elm, pine, and spruce. These five species are highly tolerant of moist conditions. Notably absent from the lowlands grouping are the five species which dominate the good lands grouping; with the exception of one occurrence of oak.

Vegetation relationships with rough and rocky land are not as clearly defined. On the rough and rocky lands a broad range of species occur, with only pine appearing with any regularity. Maple in association with pine and hemlock occurs on rocky land sites; other members of the good land indicators being absent. Many lots in this grouping can be assumed to have but scant and immature growth upon them, which would not be of great interest to surveyor nor settler. The wetlands group is

Table 3.5

Number of Tree Species as Observed with Specific Land Quality Judgments

Rank of Total Observations	<u>Goodland</u>		<u>Slow Drainage Lowland</u>		<u>Excessive Rough and Rocky Land</u>		<u>Poor to Bad Drainage Wet Lands</u>	
	Absolute Number of Observations	Percentage	Absolute Number of Observations	Percentage	Absolute Number of Observations	Percentage	Absolute Number of Observations	Percentage
4 Basswood	40	100.00	0		0			
10 Beech	8	100.00	0		0			
14 White Oak	4	100.00	0		1			
7 Oak	25	96.15	1	3.85	0			
2 Maple	60	88.24	0		3	11.76		
3 Elm	31	50.00	20	32.36	2	3.23	9	14.52
1 Pine	21	33.33	18	28.57	21	33.33	3	4.76
9 Hemlock	1	20.00	2	40.00	2	40.00		
6 Ash	2	5.38	23	67.44	0		9	26.47
5 Cedar	0		22	44.30	6	12.00	22	44.30
8 Spruce	0		15	78.95	4	21.05		
11 Balsam	0		7	100.00	0			
11 Alder	0		0		0		12	100.00
11 Poplar	0		5	83.33	1	16.67		
14 Fir	0		0		4	100.00		
16 Bush Growth	0		0		6	100.00		
17 Tamarack	0		0		0		3	100.00
18 Birch	0		0		1	100.00		

* As noted on Table 2.

Source: A.O. D.C.F. Field Report and Field Notes of R. Sherwood
No. 400, 1923. Compiled by Author.

dominated by observations of cedar, alder, ash, and elm. These species when found in association with each other are noted wetland indicators.

It can be concluded that the surveyor's notes do show a relationship between tree species and land types. It is plausible to assume that the surveyor assessed land quality using tree species in Fitzroy; with the exceptions of those sites where local topography and drainage conditions rendered the exercise superfluous.

Mapping the Field Note's Tree Species Indicators

The vegetation was mapped lot by lot with reference to the primary vegetation groupings. The four vegetation associations represent the dominance of the primary species Pine and Maple and the influence of the water moisture tolerance of the species. Distinction between the two pine dominated associations is based upon this latter argument, the Pine/Maple, Hemlock being on rocky and excessively drained sites. Brush and Burnt lands represent a fifth category and like Pine/Maple, Hemlock are associated with the rough and rocky lands group. Map 3.1 represents the landscape of Fitzroy sifted through the eyes of the surveyor and reconstructed from his records. From this base an understanding of the validity and application of the survey can begin. The need to interpolate between observations made along the concession lines, has resulted in the regulated 90° degree lines which the vegetation patterns assume. Where possible, vegetation boundaries follow water courses and heights of land.

Sherwood's Fitzroy in Comparison to the Inspectors' Reports

Through the use of the 1828 and 1840 Inspectors' reports for Crown and Clergy Reserves, Sherwood's Fitzroy can be compared to the opinions

of his contemporaries. The surveys of 1828 and 1840 provide information on vegetation, land quality, present settlement or claims on the lots, their situation and fair market value per acre for a sample of 45 lots. (31)

The two surveys provide 61 observations concerning land quality recorded within eight categories (Table 3.6). The observations range from north to south in the township but are more highly concentrated in the western half of Fitzroy. Of the eight descriptions used in 1828 and 1840 only "middling" used in the 1828 survey was not used by Sherwood. This term refers to those lots which had pine in combination with a

Table 3.6

Comparison of Land Quality Descriptions
Using Frequency of Occurrence

<u>Sherwood 1822</u>		<u>Inspection Reports</u>
44.4%	Good land/Middling	41%
	(Middling)	(11.5%)
15.1%	Lowlands	6.6%
14.1%	Swampy - wetlands	26.2%
25.9%	Bad/Rough Rocky land	26.2%

Source: A.O., D.L.F., Fitzroy Report and Field Notes of R. Sherwood, No. 400, 1823; and A.O. R.G.1, A.I. Vol. 3 and 12. Inspection Report 1828 and 1840.

mixture of good land indicator hardwoods. Kelly states that nineteenth century forest lore predicted poorer fertility soils where this mixture occurred.⁽³²⁾ Those hardwoods observed with pine include maple, basswood, and to a lesser extent beech. As these hardwoods are not to be found in Sherwood's lowland references, it is probable that "middling" as used in 1828 was included in the good lands category in 1822 and possibly in 1840 as well. The frequency of classification of good land in 1822 is remarkably similar to the Inspection report's 41 percent (when middling is added), and only 0.3 percent separates the 1822 analysis from the Inspection report's opinion of bad/rough and rocky lands. The major discrepancy between Sherwood and his contemporaries occurs with "lowland" and "wet and swampy" land categories. Here the variation in interpretation could have had direct bearing on settlement. While both surveys rate poorly drained lands at approximately 30 percent, Sherwood provides optimism with 15.1 percent in lowlands, while the Inspection report observes 26 percent as being swamp and wetlands. Such a difference may be accounted for by seasonal variation. Although the question of sampling procedures of the reserve's surveyor may be considered a probable explanation of the difference observed, it is not likely the best explanation. The reserves surveyor's sample is distinctly biased towards western Fitzroy, an area with considerably drier lands and better drainage than eastern Fitzroy. A more likely explanation of this observed difference is the application of differing methods employed by the surveyors. If the swamps and wetlands lay between the concession lines but did not necessarily cross them, Sherwood would have under-observed this feature. This would not have occurred with the Reserves' surveyor who was contracted to do actual lot surveys, which

would necessitate travelling across the entire lot. Again an element of scale presents itself as a possible solution to discrepancies in land evaluation.

Comparison of tree species observed in the 1822 and 1828 surveys further illustrates the similarities between Sherwood and his contemporaries.⁽³⁴⁾ From a sample one twelfth the size of the 1822 survey, the 1828 surveyor recorded the same four major tree species; pine, maple, elm and basswood (Table 3.7). Frequency of observation shows variation between the surveyors opinions on these four species, particularly pine, maple and basswood. This is partially due to the higher number of lots in the western half of the township, an area of generally better quality lands - pines being observed more frequently by Sherwood in the east.

The hypothesis that the two surveyors tended to rank the tree species that they observed in a similar manner can be tested using a Spearman's Rank Correlation Coefficient and the rankings provided on Table 3.7. This statistic is based only on those species occurring in both survey populations. This excludes 9.8 percent of the 1822 observations and 4.8 percent of the 1828 observations. Rho was calculated at 0.8164 and using Z was found to be significant at the .01 level.⁽³⁵⁾ This test provides statistical validity for the hypothesis that a relationship exists between the two surveyor's assessments of the forest ingredients of Fitzroy.

Variations of course do occur between the two surveys; most notably those concerning wetland species (Table 3.8). Sherwood would appear to have underestimated black ash, tamarack and not to have differentiated water elm from the elms in general. Likewise the 1828 surveyor underestimated cedar and makes no reference to poplar nor alder. Given that

Table 3

Tree Species Comparison 1822 to 1828 Surveys
(With Rankings for Spearman's Rank Correlation Coefficient)

Species	Sherwood 1822-23 Survey		Number of Observations	Reserves Survey, 1828		d^2
	Frequency	Rank		Frequency	Rank	
Maple	16.5	2	21	19.9	1	1
Basswood	13.5	4	20	18.9	2	4
Elm	14.6	3	17	16.0	3	0
Beech	2.3	9	7	6.6	5	16
Oak	5.7	7	6	3.7	6	1
Ash	6.8	6	5	4.7	7.5	2.25
Henlock	3.2	8	3	2.9	10	4
Black Ash	0.1	12	2	1.9	11	1
Pine	17.3	1	15	14.2	4	9
Cedar	7.7	5	5	4.7	7.5	6.25
Salsam	1.9	10	1	0.9	12	4
Tamarack	0.4	11	4	1.9	9	4
Water Elm	1.4	-	5	4.7	-	$d^2 = 52.5$
Spruce	3.2	-	-	1.4	-	
Poplar	1.9	-	-	1.4	-	
Alder	1.9	-	-	1.4	-	
Fir	9	-	-	1.4	-	
White Oak	9	-	-	1.4	-	
Birch	.8	-	-	1.4	-	
Bush Growth	.2	-	-	1.4	-	

Source: A.O., R.G.I. A-VI-3, Vol. 12, Crown Land Department, Inspection Report 1823, 1840; A.O. Report A.O., D.L.F. Field Notes of R. Sherwood, No. 400, 1823; Compiled by Author

Table 3.8

Frequency of Occurrences of One Species with Another, 1828 Clergy Reserves Survey

	Maple	Pine	Cedar	Hemlock	Ash	Black Ash	Basswood	Elm	Oak	Beech	Water Elm	Tamarack	Balsam	# of Times First Observation	Frequency of Observation	# of Times Observation Alone
Maple	37			5	11	11	95	84	21	32				19	59.4	0
Pine	17			33	17		17	17	17		17	33		6	18.8	1
Cedar		25			25		25				50	75		4	12.5	0
Hemlock		100												1	3.1	0
Ash											100			1	3.1	0
Black Ash											100			1	3.1	0
Total														32		1

Source: A.O., R.G.1, A-VI-3, Vol. 2.
Crown Lands Department Inspection Report, 1828.

land assessment is based upon forest indicators the variation in lowland and swampy/wetlands noted above might well be explained by the variations shown here in tree species indicators.

Comparison of the surveyor's work on the reserves with that of Sherwood's shows that he brought with him two refinements which would have greatly benefited the 1822 survey. The use of the term "middling" to differentiate good lands from lands with a mixture of pine with hardwoods, would have lowered to some extent Sherwood's appraisal of good lands in Fitzroy. Secondly the ability to, or willingness to note, the difference between elm and water elm would have greatly aided in interpreting the field notes. As shown in the 1828 survey water elm is always associated with cedar. To interpret the nature of elm in the Sherwood survey it is necessary to depend upon knowledge of other species found on the same site. The settler reading the field notes had to decide if elm with cedar and ash was different from elm with maple and basswood. Errors in land selection given this situation might have occurred.

These refinements aside, the 1822 survey compares adequately with the 1828 and 1840 inspectors' reports. A similar landscape was observed by these three surveyors, they used similar methods and achieved compatible results. This comparison illustrates that Sherwood had an understanding of land assessment compatible with the existing perceptions of the time.

Sherwood: a timeless observation

That a settler could locate on what both he and Sherwood could recognize as a viable agricultural lot is no assurance of the lot's

applicability for agriculture. The accuracy of the surveyor's land assessment using tree indicator methods must still be proven. Towards this end Sherwood's survey will be compared to a land quality typology derived from the Soil Survey of Carleton County (Table 3.9).⁽³⁶⁾

Methodology

By stressing soil texture and drainage conditions the twenty-one soil types reported by the soil survey for Fitzroy can be collapsed into four general classes. This classification exhibits decreasing soil texture and less tolerable drainage conditions for general farming. A fifth group, bottom lands, closely corresponds with the wettest lands labelled by Sherwood; usually along water courses. Using an arbitrary 70 percent level, Fitzroy's 325 lots were surveyed to see if they lay within one of these five classes. Of the 325 lots 255 were accommodated using this technique. The remaining 21.5 percent of the township's lots were accommodated through the use of three mixed soils category lots. A hierarchy of soil texture and drainage conditions can then be developed based upon site conditions and percentage of arable land. The original five classes representing 78.5 percent of all lots are listed first with their respective, texture drainage and topographical notes (Map 3.2). The mixed quality lot classes are listed below the five mapped classes.⁽³⁷⁾

In order to make these soil classes comparable with the vegetation associations on a lot by lot basis a similar eight class system was derived. This resulted in the following classification based on the mapped vegetation classes (Map 3.2).

This provides for a contingency table in which these two nominal scale variables are cross-classified. Due to empty cells in the table

FITZROY TOWNSHIP SOIL TEXTURE and DRAINAGE CONDITIONS

Map 3.2

As Suited for Agriculture

Class 1 Well Suited	Class 3 Poorly Suited
Class 2 Moderately Suited	Class 4 Very Poorly Suited
Class 5 Bottomland	

Scale in miles

0 1 2

Source: SOIL SURVEY of CARLETON COUNTY

Table 3.9

Soil Texture and Drainage Conditions Classification

<u>Class</u>	<u>Texture</u>	<u>Drainage</u>	<u>Topography</u>
1	Clay, Clay loams	Moderate to Slow	Gently Undulating
2	Sandy loams, Sandspot clays	Fair to Moderate	Undulating to Strongly Undulating
3	Sandy; Shallow	Variable	Undulating
4	Sandy; Shallow	Excessive	Gently Undulating to Rolling
5	Bottomlands, Muck, Marsh	Very Poor	Level
6	Lots with a combination of Class 1 and 2 site conditions.		
7	Lots with a combination of Class 1 or 2 site conditions with 3, 4, or 5.		
8	Lots containing a combination of Classes 3, 4 or 5 site conditions.		

Source: Soil Survey of Carleton County, 1944.

it was necessary to group categories together. This resulted in a 3x3 table in which class one lands and vegetation remain distinct but classes 2, 6 and 7 in both classifications combine to form fair to middling associations, while classes 3, 4, 5, and 8 form the poorest of

Table 3.10 .

Vegetation Classification

<u>Class</u>	<u>Vegetation Association</u>	<u>Commentary</u>
1	Maple/basswood, elm, oak	Assumed good indicators;
2	Pine/elm, ash, cedar, spruce	Assumed middling indicators;
3	Cedar/ash, alder	Assumed poor-wet indicators;
4	Pine/maple, hemlock	Assumed poor-shallow, sandy;
5	Brush, Burnt lands,	Infertile lands
6	Lots with a combination of Classes 1 and 2.	
7	Lots with combination of Class 1 or 2 with 3, 4, or 5.	
8	Lots with combinations of 3, 4, and 5.	

Source: A.O., D.L.F., Fitzroy
Report and Field Notes
of R. Sherwood, No. 400,
1823.
Compiled by Author.

both classifications (Table 3.10). The following table provides the bases for a chi-square test of the hypothesis that a relationship exists between the vegetation association indicators of land quality and the soils classifications derived from the soils survey (Table 3.11).

Table 3.11

Chi Square Analysis of the Relationship between
Vegetation Associations and Land Quality for Agriculture

Vegetation Associations

	<u>1</u>	<u>2, 6, 7</u>	<u>3, 4, 5, 8</u>	
<u>Soils</u>	(Expected)	(Expected)	(Expected)	
1	56 (45.24)	77 (70.85)	4 (20.91)	137
2, 6, 7	36 (21.79)	27 (34.15)	3 (10.07)	66
3, 4, 5, 8	14 (38.97)	62 (61.02)	42 (18.01)	118
Total	106	166	49	321

Source: Compiled by Author.

Results

The resulting chi-square value of 94.192 with four degrees of freedom allows for the rejection of the null hypothesis,⁽³⁸⁾ at the .001 level (Table 3.11). Statistical support exists for the hypothesis that the surveyor accurately interpreted land quality using tree species indicators. A settler using Sherwood's field notes, and armed with the same rules of thumb upon which Sherwood based his analysis, would have been assured of acquiring a location which would meet most of his expectations. This historical relationship is supported by the 1969 research in Ontario of Dale and Hoffman. They record that in a one mile square

area that six ecosystems based on the vegetation pattern existed. They discovered that in all but two cases, each ecosystem was characterized by a distinctive organic soil type.⁽³⁹⁾

Conclusion

The 1822 survey of Fitzroy by Reuben Sherwood has been stringently examined and found to be an admirable example of nineteenth century land surveying. Through analysis of the field notes, comparisons of them with the Crown Land's inspection reports and testing against modern soil surveys Reuben Sherwood's survey is found to be an accurate assessment of the township.

Using methods derived from Clarke's work in Essex County, this chapter has demonstrated the applicability of those methods for an area far removed from Essex County in both physical distance and forest composition.⁽⁴⁰⁾ The relationship between the nineteenth century surveyor's vegetation indicators and the soils survey is significant. It can therefore be reiterated that the modern soil survey can be accepted as a surrogate for the nineteenth century surveyor's perception of the land. The question raised earlier still remains valid; we still can not be sure that this interpretation was understood by incoming settlers. What a trained surveyor recognized in 1822, again in 1828 and 1840 and is still recognized today as good land for farming may have had little relevance to the pioneer and his family. As Tyman notes:

... few pioneers, it seems, were ever inhibited by Deputy Land Surveyor's classification when settling a homestead.⁽⁴¹⁾

ENDNOTES

- (1) The primary sources for this chapter are derived from A.O., R.G.1, A-1-1, Vol. 37 (Book 33), pp. 143-145; Surveyor's letters 1774-1824. Included in this, A Report of the Surveys of the Townships of Lavant, Bathurst, Pakenham, Fitzroy and Torbolton in the Bathurst District, commenced June and finished December 1822, under the direction of R. Sherwood D.L.S. and contractor; A.O., R.G.1, Department of Lands and Forests, Fitzroy Report and Field Notes¹ No. 400, 1823; Entered Vol. 13 page 177; A.O., M.S.30(6), Surveyors' letters 1784-1843; A.O., R.G.1, B-IV, Vol. 80, Surveys Accounts; A.O., R.G.1, A-VI-3, Vol. 12, Crown Lands Department Inspection Reports, Bathurst District Clergy Reserves 1828; A.O., R.G.1, A-VI-3, Vol. 4; Crown Lands Department Inspection Reports, Bathurst District, 1840; G. A. Hills, N. R. Richards, and F. F. Morwick, Soil Survey of Carleton County, Province of Ontario, Report Number 7 of the Ontario Soil Survey (Guelph, 1944).
- (2) J. Clarke and G. Finnegan, 1984, p. 121; The establishing of the surveyor's personal and professional credentials is shown in this paper to be most useful in establishing the quality of the survey.
- (3) A.O., R.G.1, A-VI-3, Volumes 4 and 12 Inspection Reports; Gentilcore 1972[b], provides an example of the application of the reports.
- (4) Hills, Richards, and Morwick, 1944.
- (5) A.O., M.S.30(6); (R. Sherwood to Thos. Ridout, Esq., 19 Sept. 1822).
- (6) Gentilcore and Donkin, 1973, pp. 39-101; Sherwood surveyed 23 townships, two mill seats, one river, one lake and one mining location prior to Fitzroy on government contracts. Not listed in Gentilcore and Donkin would be the numerous surveys he did privately and which can only be gleaned through the reading of personal records, legal documents and secondary sources. An example is his survey of Col. Joel Stone's property at Stone's request in September of 1799; noted in H.S. McDonald, "Memoir of Colonel Joel Stone: A United Empire Loyalist and the Founder of Gananoque." Proceedings and Reports of the Ontario Historical Society, Vol. 18, (1920), p. 83.
- (7) Author's conjecture; see Chapter 4 for elaboration.

- (8) A.O., M.S.30(6); (Sherwood to Ridout, 19 Sept. 1822).
- (9) Gentilcore and Donkin, 1973; pp. 39-101.
- (10) R. W. Widdis, A perspective on land tenure in Upper Canada: A study of Elizabethtown Township, 1790-1840. (Unpublished M.A. thesis, McMaster University, 1977), pp. 61.
- (11) T. W. H. Leavitt, History of Leeds and Grenville. (Brockville: Recorder Press, 1879). pp. 122, 180.
- (12) D. W. Thomson, Men and Meridians: the history of surveying and mapping in Canada. (Ottawa: Queen's printer and Controller of Stationary, 1966), p. 233, "Biographical Sketch of Reuben Sherwood, Deputy Surveyor." Proceedings of the Association of the Provincial Land Surveyors of Ontario 1866, pp. 59-61.
- (13) A.O., M.S.30(6); (Sherwood to Ridout, 19 Sept. 1822).
- (14) A.O., R.G.1, A-1-1, Vol. 37, (Book 33), Surveyor's Report, Fitzroy Township, p. 143.
- (15) A.O., R.G.1, A-1-1, Vol. 37, (Book 33), Surveyor's Report, Fitzroy Township, p. 143.
- (16) A.O., R.G.1, A-1-1, Vol. 37, (Book 33), Surveyor's Report, Fitzroy Township, p. 143-144.
- (17) A.O., R.G.1, A-1-1, Vol. 37, (Book 33), Surveyor's Report, Fitzroy Township, p. 143.
- (18) A.O., R.G.1, A-1-1, Vol. 37, (Book 33), Surveyor's Report, Fitzroy Township, p. 143.
- (19) A.O., R.G.1, A-1-1, Vol. 37, (Book 33), Surveyor's Report, Fitzroy Township, p. 144.
- (20) A.O., R.G.1, A-1-1, Vol. 37, (Book 33), Surveyor's Report, Fitzroy Township, p. 145.
- (21) A.O., R.G.1, A-1-1, Vol. 37, (Book 33), Surveyor's Report, Fitzroy Township, p. 145.
- (22) On lots two and three in the third concessions, no viable description of the vegetation is given. In such cases the continuation of land quality comments such as swamp, after a description of swamp, cedar, tamarack has been inferred.
- (23) Clarke and Finnegan, 1984, p. 123.
- (24) Clarke and Finnegan, 1984, p. 122; Brunger, 1973 [a], p. 183.
- (25) J. S. Rowe, "Forest Regions of Canada," in Falconer, Fahey, and Thompson, eds., 1969, pp. 263-272.

- (26) Rowe, (1969), p. 268.
- (27) Where some percentages are exceptionally high but not referred to in the text as in the cases of beech with maple or balsam with alder the absolute number of occurrences is small.
- (28) Individual species site factors from: Native Trees of Canada, Bulletin Number 61, Department of Northern Affairs and National Resources, Forestry Branch. (Ottawa: Queen's Printer and Controller of Stationary, 1956).
- (29) P. F. Maycock, "The Phytosociology of the deciduous forests of extreme Southern Ontario," Canadian Journal of Botany, Vol. 41, (1963), pp. 428-36; Clarke and Finnegan, 1984, pp. 126-128.
- (30) Clarke and Finnegan, 1984, p. 126.
- (31) Aspects of situation, settlement and squatters claims relating to the Inspection Report lots will be dealt with in later chapters.
- (32) Kelly, 1974, p. 11.
- (34) The 1840 Crown Lands Inspection Report provides scant information on tree species. Considerable timbering activity may have already affected the value of tree species indicators in the recognition of land quality by this point in time.
- (35) H. M. Blalock, Jr., Social Statistics, (New York: McGraw-Hill, 1960), pp. 317-319; where

$$r_s = 1 \frac{6 \sum d^2}{n^3 - n} ; \text{ and } Z = 1 \frac{r - 0}{s} \frac{1}{1/N - 1}$$

The calculated Z score was 2.708 and was found to be significant at the .01 level.

- (36) Hills, Richards, and Morwick, 1944. The soils map and related text were used in the development of the typology.
- (37) A rating for general agricultural settlement for this eight class typology from best to worst would be class 1, 6, 2, 7 followed by the poorer lands 3, 4, 5 and 8; the ordering of the later group is optional.
- (38) The Null Hypothesis being rejected can be stated as: there is no significant relationship between vegetation associations and soil fertility as classified for general farming; Blalock, 1960, pp. 212-241, 452.
- (39) Rowe, 1969, p. 271.

(40) Clarke, 1970, pp. 70-81; Clarke and Finnegan, 1984, pp. 119-136.

(41) Tyman, 1975, p. 89.

CHAPTER 4

REUBEN SHERWOOD: SURVEYOR AND SPECULATOR

If Reuben Sherwood adequately carried out the survey of Fitzroy township, as evidenced by the compatibility of his work with his contemporaries and modern soils analysis, why was he dismissed in 1823? An answer to this question can be found by reviewing his reports, field notes, and correspondences with the Surveyor General's Office and the Executive Council, with specific reference to one lot. Sherwood's dismissal as a deputy land surveyor appears to have been due to his excessive abuse of mill seat information gained while surveying Fitzroy Township.⁽¹⁾

This chapter illustrates the land speculation activities of the surveyor Reuben Sherwood upon Lot 23 in the ninth concession. His acquisition of this lot resulted in a minor land based political skirmish between the Brockville elites,⁽²⁾ of which he was a member, and the increasingly influential family of Charles Sherriff. The conflict surrounding this individual lot sets the stage for an analysis of early speculation in Fitzroy, bringing onto the land settlement stage a caste of characters who by 1831 controlled most of the northern half of Fitzroy. The next two chapters will test the hypothesis that the surveyor was an active agent in the process of land acquisition; directing land speculators and through his field notes, or the actions of government officials, settlers, to the better locations in Fitzroy.

Sherwood - Sherriff Conflict, 1823-1825

In June of 1823 Reuben Sherwood elected to forfeit his license as a deputy land surveyor rather than surrender the title of Lot 23 in the ninth concession of Fitzroy Township to Charles Sherriff.⁽³⁾ To understand this action it is necessary to delve into the role of the surveyor as an agent of land speculation interests. The location of the lot in question is at the confluence of the Mississippi Syne and the Ottawa River at Fitzroy Harbour. Sherwood in his field notes provides the following, rather banal, description:

Table 4.1

Lot Description along Ninth Concession into Fitzroy Harbour

<u>Concession</u>	<u>Lot</u>	<u>Chains</u>	<u>Links</u>	<u>Descriptions</u>
9	22	2	64	To the west shore a rapid each way
		20	00	Pine and Oak
		7	36	Cedar and Hemlock
	23	7		Cedar, Hemlock to a small stream on
		4		the east side there of
		10	78	Oak, Ash, Pine to another channel
		5		Crossing Channel North to Northeast
		3	22	Lowland Ash and Elm
	24	16	50	To the Ottawa or Grand River, just above the raft channel leading into the Bay I call Fitzroy Harbour.

Source: A.O., D.L.F., Fitzroy Report
and Field Notes of R. Sherwood,
No. 400, 1823.
Compiled by author.

Sherwood provides a straight forward, matter of fact description of what is undoubtedly a fine mill seat with access to the raft channel of the Ottawa River skirting the Chats Rapids. No exceptional commentary is provided on this nor any other of a variety of mill seats along the Carp and Mississippi Rivers. Yet in Sherwood's personal report to Thomas Ridout a more exuberant one is found:

The township of Fitzroy ... contains more good land than either of the other Townships and in point of situation exceeds the whole - having the outlet of the Mississippi River and Carp River and the Chats Rapids in the front with many good mill seats.⁽⁴⁾

Sherwood then makes his bid to alienate Charles Sherriff from what he believes to be the most eligible location for mill seats and a town plot ...

The most eligible situation is Fitzroy Harbour from whence boats and rafts can safely pass to Lower Canada and this place is now occupied by a Mr. Sherriff say upon Lots 24 and 25 in the 10th Concession and upon which he has ...⁽⁵⁾

The field notes for Lots 23 and 24 in the tenth concession state:

"Lot 23 - Good land to Fitzroy Harbour being a deep bay facing the Chats Rapids, improved by Mr. Sherriff" but then in brackets, "Lot 24 occupied by Sherriff," we can assume that Lot 23 in the ninth and tenth concessions formed Fitzroy Harbour.⁽⁶⁾ Sherwood has twice stated in separate documents that Sherriff is not on Lot 23 but upon Lot 24 and above in the tenth concession. Sherwood provides us with an assessment of the Fitzroy Harbour area, which includes a viable location for mills, a safe harbour, and a not too well located Charles Sherriff, a pre-

survey land grantee. A letter he attached to the surveyor's report of 1823 brings to light the true meaning of these points:

that if it should be considered possible I would allow Mr. Sherriff's situation to be deducted before the drawing, provided I am allowed to locate one lot not of the quantity to be drawn in the township (for payment of services),⁽⁷⁾

On the 23rd of January 1823, Sherwood was personally at York delivering his report and pressing his claim to an extra location. At the time there appeared no previous claim to the lots although the grant of the land made prior to survey for Charles Sherriff, would appear to have bordered the location selected by Sherwood. Sherwood left York with the knowledge that the patents for Lots 23 and 24 in the ninth concession would issue in his name. He would also have been aware that Lot 23 in the tenth concession was to be reserved for the Crown, thus open for leasing or purchase at a later date.⁽⁸⁾

Sherwood recognized that these lots provided an exceptional harbour frontage and mill seat location; he could not forego the opportunity of acquiring them. Using the lack of proper instructions regarding the land grant to Charles Sherriff, Sherwood acquired permission to step beyond the bounds of his initial contract and acquire a prime town plot location. Using his field notes and report he alienated these lots from Sherriff, who upon discovery of the situation prepared his case for presentation to the Executive Council.

How common though would an action of this nature be for Sherwood? What were his motives for pushing the surveyor-general into granting him these lots. Widdis records Sherwood in 1819 submitting a bid to survey Alfred and Plantagenet townships for "ten percent of the area surveyed,

five percent thereof to be at my choice and five percent by draught."⁽⁹⁾
 This bid was twice the average rate and was rejected by Ridout.⁽¹⁰⁾ For
 Fitzroy the commission was approximately three percent of the land;
 Billa Flint, Sherwood's assignee receiving 1,880 acres of the townships
 62,680 acres.⁽¹¹⁾ This percentage of land is a far cry from the ten
 percent demanded a few years before and is approximately equal to that
 which he received for surveying in Nepean and North Gower while
 returning from Fitzroy. Again though Sherwood begged special considera-
 tion for these surveys:

... and receive my percentage in a township bounding on
 the Grand or Ottawa River and in rear of the townships
 of Fitzroy and Pakenham.⁽¹²⁾

Sherwood's sojourn to York in the third week of January 1823 must
 have been in his opinion a considerable success. He left York with the
 knowledge that his survey reports had been accepted. He had acquired
 the most eligible of harbour and mill seat locations available in the
 five townships just completed and payment for partial surveys in Nepean
 and North Gower in the potentially dynamic township of McNab, north of
 Fitzroy Harbour on the Ottawa River.

The opening rebuttal to Sherwood's plan was made by Charles
 Sherriff in a letter addressed to Major Hillier, dated March 29th
 1823.⁽¹³⁾ In it Sherriff notes he has considerable improvements along
 the Mississippi and Carp Rivers, with yet a small start upon Lot 23 in
 the tenth concession. He notes that removal of this lot from his pro-
 perty would cut him off from his property on Lot 23 in the ninth conces-
 sion which he states:

... is part of our lands and which extends to the lower branch of the Mississippi River, over which and to a certain extent upwards we have the right of the water for Mills ... (14)

At this point it is possible that Sherriff is not aware of the threat upon his domain being made by Sherwood; he is merely attempting to have a Clergy reserve lot shifted off of his lands. In this initial defense of his property he is successful, the reserve being relocated to Lot 16 Concession Eleven. We should not be deceived, though, regarding Sherriff's intentions. While making a strong argument for Lot 23 in the tenth concession he intricately links its requirement for the continuity of his parcel with Lot 23, Concession Nine and with the water power of the Mississippi River for milling purposes. He does this without any reference to the surveyor Sherwood. In the same letter he tells Hillier that according to correspondence with the government on the 25th and 28th of October 1820, he had all of the rights assigned to him which are stated above. He notes that these letters and documents ~~should~~ have been transmitted "from Quebec by the Deputy Quarter Master General to John Small Esq., 27th November 1820 for the consideration of his excellency the Lieutenant Governor in Council."⁽¹⁵⁾

Given this documentation we can assume that Hillier turned matters over to Ridout for investigation. On May the second, Ridout wrote Sherwood informing him of Sherriff's actions. To which he received the following reply:

I have just received your letter of the 2nd. May which greatly surprised me, as the Sherriff's concern was all settled when I was in York. The Order in Council was referred to and an allotment of about 7,000 acres set apart for him to choose out of and that the best part of the township.

The order in Council ... specified that he should receive his lands below the Chats Rapids, now the Chats Rapids extend a quarter of a mile below the outlet of the smallest branch of the Mississippi River and within two or three chains of the Tenth Concession line.

I have made such arrangement with Mr. Flint and others to form a town plot and will build Mills on Lot 23 in the 9th Concession that it is not in my power to surrender the Patent nor would I if it was for one fourteenth of the township. And please it to observe that no reserve was made in my contract for the survey except, for the Crown and Clergy, I might have drawn any lots that Mr. Sherriff has on the Carp mile lots as likely as any other.⁽¹⁶⁾

The proceeding commentary and quotes provide the extant documentary evidence upon which the Executive Council acted on June 11th. It is of interest to note that on July 23rd 1823, Thomas Ridout's official statement concerning Lot 23 in the ninth and tenth concessions was recommended to council, some five weeks after the council's decision. Ridout had concluded:

The Crown Reserve Lot 23 in the 10th Concession of Fitzroy may be removed for the accommodation of Mr. Sherriff to another lot of apparent equal value in that township if it be your Excellency's pleasure.

Mr. Sherriff's claim to Lot 23 in the 9th Concession does not appear from any documents in this office. If that lot or any part of it had been known to me as being within the tract designed for that Gentleman it would have been excluded from the draft of the Surveyor who surveyed the township; Mr. Reuben Sherwood to whose assignee it has been ascribed.⁽¹⁷⁾

The accuracy of Sherwood's statement is supported by the Schedule of Recommendations of Johnstown District for locations in the townships of Fitzroy. This volume opened in 1822 and showing locations to late 1824 clearly delineates the Sherriff lands within the terms of Sherwood's letter⁽¹⁸⁾ (Map 5.1). Ridout corroborates Sherwood's state-

ment that he was under no obligation, given his contract, to recognize Sherriff's claims.⁽¹⁹⁾ Sherwood's letter of the 21st of January demonstrates that Sherwood recognized the position of the "Gentleman" (Sherriff), requesting permission of the surveyor general to deduct his lands prior to drawing lots. Sherwood had gone to great lengths to establish Sherriff's position, noting it in his survey field notes and his reports and confirming these with Ridout. His reasons for so clearly defining Sherriff's location and property rights was done with obvious intent.

The Council's Decision

A firm decision on the Sherwood - Sherriff dispute was handed down by the Executive Council on June 11, 1823, when Charles Sherriff personally appeared before the Council to press home his charges, argued:

Reuben Sherwood is illegally claiming the East half of Lot 23 in the 9th Concession and that Sherwood's claim that his lot lay outside of his land reserve was a willfully made error to cheat him.⁽²⁰⁾

Apparently without the opinion of the Surveyor-General, whose report was not recommended to Council for some five weeks, the Council concluded:

... the grant to Reuben Sherwood of the lot in question be rescinded and given to Sherriff and that if Sherwood refuses to Surrender the grant (Patent) that he should be dismissed as a deputy surveyor.⁽²¹⁾

As Sherwood had stated earlier he was in no position to surrender this lot having Quit Claimed it to his assignee Billa Flint, a Brockville merchant.⁽²²⁾ Sherwood it would appear had no option open to him but to accept the Council's admonishment and be dismissed.⁽²³⁾

Sherwood's quit claiming of the lot to Billa Flint and others brought into the dispute a third party of recognizable influence. Flint was closely connected, as was Sherwood, to the elite families of Brockville. This group formed a strong portion of Tory and Loyalist support, dispensing regional favours and supporting the York government. While Sherwood was admonished for his actions one could hardly state the Council pursued the decision. While Sherriff could point to a political victory, (the York government had indeed supported him) he still did not receive the lot in question. Quite contrary to what could be expected, it was Sherwood who acquired the lot after being dismissed, not once but twice. On Christmas Eve, 1825 Flint quit claimed the lot to Sherwood.⁽²⁴⁾ Within a year of receiving the lot Sherwood sold it to Henry Jones of Brockville, relative of Charles Jones a Fitzroy land grantee, for two hundred pounds lawful money.⁽²⁵⁾ In turn Jones quit claimed it back to Sherwood in 1831.⁽²⁶⁾ In that same year Sherwood sold the location to Andrew White of Gloucester Township for one-thousand pounds lawful money.⁽²⁷⁾ While White was paying some 200 shillings per acre for Lot 23 in the ninth concession, Elnathan Hubbell, brother-in-law of Henry and Charles Jones, acquired the patent for the mill seat up river at present day Galetta.⁽²⁸⁾ This lot was valued by the surveyor in 1828 at twelve and a half shillings per acre.⁽²⁹⁾

By this time Sherriff had already accepted compensation for the lot, in lieu of ever acquiring it from Billa Flint. From the Executive Council Sherriff received the following judgment:

... the imposition practised by the deputy surveyor to elude the provision made for security of Mr. Sherriff against the Mill Seat coming within the warrant for compensation of the survey has operated as injuriously to the Petitioner... an award of 1,000 acres in made in compensation. (30)

Summary

By 1831 Lot 23 in the ninth concession was out of the hands of the two largest land speculating interests in Fitzroy. Neither the Sherriff family nor the Brockville faction composed of the formidable Jones, Sherwood, Hubbell, Flint, and Morris families had acquired this prime development site. The two main contestants, Reuben Sherwood and Charles Sherriff, while not acquiring clear title to the lot did not suffer irreparable damage. Sherriff claimed in compensation 1,000 acres of land, receiving it in a contiguous block, free of settlement duties. Sherwood at the age of fifty had been ignobly dismissed regardless of Ridout's late support, but his career as a land surveyor can be seen to have had many beneficial sidelines. Through the good auspices of Flint and Jones he managed to re-acquire the lot in question and sell it to a third party at a considerable profit. Lot 23 in the ninth concession never became the development site envisaged by Sherwood. On the other hand Sherriff's town plot on lot 24 in the tenth concession continued to gain prominence throughout the period. Here the Sherriff's based their early development schemes for the Ottawa River timber trade although in time they moved south to Ottawa. The Brockville association continued to develop their land settlement schemes in Fitzroy and shifted their base to the mill seat at Hubbel Falls.

Conclusion

This hard fought battle over the rightful ownership of a mill seat and harbourfront lot provides a clear illustration of the surveyor's role in land speculation. Reuben Sherwood's actions in this affair are not beyond reproach. Nor does Charles Sherriff's reputation come through this affair unscathed particularly given the tardy report of Thomas Ridout and the evidence in the Johnstown District's Location Schedule. Yet, justice was seen to be done by all. Although he never acquired the lot, Sherriff received land in compensation, and the knowledge that he had been supported by the government in York. Sherwood although dismissed was not forced to surrender the lot which provided him with a substantial income. Given his numerous holdings and interests the loss of his surveying position, at the age of fifty, may well have been of limited consequence.

The actual victor in this affair was the government at York. Much to their benefit they had avoided alienating two influential regional elites. By not pressing Sherwood to surrender the patent, which came into his possession twice after the 1824, they had not alienated their staunch Brockville support. By supporting Sherriff they had prudently supported a representative of a fast rising political force. In a relatively short period of time the Sherriff's would control the Crown Timber Office in Bytown and would be able to voice their opinions through their ownership of that city's first newspaper.⁽³¹⁾ In this conflict over a single lot, some 200 acres, much was at stake for the government at York. Lot 23 Concession 9 faded quietly into the land settlement history of Fitzroy Township, being overshadowed by the Sherriff's efforts on Lots 23 and 24 in the tenth concession.

ENDNOTES

- (1) As a point of clarification, the qualifier excessive is used here rather than just abuse, for abuses by the privileged elite were common place. This is excessive abuse since it directly harmed the financial and development schemes of another member of the elite. The Executive Council never considered looking into the abuse in the locating of the Brockville elite, all close neighbours if not relatives and in-laws of Sherwood's, on the prime mill and agricultural lots along the Mississippi River.
- (2) Members of the Brockville elite are clearly outlined in Ian, MacPherson, Matter of Loyalty: The Buells of Brockville 1830-1850. (Belleville, Ontario, Mika Publishing Company, 1981); Elva M. Richards, "The Joneses of Brockville and the Family Compact." Ontario History, Vol. 60 (4), 1968, p. 167-184.
- (3) P.A.C., R.G.1, Land Book L, 1821-1824. (Major Hillier to Charles Sherriff, account of meeting Executive Council Chamber, June 11, 1823).
- (4) A.O., R.G.1, A-1-1, Surveyor's Report Fitzroy, p. 143.
- (5) A.O., R.G.1, A-1-1, Surveyor's Report Fitzroy, p. 145.
- (6) A.O., Fitzroy Report and Field Notes of Reuben Sherwood, Vol. 13, No. 400, 1823, Concession 9, Lots 22, 23.
- (7) A.O., M.S.30(6) Surveyor's Letters 1784-1843. (Sherwood to Ridout, 21 January, 1823).
- (8) A.O., R.G.1, C-I-4, Vol. 19, Records of the Johnstown District Land Board.
- (9) Widdis, 1983; p. 445.
- (10) Gentilcore and Donkin, 1973; Sherwood is not listed amongst the surveyors of Alfred nor Plantagenet.
- (11) The figure of 62,680 acres made by Sherwood in his field notes is a considerable overestimate, regardless of whose figures one accepts as accurate. The author's calculation using the field notes is of 55,900 acres, while the Beldon Atlas quotes 54,014 acres. The municipality of Carleton West could not provide an independent figure based on recent surveys; they actually use Beldon's figure of 54,014 and seemed confused when informed

that the surveyor's figures were much higher. The actual allotment given to Sherwood is 3.25 percent using 55,900 acres Flint should have received 1,816.75 acres while 54,014 acres provide Flint with 1,755.5 acres of land.

- (12) A.O., R.G.1, C-1-2, Box 8 (Sherwood to Ridout, 24 January, 1823).
- (13) A.O., R.G.1, Concession 10, Lot 23. (Sherriff to Hillier, 29 March, 1823).
- (14) A.O., R.G.1, F.T.P., (Sherriff to Hillier).
- (15) A.O., R.G.1, F.T.P., (Sherriff to Hillier).
- (16) A.O., M.S.30(6), Surveyor's Letters, 1784-1843 (Sherwood to Ridout 5 May, 1823). This letter in response to one of May 2nd. Ridout to Sherwood was drafted after Ridout had concluded his analysis of the Sherwood-Sherriff conflict for Hillier. Hillier it would appear did not present Ridout's statement to the Executive Council till July 23rd of 1823 some three months after Ridout signed his name to the decision he made, noted here in footnote 16.
- (17) A.O., R.G.1, F.T.P., Concession 10, Lot 23. (Sherriff to Hillier, 29 March, 1823; Ridout's conclusion drafted onto the back of Sherriff's letter and dated late April 1823).
- (18) A.O., R.G.1, C-I-4, vol. 19, Schedule of Recommendations for Locations by the Land Board for the District of Johnstown for Locations in the Township of Fitzroy.
- (19) A.O., R.G.1, F.T.P., Concession 10, Lot 23. (Sherriff to Hillier, Ridout's conclusion.
- (20) P.A.C., R.G.1, Land Book L, 1821-1824. (Hillier to Sherriff, June 11, 1823).
- (21) P.A.C., R.G.1, Land Book L, 1821-1824. (Hillier to Sherriff, June 11, 1823).
- (22) A.O., R.G.1, Grant R. Sherwood to B. Flint, Brockville, Concession 9, lots 23 and 24. February 1823.
- (23) Gentilcore and Dorkin, 1973; op. cit. Sherwood never appears as a surveyor after 1824.
- (24) A.O., A.I.D., Concession 9, Lot 23; Memorial No. 34.
- (25) A.O., A.I.D., Fitzroy Township, Concession 9, Lot 23; Memorial No. 259.
- (26) A.O., A.I.D., Fitzroy Township, Memorial No. 372.
- (27) A.O., A.I.D., Fitzroy Township, Memorial No. 396.

- (28) A.O., A.I.D., Fitzroy Township, Concession 6, Lot 21.
- (29) A.O., R.G.1, A-VI-3, Vol. 12. Inspection Report 1828.
- (30) P.A.C., R.G.1, L1/ Land Book M, 1824-1826. Land Petition of Alexander and Charles Sherriff, 15 October, 1824, with reply from the Committee of the Executive.
- (31) N.J. Scott. Toryism in Carleton County, 1818-1841; (unpublished Graduate Research Essay. Department of Canadian Studies, Carleton University 1968) pp. 25-27, 83-85; H. Beldon and Company, Illustrated Historical Atlas of the County of Carleton, 1879; (reprinted Belleville, Mika Silk Screening Ltd., 1971), p. 116.

CHAPTER 5

KNOWLEDGE, POSITION, CLASS, AND LAND:
"WHO ACQUIRED WHAT AND WHERE; FITZROY LAND ACQUISITION 1824-1842"

Continuing with the theme of the surveyor as an active agent of land speculation, this chapter explores his role in the acquisition of land by speculators and settlers. We begin by examining the hypothesis that the surveyor, either directly or through his notes, played an active part in the decision making process of speculators and government officials. The extant documentary evidence for land acquisition in Fitzroy, allows for an extensive analysis of the surveyor's influence upon and relationship with, the district land board, prominent land speculators, and settlers.

The chapter begins by addressing Gentilcore and Donkin's comment concerning the surveyor's script and role in speculation:

Inevitably these lands figured prominently in subsequent speculation ... the "whole role" of the surveyor in land speculation remains to be investigated.⁽¹⁾

Widdis addresses the first half of this remark in his paper on land surveyors and speculators.⁽²⁾ The second half of the quote implies that the surveyor's speculative interest went beyond his own script, into a larger scale of speculative activity, based upon his knowledge of the landscape and including business as well as personal connections. Lot

Table 5.1

Lots and Acreage Granted in Fitzroy by the
Johnstown District Land Board, 1822-1825

	<u>Militia</u> <u>Officers</u>	Children of United Empire <u>Loyalists</u>	<u>Militia</u>	<u>Immigrants</u>	<u>Total</u> <u>Grants</u>
Number of Recipients	24	20	33	42	119
Acres Received	13,367	4,800	3,900	2,700	25,037
Number of Lots	73	25	20	19	137
Average Grant Size in Acres	(568)	(240)	(118)	(64)	(210)

Source: Compiled by Author,
 from the J.D.L.B.
 Records for Fitzroy
 Township

the township's lands are accounted for (see Map 1). In contrast the population in 1831 was 331; approximately 143 acres of granted or reserved lands for every man, woman and child in the township.⁽¹⁶⁾ We can assume that a fair amount of Fitzroy's land was owned by non-residents.⁽¹⁷⁾ Let us begin to analyze this position by reviewing the early grants made by the J.D.L.B..

Of the 25,037 acres of land granted by 1825, 13,637 acres or 54.5 percent went to 24 Militia Officers who had served primarily with the Leeds and Grenville regiments during the 1812 War.⁽¹⁸⁾ Thirteen of these twenty-four recipients were residents of Brockville and

patent or settler location, with lots having "good land" tree species indicators does not necessarily prove that the surveyor influenced lot selection. Indeed, we may only be illustrating the breadth of tree species - land quality forest lore. It can be assumed though, that most speculators and many settlers did not randomly select lots, nor is it likely that many had the time and money that would be necessary to do an extensive search through the wastelands. The decision to move onto a lot required searching both its title as well as the quality of the land. Commonly this procedure was carried out at a district or county town, if not at York. In these nascent urban centres information on the legal accessibility and physical nature of lots would have been a valuable commodity.⁽⁵⁾

Sources and Procedures

The primary-documents for this chapter are numerous, for no single township, district, county, nor colonial government agency continuously handled the land records required for the analysis of individual grantee and settler locations through time. The chapter follows the logical progression of the documents. The first section of this chapter utilizes the grants made to immigrants and military personnel between 1823 and 1825 by the Johnstown District Land Boards (J.D.L.B.).⁽⁶⁾ Information regarding these grantees is gleaned from two primary document sources the "Archives of Ontario's Computerized Land Record Index's Alphabetical Listing" and the Fitzroy Township Papers.⁽⁷⁾ These sources provide personal information, including potential settler's place of origin, the reason for his request and often his relationship with other grantees. From the origin of request, to grant, to patent, and then

subsequent first sale an intensive analysis of the timing of settlement, lot acquisition, and grantee motivation can be deduced.⁽⁸⁾

The record groups described above are the base for the analysis of land acquisition in the early phase of settlement. From them we can ask who acquired land, where were they from, what was their relationship to the surveyor, and what was the quality of the land that they acquired? In the early phase those acquiring the land were first and foremost Militia Officers, followed distantly by the Children of United Empire Loyalists (C.U.E.L.),⁽⁹⁾ and following in the social order of the granting system, the common militiamen and immigrants. These four groupings follow to some extent a social and economic division of the society. Officers were often in a position of local authority and grants of between 400 and 1,200 acres supported their status.⁽¹⁰⁾ There exists only limited overlap between the four social groupings of grantees, with only one, John Grant, receiving both an Officer's grant and a C.U.E.L. grant. There was no overlap of grantees between militiamen and immigrant groups. In this district, the C.U.E.L. commonly received grants of 200 acres. The militiamen, depending upon their rank, acquired grants of between 100 and 200 acres of land, while the bottom of the social scale of granting privileges the immigrant, received a mere 50 acres.⁽¹¹⁾

The early grantees can also be divided along territorial lines. The grantees came from across south eastern Ontario and particularly from the first settled townships north of the St. Lawrence River (Table 5.3). The majority though came from Elizabethtown Township and the Town of Brockville, in that township. These grantees were the relatives,

business associates, and neighbours of the surveyor Reuben Sherwood. The location of the major grantees shows the cohesiveness of particular social groups in their lot selections. The factors of physical proximity of the grants and the nature of the lands acquired provide insight into the early grantees' decision making and motivation.

The location of the early grantees leads to the question of accessibility mentioned by Gentilcore.⁽¹²⁾ Although complications exist in the data which makes the analysis of the distances of lots to access routes complex the analysis is revealing. The chapter concludes by testing the second half of Gentilcore's hypothesis that settlers in the second phase acquired better quality locations for farming than did earlier locatees.⁽¹³⁾ The data base used in these sections include archival map sources, which indicate the earliest roads and point to the use of the rivers for transportation, and soil and vegetation lot quality indicators. Testing of the improved locating ability by settlers in the second phase uses the 1842 Census locations and the squatters' locations prior to 1840. The squatters' locations are derived from an intensive review of letters and reports filed in the Fitzroy Township Papers. These locations represent independent decisions made by settlers on the quality of the lot they desired to occupy, regardless of its legal status. If the lot was empty they felt that through their physical working of the land the Government would see fit to provide for them.⁽¹⁴⁾

The use of patent dates extracted from the "Abstract Index to Deeds" allows for a final testing of the relationship between soil quality and lot acquisition. In this test analysis of variance is used to interpret the relationship between patent dates and land quality. It

is assumed that those lots with the best soils would be first patented under normal economic conditions. Through this extensive review of the documents the relationship between surveyor, speculator, government officials, and settlers as regards lot locations will have been examined.

Lot-Acquisition 1823-1825: The Early Phase

In the discussion of Lot 23 in the ninth concession Reuben Sherwood informed the Government that he had quit claimed the lot to Billa Flint and others. Through the records of the J.D.L.B. and supporting evidence the probable identity of these land speculators can be revealed. The starting point for this investigation is the Town of Brockville which in 1808 became the Johnstown District Town.⁽¹⁵⁾ Although Carleton County had been separated from the Johnstown District and made part of the Bathurst District by proclamation on 13 November, 1822, the J.D.L.B. records indicate that Brockville continued to control land granting until 1825. As the author's compilation (Table 5.1) shows, the J.D.L.B. granted 25,037 acres of land to 119 recipients; or approximately forty percent of the township between 1823 and 1825. This was not an equitable distribution of land. The average grant size clearly indicates the perceived importance of specific groups at the time. Militiamen received a little less than double that of immigrants. Children of United Empire Loyalists roughly double that of the common soldiers and Officers roughly 2.5 times that of the Loyalists.

If we combine the J.D.L.B. grants with the 1,880 acres quit claimed to Billa Flint, the 5,000 acres granted to the Sherriff family, and the Crown and Clergy Reserve of 15,418 acres, approximately 75 percent of

FITZROY **Lands Granted or Reserved**
TOWNSHIP **Johnstown District Land**
 Board ca.1825
 Map 5.1

GRANTED TO:

- B** Billa Flint
- U** United Empire Loyalists
- O** Military Officers
- Militiamen
- Immigrants
- ⊕** Conflicting Grants.

RESERVED FOR:

- ▨** Charles Sherriff
- Clergy Lands
- ▤** Crown Lands
- Crown to King's College; 1827
- ▩** Conflicting Claims

SCALE IN
MILES 1

Source: AQ-RG 1 C-1-4-
Vol. 19

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Lots and Acreage Granted in Fitzroy by the
Johnstown District Land Board, 1822-1825

	<u>Militia</u> <u>Officers</u>	Children of United Empire <u>Loyalists</u>	<u>Militia</u>	<u>Immigrants</u>	<u>Total</u> <u>Grants</u>
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the township's lands are accounted for (see Map 1). In contrast the population in 1831 was 331; approximately 143 acres of granted or reserved lands for every man, woman and child in the township.⁽¹⁶⁾ We can assume that a fair amount of Fitzroy's land was owned by non-residents.⁽¹⁷⁾ Let us begin to analyze this position by reviewing the early grants made by the J.D.L.B..

Of the 25,037 acres of land granted by 1825, 13,637 acres or 54.5 percent went to 24 Militia Officers who had served primarily with the Leeds and Grenville regiments during the 1812 War.⁽¹⁸⁾ Thirteen of these twenty-four recipients were residents of Brockville and

Table 5.2

The Brockville/Elizabethtown Township Speculators
Active in Fitzroy, 1823-1825

	<u>Acres</u>	<u>Connection</u>
<u>The Jones-Sherwood Connection</u>		
Hon. Charles Jones (Capt.)	800	Son of Ephraim Jones
Hon. L.P. Sherwood (Lt. Col.)	600	Married Charlotte Jones
Dr. Elnathan Hubbell (Surgeon)	1,000	Married Lucy Jones
Captain John Stuart	800	Married Sophia Jones
Billa Flint	1,880	Formal arrangement with R. Sherwood brother of L. P. Sherwood
<hr/>		
Col. Joel Stone	1,200	J.D.L.B. Senior Regimental Officer
Lt. Abraham Dayton	500	Stepson of J. Stone
Lt. Allan Grant	500	U.E.L.
Lt. John Grant	700	C.U.E.L. Son of A. Grant
Lt. Alexander Morris	500	Brother of Wm. Morris
Hon. William Morris (Ensign.)	350	First Warden - Johnstown District
(1,750 acres, 1836)		
Capt. Sylvester Wright	800	
Ensign. Z. M. Phillips	400	
Ensign. John Kilborn	500	Clerk, Merchant in Brockville
Lt. John McLaren	500	U.E.L.
Total Acreage Granted 1823-1825	11,030	

Source: Compiled by author.

Elizabethtown Township and received 7,950 acres of land (Table 5.3). Also closely associated with these thirteen officers were Billa Flint, a Brockville merchant, and Colonel Joel Stone, "founder" of Gananoque (Table 5.2). The linkage between Billa Flint and the Jones-Sherwood connection is not fully understood. That Flint had a special and long

standing arrangement with the surveyor R. Sherwood, acquiring lands paid to Sherwood in surveyor's land script is known. That Henry Jones, an employee and second cousin of Charles Jones, was involved in a series of quit claims and bargains and sales with Flint and Sherwood involving Lot 23 in the ninth concession points to a Jones-Flint partnership.⁽¹⁹⁾ Flint would appear to have been a successful Elizabethtown township innkeeper and active land speculator.⁽²⁰⁾ He also was involved in various merchantile activities, holding commercial licenses for fishing and timbering in the areas north of Fitzroy.⁽²¹⁾

The relationship between Stone and the Brockville elite would appear to have been of a mixed nature. We know that Reuben Sherwood had visited and done private work for Stone.⁽²²⁾ Stone's stepson Abraham Dayton was an active Brockville merchant and Stone was actively involved with the Johnstown District courts. Atkinson notes that on 21 May, 1811, Billa Flint, James Breakenridge, Levi Soper and Joel Stone were respectively charged with blasphemy, extortion, assault, battery and riotous assault, and compound larceny.⁽²⁴⁾ All charges were heard before and dismissed by the sitting judges, Breakenridge and Stone. Soper, Flint and Stone in 1825 controlled 3,505 acres of land in Fitzroy. Stone was one of the five men appointed to the Johnstown District Land Board, along with the Chairman Solomon Jones, Reuben's brother Adiel Sherwood and fellow Fitzroy grantees Charles Jones and Jones' brother-in-law Dr. Elnathan Hubbell.⁽²⁵⁾ While Stone had business dealings with Flint and Sherwood, and Jones had transactions and marital connections with Hubbell and Sherwood, a positive Stone-Jones connection appears unlikely. Of Charles Jones, Stone gives the following description:

there has been many things said of Charles Jones, Esq., for many years past respecting his oppressing the poor, taking away their lands, making himself opulent on their ruin etc.⁽²⁶⁾

Atkinson notes that Jones and Stone figured prominently in court actions and that such episodes "initiated by greed and compounded by opportunism and incompetence, were highly destructive of the trust necessary to make the local economy and social system work."⁽²⁷⁾ Obviously mistrust could be overcome when joint efforts lined both men's pockets; in 1825 Jones and Stone took advantage of their seats on the Johnstown District Land Board and greedily acquired acreage on neighbouring lots in Fitzroy.

The Jones Family connections also included Rueben Sherwood's brother L. P. Sherwood, who married Charlotte Jones and Captain John Stuart, husband of Sophie Jones; Lucy Jones being Dr. Hubbell's wife (Table 5.2).⁽²⁸⁾ A further analysis of the family connections within the Brockville area grantees finds the father and son combination of Allan and John Grant,⁽²⁹⁾ and the brothers William and Alexander Morris.⁽³⁰⁾ William Morris left Brockville shortly after his initial grant and proceeded to Perth. It was from Perth that Wm. Morris in 1836, acquired a grant of 1,760 acres in Fitzroy fronting along the Ottawa River and the Mississippi River Syne west of Fitzroy Harbour.⁽³¹⁾ John Kilborn was a clerk for the merchant Roderick Easton of Brockville at the outbreak of hostilities in 1812 and by 1814 had been promoted Ensign in Captain Thomas Fraser's command.⁽³²⁾ Kilborn appears after the war as a supplier for the immigrants moving into Perth and then again in the Rideau Canals at Kilmarnock.

The connectivity of the primary group of Brockville land grantees is clearly illustrated on Buell's map of 1816.⁽³³⁾ Along a 600 foot stretch of the King's Highway in Brockville are to be found the residences of C. Jones, L.P. Sherwood, Flint, Hubbell, the Morrises, and the surveyor Rueben Sherwood. This key grouping again appears on Map 5.2 showing the location of Brockville grantees in Fitzroy. With the exception of Billa Flint's lots which were randomly drawn,⁽³⁴⁾ these men located exclusively along the Mississippi River and into the northwest quarter of the township. John Kilborn's 500 acres are also strategically located here; while Joel Stone and his stepson have three of their eleven lots in this quarter. The remainder of the Stone-Dayton locations are scattered in pairs across the central concession of the township. This pairing of lots appears to be a common pattern, Wright having taken two four hundred acre lot groupings; being Lots 7 and 8 in the fifth, and the fifteenth lot in the sixth and seventh concessions. Clustered holdings are apparent in the cases of Allan Grant with 500 continuous acres, John Grant with 700 acres fronting on the seventh concession, and John McLaren, who acquired a 500 acre block to the east of John Grant.

Place of Origin of Fitzroy Grantees

The dominance of the Brockville area grantees in this land rush is further emphasized by the place of origin of the early land grant requests (Table 5.3). Of the twenty-five places of origin listed Elizabethtown township, with its focal point Brockville, is noted on 37 occasions. Augusta township to the east, including Prescott, is mentioned on 17 occasions, while Edwardsburgh the third in magnitude drops

FITZROY TOWNSHIP

Lots Owned by the
Brockville Elite
Map 5.2

1823 Large Grantees J.D.L.B.

■ - Jones-Sherwood
Connection

■ - Billa Flint

■ - Other Brockville
Large Grantees

■ - Local Canada Company Lots

■ - William and Alexander
Morris

■ - Stone-Dayton

■ - Allan and John
Grant

SCALE IN MILES

0 1 2

Source: Compiled by Author

Table 5.3

Place of Origin for Fitzroy Township Grantees

<u>Upper Canada</u>		<u>Percentage of All Grantees</u>
Elizabethtown Twp. (Brockville)	38 4	34.25
Augusta Twp. (Prescott)	15 2	15.74
Edwardsburgh Twp.	8	7.41
Matilda Twp.	6	5.55
Williamsburgh Twp.	4	3.70
Charlottesburg Twp.	4	3.70
Montague Twp.	4	3.70
Cornwall	4	3.70
Perth	4	3.70
Montreal	3	2.78
Landsdowne Twp. (Gananogue)	3 1	3.70
Yonge Twp.	2	1.85
Roxborough Twp.	2	1.85
Wolford Twp.	1	0.93
Osnabrock Twp.	1	0.93
South Gower Twp.	1	0.93
Hull	1	0.93
McNab Twp.	1	0.93
Lanark Twp.	1	0.93
York	1	0.93
Pakenham Twp.	1	0.93
Ottawa	1	0.93
Total Locations 25	108	

Source: Compiled by Author, from the
A.O., Alphabetic Listing of
Grantees, F.T.P., and R.G.1, C-
1-4, Vol. 19.

again by more than half to 8 requests. Increased distance away from Brockville, the District town and home of the surveyor, appears to play a major role in the dissemination of information concerning the availability of good lands in the new township of Fitzroy. By twenty miles east of Brockville in Matilda Township the number of requests granted drops to six and then to four in Williamsburgh Township. The gradient is even steeper westward of Elizabethtown Township, with Yonge Township presenting only two requests and Leeds-Landsdowne four. With the exception of Montague Township and Perth Town no townships north of Brockville makes frequent requests for lands in Fitzroy. The number of requests from urban centres such as Cornwall, Perth, and Montreal illustrates the increased level of land information available in administrative and commercial centres.

Land Acquisition from the Top Down

Did position, privilege and proximity result in better lot acquisitions for those so placed? Certainly, the Militia Officers obtained the majority of the lands granted to 1825, but did they acquire land with greater potential than those obtained by the other ranks or by immigrants? Two hypotheses can be tested using the 1823-25 grants. First the relationship between social status and quality of the lot obtained by grant can be investigated. If class and position influenced the granting procedure then we could expect to find Officers and the Loyalists grantees acquiring better land than the Militiamen and Immigrants. If on the other hand the observed land quality by lot is equal to that which could be expected then an explanation other than social position must be sought. Secondly, Gentilcore's opinion that government

direction resulted in land granting indiscriminate of the physical environment can be tested.⁽³⁵⁾ If this is the case we would expect to find that no difference exists between the observed and expected frequencies of grants when judged by land quality.

Social Class and Land Quality

The first hypothesis postulated is that the social groupings of the grantees are associated with specific land qualities. If this is the case then it can be expected that those in positions to do so exerted their influence to obtain the best locations. Land quality is analyzed here on the basis of three soils classes as noted in chapter three, Table 3.9; while the four social groupings relate to the classes of grants made by the Land Board. The chi-square statistic is used to test the hypothesis.

Results of Chi-Square Test

As shown on Table 5.4 the observed frequencies differ only mildly from those that could be expected. The null hypothesis that no relationship exists between the social groupings and the quality of lots acquired can not be rejected given a chi-square of 1.75 with six degrees of freedom at the 95 percent confidence level.

The Militia Officers as a whole did not receive better quality lots than did any other of the social groupings. This should not be taken to mean that lots were allocated indiscriminately; at this point one can only state that no social group received better quality lots. The second hypothesis that land grants in the early phase were associated with land quality regardless of social groupings implies that the

2

1.0

1.1

1.25

2.8

3.2

3.6

4.0

4.5

5.0

5.6

6.3

2.5

2.2

2.0

1.8

1.6

1.4

1.6

Table 5.4

Chi-Square Analysis of the Relationship between Grants 1823-25
by Social Group and the Quality of Land Acquired

Quality	(1)		(267)		(3458)		
Lots to:	Good Land		Fair Land		Poorest Land		
	Observed	(Expected)					
Officers	41	(41.1)	20	(18.1)	12	(13.9)	73
United Empire Loyalists	14	(14.1)	5	(6.2)	6	(4.7)	25
Militia	11	(11.1)	4	(5.0)	5	(3.8)	20
Immigrants	11	(10.7)	5	(4.7)	3	(3.6)	19
Total	77		34		26		137

Not significant at .05

$$\chi^2 = 1.7516$$

Source: Compiled by author.

J.D.L.B. directed settlers to specific lots as they chose them. If the Land Board members were interested in promoting rapid settlement (and so a land market for their extensive speculative holdings) it is reasonable to expect that they would have directed prospective settlers to lots showing good potential for agriculture. The locations selected by the Jones-Sherwood connection indicates an intensive interest in mill seat locations along the Mississippi River. As these gentlemen sat on the Land Board it can be expected that they would locate prospective

settlers on lots which had the advantages of land quality and proximity to their mill sites. Table 5.5 shows the significant difference between the observed lot locations (137) and those that could have been expected under random lot selection. These latter values were generated by multiplying the total number of granted lots by the appropriate percentage of all lots in soil groupings one through 2, 6, 7, and 3, 4, 5, 8. Given 137 lots in the best soil grouping (1) we would expect that 58.6 lots out of 137 would have been selected by the J.D.L.B. under random lot selection procedures. This figure is considerably less than the actual number of good quality lots granted by the board. Likewise the

Table 5.5

Chi-Square Analysis of the Relationship between the Observed and Expected Frequencies of Lot Quality Granted by the J.D.L.B.

Soils Groupings	Observed in Township	Percentage of All Township Lots	Observed J.D.L.B. Grants by Soil Quality	Expected Grants by Soil Quality
1	139	(42.77%)	77	58.595
2, 6, 7	66	(20.31%)	34	27.825
3, 4, 5, 8	120	(36.92%)	26	50.580
Total	325	100%	137	137.000

Significant at .01

$$\chi^2 = 19.096$$

Source: Compiled by author.

board successfully avoided the poorest quality lots when making their grant locations.

The chi-square value obtained (19.06) is significant at .01 level given two degrees of freedom and confirms the hypothesis that grants were made with land quality for agriculture as a prime prerequisite.⁽³⁷⁾ We can conclude that J.D.L.B. members regularly located grantees upon the better lands in the township. In contrast to Gentilcore's commentary we conclude here that government direction of settlement was sensitive, not indiscriminate, of the physical environment. In Fitzroy this sensitivity would appear to be directly related to the efforts of the government officials; an action which can be recognized as being not purely philanthropic in nature.

The surveyor's role in land speculation and selection is becoming apparent. The major speculators in Fitzroy are the surveyor's brother, his in-laws, their neighbours, fellow Militia Officers, and business partners. The J.D.L.B. acting with Sherwood, as noted in their instructions, consistently located grantees on good lands which would be advantageous to government official/speculator and settler. The significance of the connection of Rueben Sherwood and the land speculators of the Brockville area can be illustrated by an analysis of this group's lot acquisitions. To this end comparisons will be made with the non-Brockville area large grantees and with the small grantees of Elizabethtown Township.

Analysis of Brockville Area Elites' Locations

The hypothesis is postulated that the Brockville area elite acquired a significantly greater number of better quality lots than other

large grantees. In this analysis of the Brockville area elite the lots acquired by Billa Flint are not included as they were drawn randomly. The non-Brockville sample also includes the locations of the Naval Purser and C.U.E.L. Arthur Gifford of Prescott. The two samples are fairly equal in size, the Brockville sample numbering 50 the latter one 40.

Results of the Test

The results of the chi-square (6.722) is significant at the 0.05 level with two degrees of freedom (Table 5.6).⁽³⁸⁾ We can reject the null hypothesis which states: there is no significant difference between the quality of lots granted to the two large grantee groups. The Brockville area elite did acquire significantly more good quality land locations and judiciously avoided the poorest quality lands unlike the other large grantees.

Analysis of the Brockville Area Elite and the Common Grantee

Was this level of lot quality acquisition merely significant for the Brockville elite or would knowledge of the terrain in Fitzroy have been equally available to the residents of Elizabethtown township? A second chi-square test indicates that the level of good quality lot acquisitions by the Brockville area elite was unique. The average Elizabethtown township resident might have known that Fitzroy held great promise but as a group they appear not to have been able to compete with the elite. The value for chi-square of 16.825 was greater than required for significance at the .001 level with two degrees of freedom (Table 5.7).⁽³⁹⁾ The null hypothesis that there was no difference in the

Table 5.6

Chi-Square Analysis of the Relationship between Lot Quality and
Militia Officer Grantee Groupings

Land Quality	Observed Lot Acquisitions by Brockville Area Elite		Observed Lot Acquisitions by Other Militia Officers		Total
	(Observed)	(Expected)	(Observed)	(Expected)	
1	35	(29.444)	18	(23.556)	53
2, 6, 7	10	(11.667)	11	(9.333)	21
3, 4, 5, 8	5	(8.889)	11	(7.111)	16
Total	50		40		90

Significant at .05

$$\chi^2 = 6.722$$

Source: Compiled by Author.

quality of lots acquired by the Brockville area elite and the common Elizabethtown Township grantee can be rejected. A review of the observed and expected frequency of grants for the small grantees indicates that these men would have gained little satisfaction from the lands they obtained. The observed and expected values for the two groups would appear to be exactly reversed for the poorest soils group. The large

Table 5.7

Chi-Square Analysis of the Relationship between the Quality
of Land Selected by Brockville and Elizabethtown Large Grantees of
400 Acres or More and Small Grantees of Less than 200 Acres

Land Quality	Brockville Area Large Grantees		Elizabethtown Township Small Grantees		Total
	(Observed)	(Expected)	(Observed)	(Expected)	
1	35	(29.861)	8	(13.138)	43
2, 6, 7	10	(8.333)	2	(3.767)	12
3, 4, 5, 8	5	(11.805)	12	(5.194)	17
Total	50		22		72

Significant at .01

$$\chi^2 = 16.825$$

Source: Compiled by Author.

grantees received five poor lots when twelve poor lots could have been expected, the opposite being the case for the small grantees.

These two tests statistically support the hypothesis that the Brockville area elite acquired significantly higher frequencies of the better quality lots than did other grantees. The dominance of this group in lot acquisition points directly to the surveyor as an active agent in land speculation, as well as to their connections with the Land Board. We can conclude that the Brockville area elite grantees with

their close connections to the surveyor and the Land Board rapaciously consumed Fitzroy, using privilege, position, and above all else knowledge, to fill their portfolios with the choicest locations in the township.

A Question of Physical Access

Land accessibility has traditionally been dealt with by historical geographers as the relationship between variables of settlement development and physical distance. Explanation of settlement patterns has generally emphasized the testing of distance to road, rivers, town sites, and other settlement foci.⁽⁴⁰⁾ This thesis takes a different approach to accessibility by stressing the concepts of legal and social access to land.⁽⁴¹⁾ It is this author's opinion that the use of physical distance measures in explanation of settlement patterns provides the most favourable of explanations for analysis of lot value, productivity, and settlement density. But access to land involves more than just physical distance from various points. It must also be understood as legal access to land, particularly in light of the large scale speculative activity and the increasing awareness of the large percentage of resident non-land owners who occupied farm lands in Upper Canada.⁽⁴²⁾ Social access in the nineteenth century is closely aligned with legal access. To purchase land one required capital, but capital is known to have been in short supply.⁽⁴³⁾ Social access to land leads us to ask who acquired land, where, and how? Being in a legally and socially advantageous position in Upper Canadian society is generally acknowledged as a primary prerequisite for land speculation. But what of the common settler, did social complications, particularly ethnic group

tensions, block his access to the land? Access to the land as discussed above will be the topic of later chapters. The focus here is upon Gentilcore's hypothesis that "environmental advantages, even when perceived were outweighed by other considerations, particularly accessibility and direction of settlement."⁽⁴⁴⁾

Getting about in Early Fitzroy

Fitzroy prior to 1830 was a sparsely settled township with limited road connections to the small hamlets of Fitzroy Harbour and to the west, Pakenham Village. Fraser noted that settlers from McNab were forced to journey to Hubbell's Falls or even Pakenham Village on foot for milling and market necessities.⁽⁴⁵⁾ Such travel was an arduous and time consuming activity. Travel in the township, as well as access to it, were best handled by river transportation.⁽⁴⁶⁾ The grants made by the J.D.L.B. to the Brockville area elite show the importance of navigable rivers in grantee locations. Almost all of the lots selected by this group were accessible from the Mississippi, Ottawa, Carp, and even Madawaska Rivers. But even river front access could not open lots for settlement if a haze of legal complications hung over the land. The Sherriff properties along the Carp and Ottawa Rivers, although admirably located, were still comparatively unoccupied by 1842. In this situation physical accessibility is of less importance in explaining settlement than is legal access. The Sheriffs throughout the early phase of settlement preferred to lease their properties rather than sell them.⁽⁴⁷⁾ They had also used their lands as collateral on a mortgage with Henry Atkinson and Company. Atkinson's foreclosure on some 2,750 acres in

1842 led to serious complications in land deeding, sales, and tax collection for the next decade.⁽⁴⁸⁾

Gentilcore's physical access hypothesis can be tested for Fitzroy by comparison of the locations of early grantees against an approximation of through roads as illustrated on the earliest road map for the area (Map 3). The roads in all probability post date the earliest grants, but are contemporary with the patent dates and first sales of many of the major grantees. The average distance to the closest road in Fitzroy, using all lots, was 0.88 miles. This is certainly not a great distance. The maximum distance one would have to travel was 3.1 miles, while the minimum was one tenth of a mile. In contrast the average distance to the closest road for those lots granted by the J.D.L.B. was 0.623 miles. This difference in the population mean and the sample mean was tested to see if it is significantly different using a standard t test.⁽⁴⁹⁾

The "t" value obtained was significant for a one-tailed test at the .0005 level.⁽⁵⁰⁾ The mean distance to a road for the 1823-25 grantees was significantly less than the population mean. Indeed all four classes of grantees' means fell within one standard deviation of the sample's average and can all be argued to be statistically significant (Table 5.9). From this evidence we can conclude that in the early phase grants were closely related to the existence of the existing roads, with those lots granted to immigrants and militiamen being physically closer to roadways than those granted to Loyalists and Militia Officers.

In light of the timing of road construction and the low average distance to the nearest road it is probable that the J.D.L.B. officials

Table 5.9

Average Distance to Road for the Four Classes of Grants
Made by the Johnstown District Land Board 1823-1825

<u>Grant Class</u>	<u>Average Distance To Nearest Road</u>
Children of United Empire Loyalists	0.672 miles
Militia Officers	0.673 miles
Immigrants	0.505 miles
Militiamen	0.490 miles

Source: J.D.L.B. Grants
 Compiled by Author.

and possibly speculators had direct input into road planning. Fraser in an analysis of the Laird McNab's policies in McNab Township bordering northwestern Fitzroy, notes:

Judge Ritchie of Fitzroy and the Laird had brought all of the statute labour requirements under the Lairds own plans, including the development of the Arnprior road ... When the path masters and Town clerks argued against such a plan at the Honourable William Morris's Quarter Sessions Court in Perth, Morris enraged and through the petition of the settler's under the table.⁽⁵¹⁾

Fraser also informs us that Billa Flint had extensive holdings in McNab and that it was L.P. Sherwood who suggested to McNab that if he settled the township it would be named after him and would be his to manage.⁽⁵²⁾ The proximity of McNab Township to these mens' holdings in northwestern Fitzroy indicates the development potential that they envisioned for the area. It is not improbable that they used their influence when possible to advance the value of their speculative holdings.

Access Closed

While the statistical analysis supports the hypothesis that early grantee locations were positively related to physical access as measured by distance to road, it can not be strongly stated that Gentilcore's argument can be supported or refuted. Firstly, the road system is not known to have existed before the date of granting, nor patenting of many of the early grantee's lots. It is likely that roads were directed where access was most difficult or most highly prized. Secondly, early access to Fitzroy was readily advanced by the existence of navigable rivers flowing by and through the township. That individual lot access was impeded by the lack of cut side roads and concession lines is to be expected in a new township. Certainly lots with road access would have been acquired at the earliest date, but we can not be certain that suitable grant locations were not the reason for the road's location!

Survey proceeded general settlement in Fitzroy but it would appear that government direction of settlement, through land granting preceded the question of physical access by road.

Size of Grant, Motive, and Land Quality

Throughout the chapter the terms grantee and settler have been used independently of each other, for to receive a grant does not necessarily equate with settlement. The size of grant information (Table 5.10) indicates a break between large grantees of over 400 acres and small grantees of 200 acres or less. This natural division in the size of grants supports Clarke's 400 acre threshold for determining the existence of speculators.⁽⁵³⁾ While Brunger used a 500 acre level for recognition of speculators and Widdis argued that motive not size is most

significant in the recognition of speculators, the natural break of under 200 acres and above 400 leads the author to follow Clarke's method for recognizing speculators.⁽⁵⁴⁾ The nature of land speculation in Upper Canada favours the use of an arbitrary level of acreage owned for the recognition of significant speculators. The widespread nature of speculation requires that some generalization is required in order to handle the volume of speculative activity, even at the township level.

The hypothesis first postulated was that size of grant would bear some relationship with the quality of land acquired. Chi-square was used to test the null hypothesis that no relationship existed between the size of grant, be it large or small, and the quality of land acquired. A resulting chi-square value was obtained of 1.048 with two degrees of freedom (Table 5.10). This was insufficient to reject the null hypothesis. It appears that the influence one had in acquiring large grants did not carry through to lot quality selection; all large grantees fairing no better than all small grantees. With the exception of the Brockville area elite the large grantee's group did not acquire significantly more good land than would have been expected.⁽⁵⁵⁾

What can size of grant information reveal about the nature of speculation and settlement? Is it correct to assume that large grantees are less likely to become settlers than small acreage grantees? Utilizing origin of grant, patent date and transactions it is possible to gain an understanding of the nature of the grantee's motives concerning lot acquisition. The small grantees readily divide into two groups: Upper Canadian residents with militia or loyalists grants and immigrants. Of the Upper Canadian residents the largest single group are the Elizabethtown small grantees numbering 22 grants and totalling 3,050

Table 5.10

Chi-Square Analysis of the Relationship between Size of Grant
And Lot Quality Selected for above 400 Acres and below 200 Acres
Grants in Fitzroy Township

Land Quality	Large Grantees — 400 Acres		Small Grantees — 200 Acres		Total Land Quality Observations
	Observed	Expected	Observed	Expected	
1	59	(62.31)	36	(32.69)	95
2, 6, 7	32	(30.17)	14	(15.83)	46
3, 4, 5, 8	31	(29.52)	14	(15.48)	45
Total	122		64		186

Not significant at .05.

$$\chi^2 = 1.048$$

Source: Compiled by Author.

acres of land. While it might be expected that they would see these grants as a windfall, patenting and first sales data discounts this line of thought.

In comparison to the large grantees of Brockville, these small grantees were even less inclined to become settlers in Fitzroy. Lot patents were acquired by the sample group as early as 1827, but more commonly between 1836 and 1838. Five of the grantees never fulfilled their settlement duties while another sold his location to Billa Flint prior to patenting. Of the sixteen who did patent fifteen can be traced through to the first sale of the lot. Seven of the fifteen sold

their newly patented lots within three years. Four of the remaining eight sold between six and nine years, while the final four continued on the Abstract Index to Deeds listing until the lot was removed from their possession by death or by a Sheriff's deed poll. None of these small grantees of Elizabethtown Township appears to have permanently resided in Fitzroy.⁽⁵⁶⁾ The one remaining patentee George Lorence or Lantz disappears from the Abstract Index to Deeds after patenting, no subsequent sale being recorded.

We can conclude that this group of grantees were not lured to settle in Fitzroy by grants of 100 or even 200 acres of uncleared forest lands. They had served in the War of 1812-14 and must have been reaching adult maturity by the time the grants were made. Even the youngest enlistee of eighteen in 1812, would have been thirty-one by 1825; he was probably married, actively involved in farming and well established in his business connections. To this grantee the lands of Fitzroy would merely be an investment for the future, payment for services, long overdue! Fitzroy to these men was not the new frontier.

A clear indication of the timing involved in the grantees' acquisition and subsequent first sale is given on Table 5.11. The table is divided into two sections based upon who acquired the patent of the lot granted. Reading from left to right we note that of 81 officers 80 acquired the patent to the lot which was granted to them. On average they took 6.75 years to acquire the patent and 8.1 years thereafter to sell the lot. On the right side of the table we see that only one Militia Officer's lot was not patented by the grantee. Of the four classes of grants only the Immigrants show a high frequency of not acquiring the patents for lots granted to them (61.5%). The other three

Table 5.11

J.D.L.B. Grants Time Lapse Grant-Patent-First Sale

Social Grouping	Number of Granted Lots Observed	Grantee and Patentee the same			Patentee Different than Grantee		
		Number of Observations	Years Elapsed Grant to Patent	Years to First Sale	Number of Observations	Years Elapsed Grant to Patent	Years to First Sale
Officers	81	80	6.75	8.1	1	15.0	17.0
C.U.E.L.	26	20	9.6	5.8	6	15.3	1.6
Militia	32	26	8.6	2.75	6	19.0	6.0
Immigrants	39	15	11.6	5.4	24	19.0	24.8

Source: A.O., R.G.1, F.T.P.; J.D.L.B., Grants 1823-1825;
 Abstract Index to Deeds, for Fitzroy Township.
 Compiled by Author.

classes of grantees show a far greater ability to have the patent issued in their name. These established grantees could probably afford to have their settlement duty done by others.⁽⁵⁷⁾ And if need be, they were in a position to have the due date of the settlement duties postponed. Charles Jones and Elnathan Hubbell received just such an extension in 1830 for "one more" year, their patents not issuing till 1835 and 1836.⁽⁵⁸⁾

Once the grantee had acquired the patent we find that he generally sold shortly afterwards. The average immigrant would have taken till 1837 to acquire his lot but sold it by 1843. The Militiamen, mainly representing settlers in Leeds and Grenville Counties sold their lands in less than three years or by 1836. The year 1838 marks the date of the sale of the average loyalist grant.

Officers though do not neatly group around the average years to first sale. The figure of 8.1 years to first sale marks an average between two modes marked by the parameters 0 to 2.5 years and 23 to 30 years to first sale. Zebra Phillips and Joel Stone, neither of whom were young men at the time they received their grants, sold their lots within one and 2.5 years, respectively. To this group of early first sales can be added Levi Soper who patented in 1828 and sold all four of his lots in 1829 and Duncan Campbell who sold his locations within months of acquiring the patents. These men generally sold to other speculators, Campbell selling to Andrew Dickson of Pakenham,⁽⁵⁹⁾ Soper's lands being acquired by Richard Ennis. Ennis in turn sold to settlers and speculators amongst whom was Charles Jones. Stone's 1,200 acres were mainly sold to Archibald Campbell of Adolphustown⁽⁶⁰⁾ and William Stone MacDonald of Gananoque.⁽⁶¹⁾ Hamilton Lowery of north Huntley

acquired two of Stone's lots along Fitzroy's south boundary line, which he actively began to farm.⁽⁶²⁾

Not all of the fast to first sales grantees were actively advancing their private speculative ventures. Thomas Fraser sold his lands shortly after the patent was taken out; on this rarest of occasions, the lands were acquired by his son. The letter specifying settlement duties having been compiled was signed by Thomas Fraser Junior and this gentleman, his wife and son, Thomas Fraser III remained active owner-occupiers in Fitzroy.⁽⁶³⁾ Family patterns though did not always hold true: while, Allan Grant sold his lands within one year of patenting, his son John Grant remained settled in Fitzroy for 33 years. His land being acquired by his son Allan Grant.⁽⁶⁴⁾ William and Alexander Morris represent land owners who sold some lots after a short period, 3 to 7 years, while holding others for up to 26 years.

Certainly the quartet of Billa Flint, L. P. Sherwood, Elnathan Hubbell and Charles Jones represent the classic stereotype of the patient unrelenting land speculator. Jones held his lots for up to twenty years, Hubbell up to twenty-three years, while Sherwood and Flint could only be parted from their lands by death.

Flint during his lifetime was a despotic nonresident speculator, regularly demanding of the County Sheriff that his lots be "swept clear of squatters". In 1851 one Michael Steep wrote to the Crown Lands department that "a Flint in Broyvil is stirring to impose on me for rent as I suppose it do not to be his."⁽⁶⁵⁾ Steep never acquired Lot 18 in the first concession⁽⁶⁶⁾ nor was Flint's removal of this squatter long

savoured, his lands being acquired by his principal heir Sally Beach in 1852.⁽⁶⁷⁾ For twenty-six years Flint held 1,880 acres of land in Fitzroy making no appreciable advancements upon them.⁽⁶⁸⁾

Of the Hubbell, Jones, and Sherwood lots along the Mississippi River, the Beldon Atlas of Carleton County offers a most fitting eulogy:

Galetta ... was originally Hubbell's Falls after Dr. Hubbell of Brockville, who leased in 1823, the lot on which water privileges at the Falls were situated from the Clergy Reserves for a period of 21 years. He did nothing with the property, however, till 1832, when he sold his goodwill to James Steene, who at once built a mill there.⁽⁶⁹⁾

Little of the above information would appear to be supportable using the township records, but undoubtedly the spirit of the statement is true. Hubbell was granted this lot in 1823 by the J.D.L.B. although he did not acquire the patent until 1847.⁽⁷⁰⁾ In compensation to the Clergy Reserves Lot 12 in the 1st concession was added to their lands.⁽⁷¹⁾ Hubbell may have sold his goodwill to Steene but the "Abstract Index to Deeds" records him deeding the lot to James Hubbell, barrister. It was James Hubbell who sold the east half in 1865 to Rosanna Steene.⁽⁷²⁾ This action by Hubbell of selling his goodwill or leasing the land is a common pattern for men such as Hubbell, Jones, Sherwood, and others; when someone else was willing to make an investment on their lands they would be more than willing to assist.

Not all large grantees were motivated by land speculation alone. The sons of Allan Grant and Thomas Fraser became active farmers managing their large estates personally. Herman Landon an early mill owner on the Carp River had sold his large grant off to numerous relatives during the early 1830's. By 1842 only one family member John Landon then 58

years of age remained, located at the mill site on Lot 16 in the ninth concession.⁽⁷³⁾ The fact remains though that few grantees, nor their sons, actively pursued land settlement in Fitzroy.

The records for continuity of lot holding indicate that even immigrants showed little enthusiasm for settling in Fitzroy. The majority of the immigrants never drew their lot patents, while those that did sold at the first opportunity. Fully 53 percent of the immigrants sold within one year of patenting.

Grant Size Concluded

The J.D.L.B. may have successfully granted 25,037 acres of Fitzroy Township within two years of its opening but failed miserably in attracting anyone other than large, medium, and small scale speculators. The first date of sale information (Table 5.11) clearly shows that all too few grantees were interested in acquiring land for permanent agricultural settlement.

Lot Selection and Land Settlement in the Later Phase

The final question to be analyzed in this chapter relates to land acquisition in the later phase of settlement. Gentilcore assumed that settlers would acquire a knowledge of agricultural land suitability through experience.⁽⁷⁴⁾ By a later phase in the settlement's development, settlers would acquire better quality lands. Three tests of Gentilcore's opinion are presented, these are: an analysis of the quality of land selected by 1842 Census characters; an analysis of locations selected by squatters up to 1840; and finally date of lot patents compared to land quality.

The 1842 Census Locations and Land Quality

The hypothesis postulated here is that actual settlers, those listed as farmers in the 1842 Census, would have acquired the best available lots remaining in the township. A farm oriented immigrant entering Fitzroy township prior to 1842 is likely to have entered the township by one of three routes. He could have gone up the St. Lawrence River to a river port town, (likely Brockville, and would then have proceeded north, likely travelling through Perth, Lanark, and Pakenham. Secondly the immigrant could travel inland from Bytown and up the Carp River Valley into south central Fitzroy. Thirdly, direct access via the Ottawa River landing at Fitzroy Harbour is possible. Regardless of the approach taken, information would have been available along any of these passages. Advice on lot availability in Fitzroy would certainly have been available at Fitzroy Harbour, Brockville, Perth, Pakenham, Bytown, and along the journey inland from notable settlers, magistrates, and at taverns.⁽⁷⁵⁾ That an immigrant could arrive in Fitzroy without previous contact and advice is improbable. If this opinion holds true we could expect that a significant difference would exist between the observed locations of settlers and those that could have been expected, given the available lots. The data for this test were based upon the 67 lot locations given in the 1842 Census which were independent of the J.D.L.B. grants and the lot vegetation indicators. Removal of the granted lands from the total number of lots in Fitzroy left 185 unspoken for lots; of which 25.9 percent were of the best vegetation association, 49.8 percent were fair to middling quality, and 24.3 percent were of the poorest association.

Test Result

A chi-square value of 20.451 was obtained with two degrees of freedom, which is more than sufficient to reject the null hypothesis at .001 level of significance (Table 5.12). Gentilcore's opinion that settlers in later periods acquired better quality lands is supported by this test. It is the contention of this author though that these 1842 settler's have obtained these lots through knowledge of the environment not necessarily gained through trial and error. The 1842 locations are the result of the first major movement of settlers into the township and likely represent the first location decisions made by settlers. These

Table 5.12

Chi-square Analysis of the Relationship between the
Observed Frequency of 1842 Locatees and the Expected Frequency
of Locatees by Land Quality

Land Quality Vegetation Classes	Observed Frequency	All Possible Lots	Expected Frequency
1	32	48	17.384
2, 6, 7	30	92	33.319
3, 4, 5, 8	5	45	16.927
Total	67	185	67

Significant at .001

 $\chi^2 = 20.451$
 $df = 2$

lot location decisions were made under restricted conditions (namely the high percentage of lots which are legally inaccessible due to the J.D.L.B. grants), yet have been wisely made.

Squatter Locations

The opinion is further supported by the analysis of the lot locations of squatters who had actively begun to clear and stake claims to lands which in their opinions were unsettled waste lands. The Fitzroy Township papers reveal that by 1840, 30 squatters had written to the Crown Land's Department. The requests include the desire to acquire location tickets, information, purchase or leasing rights, or for protection and legal assistance relating to lots which they were actively farming. These squatters in attempting to acquire rights to the land, presented to the Crown sworn oaths and affidavits by neighbours, justices of the peace, and surveyors supporting their position.

Squatters, unlike the 1842 settlers groups, can be expected to have squatted anywhere that was not obviously owned by another settler.⁽⁷⁶⁾ Given the limited clearances even on settled lots this means that almost all of Fitzroy was at their disposal. Certainly their one pre-requisite was good farm land.

Test Results

A chi-square value of 20.289 is obtained with two degrees of freedom. This allows for the rejection of the null hypothesis that, no significant difference exists between the observed and expected frequencies of lots located by land quality, at the .001 level (Table 5.13). Squatters we can conclude selected the best quality lands with great

Table 5.13

Chi-square Analysis of the Difference between
Observed and Expected Frequencies of Pre-1840 Squatters

Land Quality Vegetation Classes	Observed Frequency	All Possible Lots	Expected Frequency
1	21	106	9.906
2, 6, 7	3	167	15.608
3, 4, 5, 8	6	48	4.486
Total	30	321	30

Significant at .001

$$\chi^2 = 20.289$$

$$df = 2$$

frequency. Unlike the 1842 settlers, the squatters shunned not only the poor locations but also the middling vegetation and mixed quality lots. The 1842 settlers hampered by legal constraints of land title, a propriety shunned by squatters, could not afford to bypass these middling lots, acquiring them as often as they did the best quality lots.

We can conclude that immigrants settling between the late 1820's and 1842 selected a statistically significant number of those lots which the surveyor classified as good lands for farming. Certainly the availability of information, be it formal government assistance, a chat at the ale house, directions from land speculators, or merely the

existence of wide spread and accurate forest lore, contributed to this abundance of good land acquisition in an area of restricted legal accessibility.

Land Quality and Lot Patenting

We turn now from specific group studies which have revealed strong relationships between surveyors, speculators, settlers, and the environment and look at the overall relationship between settlement timing and land quality.⁽⁷⁷⁾ The basis for this analysis is the patent date for each lot in Fitzroy and the soil classes observed by lot. The existence of a relationship between the nominal scale soil classes and the interval scale, years to date of patent data is achieved by using analysis of variance. Again it was necessary to be selective in lot analysis. The lots represented on Table 5.14 are those ones remaining in the population after a review of the dates of patent information. Not included in the "Open Market Lots" category are all government reserve lots and all lots granted in the early phase to Militia Officers, Loyalists and speculators. The latter groups with their higher percentage of good land acquisitions and ability to get the patent issued through various means would have biased the study by lowering the average date of patent. Likewise the reserve lots held by the Canada Company, Clergy Reserves, and King's College were dealt with separately. Using analysis of variance we can test the null hypothesis that no relationship exists between the quality of a lot, as appraised for agriculture, and the years to its date of patent; in other words the population means are assumed to be equal. The computations for analysis of variance are summarized on Table 5.15.⁽⁷⁸⁾ The resulting F value of 3.719 with the

Table 5.14 .

Land Quality and Date of PatentOpen Market Lots

<u>Land Quality</u>	<u>Number of Observations</u>	<u>Average Years to Patent</u>
1	73	10.05
2, 6, 7	12	11.42
3, 4, 5, 8	40	15.03
Total	125	

Reserves Lands

<u>Land Quality</u>	<u>Number of Observations</u>	<u>Average Years to Patent</u>
1	32	22.50
2, 6, 7	28	20.29
3, 4, 5, 8	12	35.08
Total	72	

corresponding degrees of freedom, allows us to reject the null hypothesis at the .05 significance level (Table 5.14). Our assumption is correct, allowing us to conclude that the mean date of patent for the three qualities of open market lots are not equal to each other; the better quality land being acquired significantly earlier than those of poorer quality.

This argument does not hold, though, for the reserve lands where an F value of less than unity was obtained.⁽⁷⁹⁾ The null hypothesis that

the population means for the date of patent on three land qualities' were equal could not be rejected. The reserved lands were consistently held longer than the open market lots. Indeed, the average date for open market 'poor lands' is seven years less than the average reserve 'good lands' date of patent. Demand for the reserve lands obviously

Table 5.15

Analysis of Variance Test for the Variation Between
Dates of Patent for Lots with Differing Vegetation Classes for
Free Market Lots in Fitzroy

	Sums of Squares	Degrees of Freedom	Estimate of Variance	F
Total	11,193.73	N-1 124		
Between	640.06	K-1 2	320.03	3.719
Within	10,499.67	N-K 122	86.06	

existed by 1838 but they do not appear to have been brought forward for sale till 1845, on average. The Canada Company and the Clergy Reserves would appear to have deliberately held the best lands off the market, parting with inferior quality lots first. As with the open market lots, the poorest reserve lands were also patented last.

Chapter Conclusion

This chapter has attempted to analyse the numerous facets of the "whole role" of the surveyor in land speculation and acquisition. Through his personal and business relationships and the actions of those closest to him we can state that the surveyor was actively involved with the selection of lots by land speculators. His role in directing early granting of land was officially sanctioned by the mandate of the Land Boards and would have been actively assisted by the Board's members; three of whom were active speculators in Fitzroy.

Furthermore, this chapter has investigated through a series of statistical tests the ability of various groups in the society to acquire the best quality lands available. In the earliest period it was found that no one social group acquired more good quality lots than any other. Indeed the entire population was found to have acquired significantly more good quality land than would have been expected. The role of government direction and application of the surveyor's knowledge was concluded to have had a positive effect on land acquisition in the early period.

The division of the land, though, was not found to be equitable nor did those who received the most necessarily receive the best. A particular group of large grantees dubbed the Brockville elite, were found to have used family ties, business connections, political linkages, and governmental appointments to acquire the choicest blocks of land. When the quality of their locations was compared to those of other large grantees and those of small grantees from the Brockville area, the full extent of their pillage became apparent. And at the centre of this plunder was none other than Reuben Sherwood, the township's surveyor.

Along with his family, their in-laws and associates these men acquired thousands of acres of prime agricultural land and numerous mill seat locations. The relationship between the surveyor and the speculators can be said to have been firmly established. At this point the initial queries of: Who acquired land? Where were they from? What was their relationship to the surveyor and what quality of land did they acquire has been reasonably answered?

For the period of the late 1830's and early 1840's the land acquisition of settlers' was again surveyed in order to ascertain the applicability of Gentilcore's opinions regarding the changing acquisition of good quality land through time. On this occasion agreement with Gentilcore was found to exist. Regardless of an ever shrinking area of good land to choose from the 1842 settlers and also the pre-1840 squatters were found to have located in significant numbers on the best quality lands.

The propensity with which settlers acquired good land locations implies that the surveyor assisted in lot acquisition. This could have been achieved through personal contact, use of his notes or through information transmitted by land agents or speculators which originated with him. The relationship between the surveyor's interpretation of "good land" and the locations of the Brockville area speculators, pre 1840 squatters, and 1842 settlers is too convincing to be understood as merely the universality of regional forest lore.

ENDNOTES

- (1) Gentilcore and Donkin, 1973, p. 20.
- (2) Widdis, 1983, p. 443-458.
- (3) Gentilcore, 1972 [b], p. 419.
- (4) Gentilcore, 1972 [b], p. 419.
- (5) Clarke and Finnegan, 1984, p. 135; A.O., R.G.1, Fitzroy Township Papers; letters of settler's addressed to Land Agents at Perth, Bytown-Ottawa, and York-Toronto.
- (6) Throughout this chapter the Johnstown District Land Board will be addressed as J.D.L.B.; Gates, L.F. A Land Policies of Upper Canada, (Toronto: University of Toronto Press, 1968), p. 124; Land Boards re-established by Maitland, 1815; Gates, 1968, p. 124.
- (7) A.O., R.G.1, Land Record Index, Alphabetical Listing by Township; A.O., R.G.1, F.T.P.
- (8) A.O., R.G.1, Abstract Index to Deeds for Fitzroy Township; particularly Patent dates and data of first sale.
- (9) Throughout this chapter, Children of United Empire Loyalists will be rendered as C.U.E.L.
- (10) The one anomaly is Arthur Griffin who is listed as receiving 800 acres of land for service as a Royal Navy Purser and 200 acres as a C.U.E.L. He does not appear on the listing for Militia Officer grantees and perusal of numerous sources provides no linkages between him and the major speculators.

A review of the J.D.L.B. grants provides evidence that grant size was commensurate with the rank of the held. The records listed both the acres allotted to a given rank and those granted for service. Maximum allotted acres by rank as listed by the J.D.L.B. were as follows (all acres given in acres): Privates and Corporals, 100; Sergeants, 200; Sergeant Majors, 300; Ensigns, either 400 or 500; Lieutenants, 500; Captain, 800; Lieutenant Colonels, 1,200.

- (11) Gates, 1968, p. 86; Eric Jarvis, "Military land granting in Upper Canada following the War of 1812." Ontario History, vol. 67, no. 3, pp. 121-134, p. 125.

- (12) Gentilcore, 1972 [b], p. 419.
- (13) Gentilcore, 1972 [b], p. 419.
- (14) A perusal of the Fitzroy Township Papers leads the author to conclude that the settler moved onto vacant land with the expressed hope that occupation and active land clearing would evoke a positive response from the Crown. Gates informs us that cash sales were preferred by the Government of Upper Canada but that squatter's who generally desired to purchase in installments with interest were treated with leniency by the Crown Lands Department. Pre-emption, the right to purchase before others, existed for squatters in Upper Canada who had occupied and improved lands. This right and the reluctance of the Crown Lands Department to sell the lots out from under squatters who were not actively pursuing the lot's legal title made squatting profitable and safe. Gates, 1968, pp. 290-291.

Of the 69 certified squatters with known land improvements and active occupation 55 percent acquired title to the property in question, if they were located on Crown lands. In contrast only seven of fifty-one squatters applying for Clergy Reserve lots acquired title during the same time period. The above was compiled by the author using the Fitzroy Township Papers.

- (15) F. H. Armstrong, Handbook of Upper Canadian Chronology and Territoriality Legislation, (London: University of Western Ontario, 1967), p. 167.
- (16) P.A.C., R.G.5, B.26, Population returns for the Bathurst District, 1831.
- (17) L. Gates, Land Policies, p. 149; supports this opinion for the pre 1830 period, stating: "The previous lavish land granting policy had already resulted in the disposal of a thin population over an immense area and had established speculative control over the most fertile parts of Upper Canada"; P.A. Russell, "Upper Canada: A poor man's country? Some statistical evidence", in Canadian Papers in Rural History, Volume III; ed., D. H. Akenson, (Gananoque: Langdale Press, 1982), pp. 129-147, p. 140; does not support Gates' opinion, stating that "20 to 30 percent of the privately owned wild lands (were) in the hands of non-resident or resident large holders ... the latter almost always accounting for more land."
- (18) The service history of the major speculators was gleaned from Land Board Certificates files in the Fitzroy Township Papers, and the following monographs. D. H. Akenson, The Irish in Ontario: a study in rural history (Kingston: McGill-Queen's University Press, 1984). Thad Leavitt, 1879; Ruth McKenzie, 1967 and Wm. Canniff, The Settlement of Upper Canada (Belleville: Mika Silk Screening Ltd., facsimile edition,

1971). Compiled by author.

- (19) See chapter 4 for discussion on Lot 23, Concession 9; Henry Joneses position is referred to in T. Leavitt, 1879, p. 184.
- (20) Widdis, 1983, p. 451; Akenson, 1984, pp. 101-102.
- (21) A.O., R.G.1, A-1-6, Vol. 28. (Flint to J.H. Price, Commissioner of Crown Lands, 1849, 1850.) Flint had acquired by 1849, Timber rights on Concessions one to seven lots one to twenty in Kaladar Township and was commercially fishing three lakes back of Skootamatta River.
- (22) McDonald, 1920, p. 83.
- (23) Leavitt, 1879; p. 43; Akenson, 1984, p. 101.
- (24) Akenson, 1984, p. 101.
- (25) Leavitt, 1879, pp. 127-128; includes a document from Colonel Stone's papers relating to the establishment of the Land Board dated Executive Council Chamber March 13th, 1819. Outlines role of surveyor and his interaction with the Board. Adiel Sherwood, Land Board member, was a brother of Reuben Sherwood, surveyor; R. McKenzie, 1967, p. 19. The relationship between political position, family linkage and land speculation has been shown to be a common situation in Upper Canada. J. Clarke clearly illustrates this relationship for the Western District of Upper Canada; see, J. Clarke, "The role of political position and family and economic linkage in land speculation in the Western District of Upper Canada, 1788-1815," The Canadian Geographer, Vol. 19, no. 1, 1975, pp. 18-33. Breathing "life" into the Family Compact issue D. Gagan looks beyond the historian's constructs of ideology and personalities of the Compact's membership and delves into the financial reality of their power base in; D. Gagan, "Property and interest: some preliminary evidence of land speculation by the 'Family Compact' in Upper Canada 1820-1840", Ontario History, Vol. 70, no. 1, 1978, pp. 63-69.
- (26) Akenson, 1984, p. 101.
- (27) Akenson, 1984, p. 102.
- (28) Leavitt, 1879, p. 184; Anonymous, "The Will of Ephraim Jones", Ontario Historical Society Papers and Records, Volume 23, 1926, pp. 353-355.
- (29) A.O., R.G.1, F.T.P.
- (30) Leavitt, 1879, p. 184.

- (31) A.O., R.G.1, F.T.P. This acquisition, commonly referred to as Morris's folly, will be discussed in Chapter 6 on Land Speculation.
- (32) Leavitt, 1879, p. 68.
- (33) Ian MacPherson, Matters of Loyalty: The Buell's of Brockville 1830-1850, (Belville: Mika Publishing Company, 1981), p. 173. As MacPherson notes the Buell's as members of the reform party in the province competed regularly and efficiently against the Sherwoods - Joneses Tory grouping. Not surprisingly, the Buell's acquired no major land grants in the Johnstown District Land Board Listings.
- (34) A.O, M.S.30(6), surveyor's Letters, 1784-1843 (Sherwood to Ridout, 21 January, 18230.
- (35) Gentilcore, 1972 [b], p. 417; 1972 [a], p. 24.
- (36) Blalock, 1960, pp. 212-241, 452.
- (37) Blalock, 1960, pp. 212-241, 452; The subsequent analyses use ². The reader might argue why this is so since we would appear to be using the total populations. Since we do not know that this is the population in spite of diligent research statistical inference must be made.
- (38) Blalock, 1960, pp. 212-241, 452.
- (39) Blalock, 1960, pp. 212-241, 452.
- (40) Ontario geographers have presented strong arguments for the relationship between the physical and economic system's expansion and improvement. T. F. McIlwraith "the adequacy of rural roads in the era before railways: an illustration from Upper Canada," The Canadian Geographer, Vol. 4, 1970, pp. 344-60; stresses that a successful agricultural community depended upon an adequate road system prior to railway expansion. This view is also held by R.C. Langman, Patterns of settlement in Southern Ontario: Three Studies (Toronto: McClelland and Stewart Limited, 1970), p. 3; K. Kelly, "The Impact of Nineteenth Century," p. 65; stresses that not all settlers located themselves on the basis of land quality alone, many "simply located themselves close to a highway which led to a market centre"; A. Brunger, "Talbot", p. 8, in his analysis of settler location in the Talbot settlement found that for the early settlement period, to 1825, settlers located on available land in close proximity to potential and actual mill sites on all townships, with one exception. Accessibility as measured by distance, on the other hand was rejected by Brunger in his explanation of settler locations, due to the weakness of the significant correlation. J. Clarke, "Aspects of land acquisition in Essex County, Ontario, 1790-1900", Histoire Sociale Social History, vol. 11, 1978, pp. 98-118,

states that those townships which contained well drained soils, that were accessible by road or from the coast, and were close to the village centres, experienced an initial advantage in development but in time were overshadowed by townships located closer to the Hamilton-Toronto area. Land price analysis in Essex County further supports the importance of accessibility to coast and major urban centres; see J. Clarke and D. Brown "Land prices in Essex County, Ontario: 1798 to 1852", The Canadian Geographer, Vol. 26, No. 4, 1982, pp. 300-317; For an introduction and review of the role of transportation systems in explanation of settlement and economic development in historical geography and economic history; see William Norton, Historical Analysis in Geography, (New York: Longman Group Limited, 1984), particularly chapter nine, pp. 130-166.

- (41) Legal and social access to land involves the variables of land patenting, purchasing, mortgaging, leasing and squatting which lead to the interpretation of changing land tenure conditions through time in the history of an area. Under social access questions relating to the class of the individual measured by both monetary position and place of origin are rising to the forefront of settlement studies. These questions of legal tenure and social access will be dealt with in Chapter Six.

- (42) Squatters appear to have received considerable attention from the Colonial governments throughout the mid-nineteenth century; Gates, 1968, pp. 289-295.

- (43) Limited marketable surplus in the agricultural sector during early phases of settlement, lead to a shortage of capital for expansion and improvement to be available. As production of wheat expanded capital availability allowed for diversification, yet competition in the wheat market place and poor production seasons could readily shrink the available capital and make repayment of previous loans difficult; John McCallum, Unequal beginnings: agriculture and economic development in Quebec and Ontario until 1870, (Toronto: University of Toronto press, 1980), pp. 3, 19, 52-53; For a discussion of the backwoodsman and capital requirements; see, R. L. Jones, History of agriculture in Ontario: 1613-1880, (Toronto: University of Toronto Press 1946, reprinted 1977), pp. 67-69. Capital scarcity is further supported by the opinions of T.W. Acheson and M.L. Magill, see T. W. Acheson, "The nature and structure of York commerce in the 1820's" in J. K. Johnson (ed), Historical essays on Upper Canada, (Toronto: McClelland and Stewart Ltd., 1925), pp. 171-193; M.L. Magill, "John Dunn and the bankers" in J. K. Johnson, 1975, pp. 194-215.

- (44) Gentilcore, "Change in Settlement", p. 419; Gentilcore's access and the physical environment argument is discussed by Akenson, 1984, p. 63, fn. 20.

- (45) Alexander, Fraser, The Lost Laird of McNab. An episode in the settlement of McNab Township, Upper Canada, (Toronto: Imrie, Graham and Company, 1899), p. 187-190.
- (46) A.O., M.S.30(6), Surveyor's Letters; Sherwood informs Ridout of river transportation on Mississippi River to Fitzroy Township and north to Ottawa River, "has removed Mr. Kilborn and party down Mississippi to Fitzroy."
- (47) A.O., M.U.3289, Charles Sheriff Family Papers, 1694-1958. Included in this source are rent rolls for 1835 to 1839 with acreage and name of rentee. The abstract index to deeds clearly indicates that "the Sherriff's were reluctant to sell their non-developed lands but readily sold town lots in Fitzroy Harbour prior to 1850. Lands which they had originally patented did not come onto the market unless one of their numerous creditors had foreclosed on them and then resold the lot. Also see J. Clarke, "Geographical aspects of land speculation in Essex County to 1825; The strategy of particular individuals", in K. G. Pryke and I. L. Kulisek, (eds.), The Western District (Windsor: Essex County Historical Society and Western District Council, 1983), pp. 69-112, p. 70, Ftns. 11 and 12.
- (48) P.A.C., M.G.9, D8-73, Volume 6, File 1, 1851-1869, Township Clerk Correspondence. W. P. Taylor to Matthew Elliot relating threefold complication of assessing Atkinson and Company: 1) no such parties are known to exist; 2) as I cannot give them notice it can not be said that they have been legally assessed, 3) a portion of the land is not legally their but are Clery lands, and others are in occupation by tenants who are assessed for the same so that it is twice entered on the roll.
- (49) The calculations for the Standard t test are taken from, Blalock, 1960, pp. 144-149; where:

$$t = \frac{\bar{X} - M}{S / \sqrt{N - 1}} = \frac{.623 - .88}{.431 / \sqrt{136}}$$

$$t = 6.965$$

- (50) Blalock, 1960, 144-149.
- (51) Fraser, 1899, p. 169.
- (52) Fraser, 1899, p. 12-13.
- (53) Clarke, 1970, p. 94, ftn. 73.
- (54) Brunger, 1973 [a], pp. 80-81, R. W. Widdis; "Motivation and scale: a method of identifying land speculators in Upper Canada", The Canadian Geographer, Vol. 23, No. 4, 1979; pp. 337-351. When

it comes time to decide who is and who is not a speculator at any given point in time Widdis selects the arbitrary 400 acre scale of operation.

- (55) The chi-square value generated from a sample of 67 lot location observations was 2.368, which is not significant at the .05 level.
- (56) Cross filing of the grantees with the 1842 Census of Fitzroy results in no grantee appearing as a resident. P.A.C. Manuscript Division Enumeration Census, Canada West 1842; Bathurst District, Fitzroy Township Microfilm no. C-1344.
- (57) A.O., R.G.1, F.T.P., notes the existence of employees clearing land for both resident and absentee large grantees. Such information generally appeared on certificates stating the completion of settlement duties which were signed by neighbours and authorized by local Justices of the Peace.
- (58) A.O., R.G.1, F.T.P., Lots, 18, 19, and 20 in the Fourth Concession. Extension granted February, 1830.
- (59) A.O., R.G.1, A.I.D., Fitzroy Township; Dickson originally settled in Fitzroy in 1824 moving to Pakenham Village in 1831 acquiring the Mill Sites then in existence; V.R. McGiffin, Pakenham Ottawa Valley, Volume 1, 1823-1860. (Pakenham: Mississippi Publishers, 1963), pp. 85-86.
- (60) A.O., R.G.1, F.T.P.; Canniff, 1971 (reprint), pp. 452-454; A.O., R.G.1, A.I.D., Fitzroy Township.
- (61) A.O., R.G.1, F.T.P.; Lowrey's occupation of Lot 1 in the Seventh Concession was only possible after an exchange of shots with timbermen who were removing white pines. He wrote in 1831 to the Crown Lands Commissioner demanding retribution for those trees which had been removed.
- (63) A.O., R.G.1, F.T.P., Settlement duty completion certified. The use of the terms junior and the third to differentiate the three generations of Thomas Frasers is my own.
- (64) A.O., R.G.1, A.I.D., Fitzroy Township.
- (65) A.O., R.G.1, F.T.P.
- (66) A.O., R.G.1, A.I.D., Fitzroy Township.
- (67) A.O., R.G.1, A.I.D., Fitzroy Township.
- (68) Analysis of Flint lots through three Census periods, 1842 to 1861, reveals no notable improvement to the lots he retained till his death.

- (69) H. Beldon and Company. Illustrated Historical Atlas of the County of Carleton, (Belleville: Mika Silk Screening Ltd., reprint series, 1971), p. 265.
- (70) A.O., J.D.L.B. Records, Fitzroy Township, A.O., R.G.1, A.I.D., Fitzroy Township.
- (71) This exchange would have followed the same procedure as the exchange described earlier involving Charles Sherriff. Lot 12 in the first concession does not follow the pre-arranged Clergy Reserves layout and is likely a compensation lot for the mill Seat located by Hubbell.
- (72) A.O., R.G.1, A.I.D., Fitzroy Township.
- (73) Beldon, 1971 (reprint), p. 266.
- (74) Gentilcore, 1972 [a], p. 24.
- (75) M. A. Garland and J. J. Talman, "Pioneer drinking habits and the rise of the temperance agitation in Upper Canada prior to 1840", in, F. H. Armstrong, H. A. Stevenson, and J. D. Wilson, (eds.), Aspects of nineteenth century Ontario, (Toronto: University of Toronto Press, 1974), pp. 171-93. In Fitzroy Township, The Swamp Tavern and the Kinburn Post Office (then located on lot 8 in the sixth concession) would have served as an information gathering location on the dismal road north from Carp Village; see P.A.C., National Map Collection, H2/420, Directory of Carleton County, 1863.
- (76) A.O., R.G.1, F.T.P. Numerous statements by squatters stating that the land was vacant and not improved when they began clearing land, with statements sworn by neighbours supporting their allegations.
- (77) Clarke, 1978, pp. 98-118.
- (78) Blalock, 1960, pp. 242-264.
- (79) Blalock, 1960, p. 249.

Chapter 6

Aspects of Land Acquisition 1842-1861; Environment and Modifying Factors

The conclusion that settlers could not only select land using vegetation indicators but indeed did so in significant numbers, through time, mirrors the findings of Clarke and Finnegan's Essex County research.⁽¹⁾ In their study the possibility of further confirmation of the hypothesis, by comparing occupied land at a particular time with vegetation types, was suggested as an avenue for future research. Following upon this suggestion this chapter will study the relationships between lot occupation and land quality. It is hypothesized here that land occupation is a function of land quality, as it would have been interpreted in the nineteenth century using tree species indicators.

This working hypothesis requires considerable refinement. To begin with how is lot occupation to be defined? Should we expect a relationship with occupants per lot to signify a strong relationship with land quality? Or would occupied lots alone provide an equally viable relationship? In the first case a relationship could be expected to exist, but it is likely that evolving service nodes would determine the density of settlement rather more so than land quality. The number of farmers occupying a lot is not dependent upon the quality of the lot, but upon the ability of the individuals to gain clear title to the parcel they

occupy. Secondly, density of population is no guarantee that a lot will be well developed, one farmer with adequate capital could accomplish as much or more than four without proper financing. The number of occupied lots in the township is likewise not dependent upon land quality, as much as upon a wide range of variables including; land quality, settlement foci, the locating of tenants and labourers, and the land holding practices of speculators.

In contrast, the percentage of land cleared on any one lot can be seen as a fairly independent variable by which to measure the usefulness of tree species indicators in farmland selection. The ability of a settler to clear land, above that required for subsistence, would have depended upon a number of factors. These would include: first, the demand for the product which is the immediate result of clearing (timber, potash), in order to pay for initial labour and to finance planting; secondly, a regular market demand for this product, by which to pay for the debt incurred in land acquisition; and thirdly the existence of either an in house labour force or the availability of tenants or labourers to work the expanded holdings.⁽²⁾ Certainly a prerequisite to such an undertaking was the selection of the most fertile land available for such a large investment. Selection of such land must have been based upon the existing means of evaluation of land then available, that is, tree species indicators. That such a decision was no longer being made in an early frontier environment must be recognized. By 1842 and certainly by 1851 and 1861, numerous factors would have modified the settler's decision.

Selecting Land: A Discussion of Sources and some Modifying Factors:

By comparing the percentage of acres cleared by lot, through time, with the tree species indicators of land quality, the use of this method of land selection as well as the result of selecting good quality land for farming can be inferred. Changes in the perception of the tree species indicators, or of the importance of tree species indicators in land selection vis-a-vis other factors, will be revealed through a series of cross sectional studies. These studies correspond with the census years: 1842, 1851-2, and 1861. For each of these time periods a series of variables including land clearance and the quality of land being improved was collected. Added to these two primary variables is information on the ownership and occupation of each lot through time and for each individual lot occupier through time. This provides a base for the interpretation of the influence of land speculators on the development of individual lots and for the effect of changing land tenure status upon the land clearing activities of individual farmers.⁽³⁾ Furthermore the ability to cross reference the "Abstract Index to Deeds" with the "Manuscript Census of Canada West" through time allows for the locating of tenants and labourers for the years 1851 and 1861.⁽⁴⁾ The proximity and availability of this rural labour force must be considered as primary to the understanding of the advancement of land owners from subsistence to commercial agriculture.⁽⁵⁾

At the beginning of this discussion it was suggested that the percentage of land cleared was a fairly independent measure of land occupation in contrast to lot occupation and number of lot occupiers. Obviously the percentage of land cleared at any point in time, let alone through three periods, is the result of a wide range of local, national

and international socio-economic conditions⁽⁶⁾ To attempt such a wide ranging and intensive explanation of why individual farmers in Fitzroy expanded their land holdings and percentage of acreage cleared is beyond the scope of this present paper. That an individual would have decided upon expanding his area of cleared land, based upon the quality of land available, and in the hope of expanding his profits, would have been a common exercise in land management. That this decision was likely modified by his land holding status or tenure, the influence of local land held in speculation, the availability of labour or the existence of tenants to work the new areas and share in the risk of expansion, are all viable, yet commonly overlooked variables in the literature of land settlement.

The aim of this chapter is to investigate the relationship between land clearance and the use of tree species indicators of land quality. The existence of this relationship must not be sought in a vacuum, but instead should be understood as one variable in the decision making process of the settler. Furthermore, not all settlers were likely to find themselves in a position to expand merely because the market existed for increased production. Many would have been inhibited from expanding by a land tenure status which was less than stable; others, holding the deed to their land, may have been unable to acquire land fit for expansion or would have lacked the labour force required for adequate expansion even if the land was available. Still others, combined the necessary variables of adequate capital, labour, and area for expansion, which enabled them to select the best sites for the expansion of their cleared acreage.

Settlers and the Land, Fitzroy 1842-1861

In order to clarify the influence of land quality on the pattern of land clearance rates it was necessary to reconstruct the settlement pattern and particularly the factors of land tenure status, size of holding, land speculation, and labour availability. Each of these factors will be discussed at the aggregated township level for each time period. These short overviews provide a counterbalance for the analysis of the role vegetation in the selection of land by settlers. Following these studies, the pattern of land clearance for the periods 1842, 1851, and 1861 will be presented cartographically using standard deviations of the percentage of acreage cleared. Explanation of the resulting standard deviations above and below one standard deviation will be provided using the variables cited above, in order to establish the settler's predilection for using tree species as indicators of good land.

Sources and Procedure

To establish the pattern of land clearance for each of the cross sections required the cross referencing of the "Abstract Index to Deeds," the "Enumeration and Agricultural Manuscript Census of Canada West", and the "Assessment Rolls for Fitzroy Township"⁽⁷⁾. For each time frame in the analysis, conditions of land holdings were compared between settlers and through time for each settler. The head of household and independent adult males were listed for each period and compared with the following decades populations, thus allowing for an analysis of land holding and residence continuity. Residents of 1842 and 1851, who could not be traced forward in time given name and lot

locations were also referenced against the "Abstract Index to Deeds" and "Assessment Rolls" to insure that they had not retained property rights in the township, regardless of having moved from Fitzroy. Once land ownership or occupation had been traced, multiple lot holders listed in the "Agricultural Census" as being located on only their primary residence could have their acreage owned and cleared assigned to their various holdings. Likewise resident non-land owners, listed as occupying acreage and those with specified acreage cleared, could be assigned to their locations and their relationship to the actual land owners considered. On any 200 acre lots, upward of 400 acres of land could be claimed by individuals in the "Agricultural Census". Explanation of the situation is possible by cross referencing the "A.I.D." and the "Assessment Rolls" with the claimants from the census. This usually revealed one or two actual land owners with a series of occupants residing on their land. Some of these occupants were active farmers paying township taxes, likely tenants. Others were labourers, paying no taxes and on occasion listed as having acreage cleared, but claiming no acreage owned. Of the group paying taxes many can be traced forward in the "A.I.D." and found to acquire the title to the land in the future. For the labouring population considerable movement within the township occurred and out migration was common; legal acquisition of land became a more remote possibility through time for this group.

Cross referencing of the data groups allows for the assignment of each head of household in Fitzroy Township through the study period to one of three land tenure classifications. The first group, resident owner-occupiers, describes the common stereotype held of nineteenth century Ontario's rural resident;⁽⁸⁾ a farmer working his own land.

This stereotype though was not the common head of household through to 1861. Fitzroy's average settler between 1842 and 1861 was a man struggling to make a living and with the hope of acquiring clear title to some tract of land. Through the data sources we can clearly distinguish a group of "occupant-future owners" and "occupant-never owners". By 1851 and certainly in 1861 the occupant-never owners are fairly well synonymous with labourers. Labourers as a fourth designation of land owners though, does not provide for a distinctive tenure grouping as there are occupant-future owners who listed their occupation as labourers. Furthermore there were residents who in 1861 listed their occupation as that of farmer but who neither owned land, paid taxes, nor were listed in the agricultural returns. Men in this category fell into two groups, retired ex-land owners and farm labourers. As labourers were not classified in the "1842 Enumeration Census" it is necessary to infer the land occupation status of each head of household using the "A.I.D.". The lack of the survival of a township assessment prior to 1850 further hampered the designation of 1842 settlers. For this reason labourers are likely to be included in the 1842 occupant-never owner land tenure grouping. The improvement of the enumeration census and the survival of taxation records allowed for a greater interpretation of the status of "occupant-never owners" in 1851 and again in 1861.

The occupant-future owners as a group can be characterized as leasees on Crown, Clergy, or Canada Company lands, tenant farmers, or farmers working to fulfill some form of bond arrangement with the present land owner. The occupant-never owners group, were destined to never gain legal title to land in the township, yet claimed ownership in the census. These men could have been squatters, but for the most part

were likely tenant farmers or bonded occupants who never fulfilled their agreements with the land owners.

This procedure by which all heads of households were traced through time, yielded considerable results. The procedure allowed for the listing of all land holdings through time, indicating parcels held, acreage owned, occupied, and cleared, as well as continuity of lot ownership through time. Following from this is the ability to construct changing land holding patterns through time and to study the effect of individual land tenure and speculation holdings upon clearance rates.

Linking the Data Sources

The linkage of the various sources through the three time periods is presented on Table 6.1. The rows represent all possible data linkages, with reading from the first row E.C. representing "Enumeration Census"; A.C. the "Agricultural Census"; A.I.D. representing the listing of an E.C. or A.C. character traced to the "Abstract Index to Deeds"; and Asmt. representing the linkage of a census character to the "Assessment Rolls" of 1850, 1852, or 1861. No assessments survived in manuscript form for 1842 which explains the use of the not applicable (n/a) notes on the Table. Likewise 1850 and 1852 assessments were required for cross listing of the 1851 Census characters, as no 1851 "Assessment Roll" survived. Column one represents the initial 1842 Census population heads of households. In total 247 heads of households were listed, 81 of whom could be traced as resident owner-occupiers, while the majority, 166, were not listed as land owners using the "A.I.D.". By 1851 a total of 315 (column 4) new heads of households had arrived in Fitzroy while 187 or 75.7 percent of the 1842 population

Table 6.1

Linkage of Data Sources for Fitzroy Township 1842 to 1861
Using the Enumerated and Agricultural Census for Fitzroy Township, Carleton County,
Canada West 1842, 1851, and 1861, the Abstract Index to Deeds, Fitzroy Township, Carleton County
and the 1852 and 1861 Assessment Rolls for Fitzroy Township, Carleton County

Columns	1	2	3	4	5	6	7	8
Cross Referenced Sources	1842	1842 - 1851	1842-51 - 1861	1851	1851 - 1861	1861	Total 1851 Population	Total 1861 Population
E.C., A.C., A.I.D., Asmt.:	n/a	78	122	47	102	49	125	273
E.C., A.C., A.I.D., / :	80	0	3	0	0	3	0	6
E.C., A.C., / , Asmt.:	n/a	38	19	66	29	45	104	93
E.C., A.C., / , / :	145	0	2	15	7	27	15	36
E.C., / , A.I.D., Asmt.:	n/a	26	1	12	2	18	38	21
E.C., / , A.I.D., / :	1	6	0	0	0	6	6	6
E.C., / , / , Asmt.:	n/a	18	2	62	5	23	80	30
/ , A.C., A.I.D., Asmt.:	n/a	0	0	0	0	1	0	1
/ , A.C., / , Asmt.:	n/a	0	0	0	0	0	0	0
/ , A.C., A.I.D., / :	n/a	0	0	0	0	0	0	0
/ , / , A.I.D., Asmt.:	n/a	13	4	20	3	16	33	23
E.C., / , / , / :	21	0	1	75	14	63	75	78
/ , A.C., / , / :	n/a	0	0	0	0	0	0	0
/ , / , A.I.D., / :	n/a	0	0	0	2	0	0	2
/ , / , / , Asmt.:	n/a	8	0	18	2	18	26	20
New Heads of Households or Independent Males	247	187	154	315	166	269	315	269
Heads of Households carried Forward to next Census	n/a	187	154		166		187	320
Total Census Population as Measured by Heads of Households or Independent Males	247			502		390*	502	590*

could be traced through to 1851 (column 2). Again the majority of the new heads of households, 236 of 315, or 74.9 percent, were not listed as land owners according to the "A.I.D.". Fully 61.9 percent of all 1851 non-land owning residents were paying taxes on the lots they were occupying.

In 1861 only 269 new heads of households were listed down 15 percent from 1851 (column 6). Remarkably, 154 of the 1842 characters are still listed in the "1861 Enumeration Census". This figure represents a stable, core population of 62.3 percent of the 1842 population, which remained in the township during the twenty year period.⁽⁹⁾ Of the 1851 population's new heads of households only 52.6 percent could be traced through the ten years that had elapsed since their initial listing. Of the new heads of households listed in 1861, 176 or 65 percent were not found to be land owners using the A.I.D.; of this number 57.9 percent were listed as tax payers in the "1861 Assessment Roll".

The high percentages of heads of households for 1842, and new heads of households for 1851 and 1861 who did not own the land they were occupying (67.2%, 1842; 74.9%, 1851; and 65%, 1861) indicates that new residents in the township continued to fill a traditional role throughout the study period. A role characterized by unstable land tenure, likely commensurate with tenancy or farm labouring positions, within this predominantly rural township. Against these constant rates of high non-land ownership amongst new heads of households entering the township in 1851 and 1861 must be compared the ever increasing number of resident owner-occupiers. From less than a third of the population (32.8%) in 1842, land ownership rose to 40.2 percent in 1851 and up to 56.3 percent in 1861. In a little under forty years the lands of Fitzroy Township

had emerged from the domination of non-resident land owners, primarily Brockville and Perth government officials and later Ottawa and Montreal money lenders, and come into the possession of the actual resident population.

Of the 280 residents of 1861 who married land ownership with an "Agricultural Census" listing, fully 45 percent were originally listed in the 1842 Census. These men were generally successful farmers, supporting mature families. By 1861 many had acquired labourers and tenants and had expanded, or were in the process of expanding, their land ownership in order to assist in the welfare of their families. To this task they would have brought with them considerable knowledge of the environment. As these men sought to expand, their tenants, labourers, and recent immigrants to the township would also have been seeking available locations; be it a shanty in the waste lands or a small clearing, that was being sold to raise cash. Inevitably some would settle down on unoccupied land and chance squatting in the hope of gaining title from the Crown. This process of land acquisition became less common through time in Fitzroy; the 1851 Census listing only six squatters.

Where did these various settlers locate, to what extent did the quality of land available determine their locations, what factors modified their decisions to locate? Insight into these questions can be gained by looking at a number of opinions in the literature on the role of the environment during the later stages of settlement. Gentilcore was of the opinion that:

As choice and initiative became more common, they (settlers) were increasingly directed to the physical components of the settlement complex. The association between improved land, soil quality, value of improvements, and original vegetation indicates that an adjustment of production to land quality took place and was well established by 1850.⁽¹⁰⁾

This view is supported in theory, if not in dating of the transition, by William Norton's comparative study of the evolving agricultural landscapes of southern Ontario and Cape Province. Norton found that although land quality was not a useful variable in the explanation of Ontario's agricultural landscape in 1851, by 1891 distance variables and better land quality could be confirmed as important in the explanation of the changing agricultural landscape.⁽¹¹⁾

The macro-level analyses of Gentilcore and Norton, while assisting the direction of this present research, must be tempered, as Norton stated, with studies of smaller areas.⁽¹²⁾ Kelly noted that settlers with limited capital could immediately cultivate lands of poorer soil quality, which were characterized by less dense meaner tree species indicators.⁽¹³⁾ Kelly provided a more sensitive and personal illustration of financially limited settlers locating on lands which gave them the initial advantage of a fast return for their labours. We can construe from this a scenario of recent immigrants locating on middling lands, characterized by lower fertility and an admixture of pines with hardwoods. They likely cleared and advanced such land to maximize their labour input and with the intention of acquiring better quality land in the future. This future acquisition depended upon cash savings and perhaps the arrival of another settler willing to take on the poorer quality farm; so starting the cycle over again.

Table 6.2

Land Ownership and Progression of Land Clearance by Land Tenure Status
for Fitzroy Township, 1842, 1851, and 1861

Year and Tenure Class	Number of Farmers	Acres Owned in Township	Acres Cleared in Township	Average Acreage	Average Cleared	Percentage of Land Cleared
<u>1842</u>	162	23,680	3,862	146.2	23.8	16.31
Owner	72	12,009	2,333	166.8	32.4	19.43
Future Owner	51	7,280	1,026	142.8	20.1	14.09
Never Acquires	39	4,391	503	112.6	12.9	11.46
<u>1851</u>	296	33,006	8,480	111.5	28.6	25.69
Owner	152	18,474	5,131	121.5	33.8	27.77
Future Owner	90	9,444	2,107	104.9	23.4	22.31
Never Acquires	54	5,088	1,242	94.2	23.0	24.41
<u>1861</u>	334	44,890	16,227	134.4	48.6	36.15
Owner	243	36,247	13,555	149.2	55.8	37.40
Future Owner	63	6,124	1,781	97.2	28.3	29.08
Never Acquires	28	2,519	891	89.9	31.8	35.37

Source: Compiled by Author

Given the above opinions we would expect to see a considerable increase in land clearance through time and also a shift in emphasis from mixed quality lands to an ever increasing stress upon the best quality lands. Was this the case? To answer this question and others raised above it is necessary to present the land holding and land occupancy situations that existed in Fitzroy between 1842 and 1861.

Cleared Land in Fitzroy 1842-1861 in Relation to Land Tenure

The 1842 Census of Fitzroy Township provides agricultural information on 162 occupants of the township who claimed to have one or more acres of cleared land (Table 6.2).⁽¹⁴⁾ In total 23,680 acres of land were claimed, with 3,862 acres being considered cleared. By 1851 a 45 percent increase in the number of farmers had occurred with a concomitant increase of acreage claimed to 33,006 or a 28 percent increase. Cleared acreage by 1851 though had increased to 8,480 acres or an increase of 54 percent. The figures for 1861 closely mirror those of 1851 with an increase in the claimed acreage of 26.5 percent and an increase of acreage cleared of 47.7 percent. In strong contrast though, there occurred only an eleven percent increase in the number of heads of households claiming agricultural lands. The major increase in the agricultural population during the period can be seen to have occurred between 1842 and 1851. The amount of acreage claimed grew at a steady rate of just under thirty percent, while acreage cleared more than doubled from 1842 to 1851 and nearly doubled again in 1861.

By 1861 Fitzroy could be considered a maturely settled township with over 71.6 percent of its area in the hands of resident farmers and with 36.2 percent of the claimed land cleared. Furthermore resident

land owner-occupiers by 1861 represented 72.8 percent of all active farmers and held 80.7 percent of the agricultural lands. In comparison, resident land owner-occupiers engaged in farming in 1842 and 1851 represented 44.4 and 51.4 percent of the heads of households respectively and 50.7 and 55.9 percent of the agricultural lands. By 1861 resident owner-occupiers had come to dominate the occupation of agricultural lands in the township. The percentage of land available for those without ready capital or collateral for purchase was ever shrinking by 1861. The number of young men or new immigrants who would step up from tenancy to land ownership had remained in the area of 30 percent from 1842 to 1851. By 1861 though, social mobility would appear to have all but ceased with only 18.8 percent of the population progressing into the future land ownership status.

The third land tenure class, labelled 5 on Table 6.2, is composed of those settlers who never received clear title to their lands. It represented upwards of a quarter of all farmers in 1842, a fifth in 1851, but only 8 percent in 1861. While plummeting in percentage of total population this group also consistently rose in percentage of acreage cleared, passing future land owners in 1851 and reaching 35.37 percent cleared in 1861, just two percent less than resident owners. This group further supports the argument that the township had reached beyond subsistence level agriculture and entered a stage of commercial orientation. In 1842 the group of "resident never owners" consisted primarily of squatters and farmers settled on government lands or the lands of large land owners under various arrangements. By 1861 "resident never owners" were running small acreage farms with high percentages of cleared land. That they were squatters in 1861 is unlikely,

far too much land was occupied in the township and the market values demanded legal title to secure one's efforts. Instead it can be hypothesized that they represented the evolution of a land management class or professional tenants, willing to accept the instability of tenancy over the insecurity of financing their own farms.

The advantage of land security inherent in land ownership is apparent from Table 6.2 (using the three right hand columns, representing average acreage owned, cleared, and percentage of land cleared by time period and by land tenure group). In all examples the owner-occupiers dominate the land structure, holding and clearing more acreage than the population as a whole. By 1861 we can safely state that resident owner occupiers represented the average settler and that the other land tenure conditions had essentially become anomalies. What is significant in stating this fact, is that it runs counter to our stereotype of the New World farm population. Townships typified by resident land owning farmers would appear to have been a condition of the latter half of the nineteenth century not of the entire century, if the example of Fitzroy Township is representative.

Land Holding Size and Speculators

Directly related to the increase in "resident land owner-occupier farmers" is a concomitant decrease in the acreage held by speculators and a massive increase in the number of acres held by owners of less than two hundred acres. Changing land ownership by speculators is illustrated on Tables 6.3 and 6.4, and Maps 6.1 to 6.3, for the periods under analysis.

Table 6.3

Land Ownership, Fitzroy Township by Parcel Size
Percentage of Land Owners with their Related Percentage
of Patented Land Owned, 1831 to 1861

Scale of Land Ownership in acres	1831		1841		1851		1861	
	% of Owners	% of Land	% of Owners	% of Land	% of Owners	% of Land	% of Owners	% of Land
1,000 plus	9.0	47.5	5.3	42.5	2.7	32.5	1.2	13.7
400 to 999	22.3	28.1	7.3	14.6	5.8	13.6	6.5	18.3
201 to 399	9.0	6.0	6.3	6.3	5.4	7.0	9.3	14.4
100 to 200	50.7	17.4	72.1	35.1	71.0	43.6	62.0	47.8
1 to 99	9.0	1.0	9.0	1.4	15.1	3.3	21.0	5.8
Total number of owners	67		190		258		324	
Total Acreage Patented		30,902		53,141		58,213		58,299

Source: Compiled by Author; Abstract Index to Deeds.

As Table 6.3 clearly shows the majority of Fitzroy's land owners between 1831 and 1861 consistently held parcels averaging 200 acres or less. In 1831 sixty percent of all land owners were in this category, yet they owned only 18 percent of all patented land. From 1842 on the 200 acre parcel size maximum was the experience common to over eighty percent of all land owners in the township. In contrast this majority of the land owners never achieved the majority of patented acreage until 1861, when their share of Fitzroy's land base reached 54 percent.

On Table 6.3 one finds that above the 200 acres parcel size group, is a group of plus 200 acres but under 400 acres land owners, who never represented more than 9.5 percent of the total land owning population. These land owners commonly held 300 acre parcels, but ranged from as low as 203 acres to a high of 360 acres. As a group they become of note in 1861 when they doubled their percentage of land ownership from 7 percent in 1851 to 14.4 percent in 1861. Of this group of 31 land owners, all were residents of Fitzroy Township in 1861; six having originally appeared in the "1842 Census" while another 9 dated from the 1851. The group consists of farmers acquiring larger than average farms, dispersed over a number of contiguous or closely clustered lots. The sixteen 1861 characters in the group include a number of heirs and second generation Fitzroy family sons. The older settler group, those dating from 1842 and 1851, represent men acquiring land for just the situation the former group profitted; land banking for the next generation.

That this group of thirty-one farmers could attain a doubling of the percentage of the land base held by the 200 to 399 acre group signifies the marketing of considerable acreage prior to 1861. Indeed land speculators would appear to have made great efforts in 1855 to sell

Table 6.4

Major Land Owners-Speculators, Fitzroy Township 1831-1861

Land Owners	<u>1831</u>		<u>1841</u>		<u>1851</u>		<u>1861</u>	
	Acres	Lots	Acres	Lots	Acres	Lots	Acres	Lots
Clergy Reserves	8,157	45	7,157	40	5,557	32	2,057	16
Canada Company	1,700	11	2,900	22	3,852	28	2,000	15
King's College	940	5	800	4	440	3	440	3
Henry Atkinson and Company	0	0	0	0	2,739	18	759	6
Hon. Wm. Morris	350	3	2,738	23	2,659	21	2,648	21
Robert Sherriff (res.)	1,327	7	1,972	13	8	1	0	0
Billa Flint (see S. Beach)	1,480	8	1,680	9	1,680	9	0	0
Samual Gerrard (Gerrard and Forsythe)	0	0	1,565	9	1,165	7	0	0
Alexander Sherriff (res.)	1,000	7	1,351	9	1,248	12	739	9
John Baird (res.)	0	0	0	0	400	2	1,320	11
Charles Sherriff, Sr. (res.)	1,000	10	1,126	11	0	0	0	0
Hon. Charles Jones	0	0	1,080	6	600	4	0	0

Land Owners	<u>1831</u>		<u>1841</u>		<u>1851</u>		<u>1861</u>	
	Acres	Lots	Acres	Lots	Acres	Lots	Acres	Lots
John and Agnes Grant (res.)	700	5	1,000	7	950	8	800	5
John Sherriff	938	5	0	0	0	0	0	0
Thomas Fraser II (res.)	200	1	700	5	900	6	400	3
Sally Beach (Heir of B. Flint)	0	0	0	0	0	0	680	4
Hamilton Lowery (res.)	300	3	700	6	700	5	400	4
Ritchie and Scott (Robert Scott)	0	0	700	4	300	2	0	0
Hugh (O') Rorrison (res.)	0	0	260	3	400	5	605	7
Thomas Fraser I (res.)	600	3	100	1	100	1	0	0
Sylvester Wright	600	3	200	1	200	1	0	0
Wm. Hodgins (res.)	0	0	400	2	600	4	306	3
Elnathan Hubbell	0	0	600	4	300	2	70	1
Patrick Gorman (res.)	0	0	100	1	150	2	600	5
Alexander McQueen (res.)	600	3	100	1	0	0	0	0
Wm. S. McDonald	600	3	200	1	0	0	0	0

Land Owners	<u>1831</u>		<u>1841</u>		<u>1851</u>		<u>1861</u>	
	Acres	Lots	Acres	Lots	Acres	Lots	Acres	Lots
Andrew Dickson (res.)	200	2	600	5	0	0	0	0
Hon. L. P. Sherwood	0	0	575	3	0	0	0	0
Charles Sherriff Jr. (res.)	500	3	500	3	445	3	143	2
John Kilborn	500	3	265	2	200	1	0	0
Alexander Morris	500	3	400	3	0	0	0	0
Alexander McMillan (res.)	0	0	500	3	400	3	400	3
Allan McLean (res.)	0	0	500	3	100	2	200	2
John Hunt Senior (res.)	0	0	300	2	500	3	100	1
Abraham Dayton	500	3	200	1	0	0	0	0
Wm. Mohr (res.)	0	0	0	0	400	2	500	3
George Baird (res.)	0	0	0	0	250	2	500	5
Allan Grant	500	3	0	0	0	0	0	0
Wm. Forbes (res.)	0	0	150	3	328	6	478	8
James Hubbell (res.)	0	0	0	0	400	2	460	4

Land Owners	<u>1831</u>		<u>1841</u>		<u>1851</u>		<u>1861</u>	
	Acres	Lots	Acres	Lots	Acres	Lots	Acres	Lots
Nicholas Sparks Jr. (res.)	0	0	0	0	0	0	414	3
Archibald Riddle (res.)	0	0	300	2	350	3	400	4
John Marshall (res.)	0	0	50	1	200	2	400	4
John Bradley (res.)	0	0	200	1	250	1	400	2
John Elliott (res.)	0	0	0	0	100	1	400	2
John Gourlay (res.)	0	0	400	3	400	3	0	0
John King (res.)	0	0	0	0	200	2	400	2
George Lantz (Lantz)	400	2	100	1	0	0	0	0
John Murphy (res.)	0	0	0	0	300	2	400	3
T. B. Anderson	0	0	0	0	400	2	0	0
Thomas Brynes	400	3	0	0	0	0	0	0
John Kerr	400	2	0	0	0	0	0	0
John L. McDonald	0	0	400	2	0	0	0	0
Total Acreage in Hands of Known Speculators 400 A. parameter	24,392	#25	32,869	#38	30,171	#38	19,419	#30

off their waste land holdings. Perhaps this was in response to the Crown's planned tax increases on waste lands and threatened expropriation and sale of lands in arrears. In either case land transactions were higher than average in the mid-1850's with 1853 being a peak year for Bargain and Sales (Graph 6.1). In general the decade between 1851 and 1861 saw considerable decreases in the speculative non-resident land ownership and a dramatic increase in the acreage owned and cleared by township residents (Maps 6.1 to 6.3, and 6.6 to 6.8; Table 6.2).

Those land owners holding, according to the "A.I.D.", four hundred or more acres of land, have been designated land speculators. For the interpretation of the effect of land speculators on land clearance rates it was deemed sufficient to use a binary typology of speculators, these are resident and non-resident (Table 6.4). For each time period each speculator was traced against listings of township residents, assigned to one of the two categories and then mapped (Maps 6.1, 6.2 and 6.3).

The resulting maps for 1842, 1851, and 1861, show clear patterns in resident and non-resident speculators' holdings. Through the three periods, non-resident speculative holdings decreased and became steadily more concentrated in the northern half and then northeastern quarter of the township. Resident speculative holdings increased through time at a steady rate but were generally concentrated in the central and northeastern quarter of the township in 1842. Resident speculators were not able to bring large parcels of land together in the more densely populated western five concessions. They were successful though in acquiring blocks of land in the south central portion of the township and later in the north central region. The Sherriff land block represents the most concentrated resident speculative holding in 1842, occupying

FITZROY TOWNSHIP

Land Speculation: 1842

Map 6.1

RESIDENT SPECULATOR
NON-RESIDENT SPECULATOR
 C—CANADA COMPANY LANDS

Scale in Miles

Compiled by Author

FITZROY TOWNSHIP

Land Speculation: 1851

Map 6.2

RESIDENT SPECULATOR
NON-RESIDENT SPECULATOR

c—CANADA COMPANY

Scale in Miles

0 1 2

Compiled by Author

twenty seven contiguous lots. By 1851 the ravages of poor land management, primarily the heavy mortgaging activities of Robert Sherriff,⁽¹⁵⁾ had left much of the area in the hands of non-resident speculators. By 1861 the numerous Sherriff tenants of a previous decade had acquired the title to many of the lots, leaving the Sherriff family with 882 acres of what had been a 4,949 acre estate in 1842 (Table 6.4).

The non-resident speculative holdings pattern clearly illustrate the longevity of the influence of the Brockville elite on Fitzroy's settlement geography. Their highly concentrated holdings in north eastern Fitzroy remain almost unchanged though to 1842 and by 1851 alterations in the pattern are minor. By 1861 though their grip on the area has all but ceased, with the exception of the Honourable William Morris's grand folly, Morris Island.

Morris's acquisition of this island of scrub, rock, and swamp requires considerable explanation. Morris was one of the original Brockville elite grantee's, but by the early 1830's was a resident of Perth. While in Perth he appears to have lost a land contest with a local military officer and was granted by the Crown, lands in compensation to be selected in Fitzroy Township⁽¹⁶⁾. Just prior to this situation the Sherwood vs. Sherriff case was being concluded by the Crown during which time Charles Sherriff, the founder of Fitzroy Harbour, was asked to provide an opinion on the most logical location for a major town plot along the Ottawa River.⁽¹⁷⁾ For reasons which can only be guessed at, Sherriff responded to this 1823 request not by selecting the nascent township centre of Fitzroy Harbour, which Sherwood as surveyor had spoken so highly of, but the barren rock bound waste land across the harbour.⁽¹⁸⁾ The location was readily accepted by the

FITZROY TOWNSHIP

Land Speculation: 1861

Map 6.3

- RESIDENT SPECULATOR
- NON-RESIDENT SPECULATOR
- c — CANADA COMPANY

Scale in Miles
0 1 2

Compiled by Author

government and appears on Joseph Bouchette's map of 1831, with the inscription "Reserved for a Village" marked upon it.⁽¹⁹⁾ In September of 1836 Morris was granted permission to locate lands of equal value in Fitzroy and by 1838 had acquired the patents to over 2,000 acres of land fronting the Mississippi River and Syne and the Ottawa River; modern day Morris Island.⁽²⁰⁾ One must ask if Morris had ever traversed this territory prior to acquiring it, for it bore no relation to the quality of land he and his brother acquired in 1824. Secondly, one is left with the question, if this was such good quality land for establishing a village why did the Sherriff family not locate here and why did the surveyor not mention the possibility? Sherriff's reasoning for advising the Crown to locate the town plot on the island, leads one to wonder if his advice was not part of a larger plan relating to the earlier Sherwood-Sherriff conflict. Morris's selection of this land merely followed an established pattern for the "Brockville Elite" speculators; that Reuben Sherwood on this occasion was not available for advice is probable. Morris's acquisition of 1836 can not be considered as a major impediment to land settlement nor clearance rates. The only viable agricultural lot (Lot 24, Concession 7) on the island although claimed by Morris had been settled prior to 1838 and was being actively farmed throughout the study period. Morris's Island must be considered as merely a large privately owned area of wasteland, which would likely have remained government land had it not been for Sherriff's advice and Morris's folly.

Speculators though did play a major part in the township's development. In this section the extent of speculative holdings has been presented in order to illustrate the acreage held and locations of

speculator's holdings. This information is important for the explanation of land clearance rates in the township through time.

The Labour Component as a Factor in Land Clearance Rates

The availability of a resident rural labour force is commonly perceived as a pre-requisite for the labour intensive activities associated with farm land and road clearing, the erection of fences and buildings, and the managing of larger holdings. The opinion that such enterprises could be accomplished by the wholesome communal building bee leaves much to the imagination.⁽²¹⁾ One could hardly work their neighbours as hard as their employed labour and remain "neighbours". Farmland improvement required in the nineteenth century, as it does today, considerable capital outlay. Land mortgaging was a practice which was gaining in popularity, or necessity as the case may be, from the 1840's onwards.⁽²²⁾ Throughout the same period in Fitzroy landlessness and particularly labourers located in rural areas, were common place (maps 6.4 and 6.5). In 1851 of those listed in the "Agricultural Census" fully 48.8 percent did not own the land they farmed, while 77 of 84 labourers could be located in the rural areas of the township and associated with active farm lots. In 1851 numerous lumber camps had also sprung into existence and housed some 119 men. Their presence in the township must have contributed considerably to the expansion of cleared acreage in the township. The labourers in these camps were primarily Lower Canadians of French, Irish, and Scottish origin. A small number of the lumber camp members were sons of local settlers. Of the non-residents only one, a Swede, had his family residence in Fitzroy Harbour Village and remained in the township through to 1864. By 1861

FITZROY TOWNSHIP

Agricultural Labour

Force 1851

Map 64

- - One Labourer
- - Two Labourers
- (4•) - More than two Labourers, 3, 4,

- ▲ - Single Tenant
- ▲ - More than one Tenant
- LC20 - Lumber Camp with given number of members

Scale in Miles

Compiled by Author

FITZROY TOWNSHIP

Agricultural Labour
Force 1861

Map 6.5

- - Labourer
- - Two Labourers
- (4e) - More than two Labourers, 3 to 8
- Δ - Single Tenant
- ▲ - More than one Tenant-four
- H — •, Δ - Owner Occupier associated with Labourers or Tenants

Scale in Miles

0 1 2

Source: Compiled by Author

those listed in the "Agricultural Census" who did not own their land had dropped to 31.5 percent, while the number of rural labourers had increased to 159 or 91 percent of those portrayed on map 6.5. Labourers between 1851 and 1861 had increased by 108 percent in the township as a whole.

The pattern of labourer's locations in 1851 followed no particular pattern, in that no areas of the township had notably higher numbers of labourers than other areas given population density. The larger number of labourers in western Fitzroy is directly related to the denser population in this earlier settled section of the township. By 1861 labourers show increased numbers across the township, with highs of eight labourers, on Lot 10 in the fourth concession, the site of the hamlet of Antrim, and in Fitzroy Harbour Village, Lot 24 in the tenth concession. Locations of 1861 labourers can be seen to follow fairly closely to the major through roads. Concentrations can be noted along the front of the Concessions four and nine, and along the east-west side roads on lot eleven. Labourers in general though are widely dispersed across the township.

Comparison of Land Clearance Rates with the Environment

Land clearance rates expressed as percentage of lot cleared, and for cartographic illustration mapped on standard deviations above and below the mean, are presented on maps 6.6, 6.7 and 6.8. From 1842 onwards a higher concentration of lots in the plus two standard deviations above the mean occur in the western half of the township. This general pattern is the result of a number of settlement related variables including land quality, drainage, access to town and roads, and a

FITZROY TOWNSHIP

Land Clearance, 1842

Plus and Minus Two Standard Deviations

Map 6.6

Percentage of lot cleared and standard deviations

■ - 44.2 to 53.9; 4s.d.	○ - 4.8 to 14.6; -1s.d.
▨ - 34.4 to 44.1; 3s.d.	▤ - 0.5 to 4.7; -2s.d.
▩ - 24.5 to 34.3; 2s.d.	P - Patented, zero acres cleared.
● - 14.7 to 24.4; 1s.d.	Sample size, N=145

Scale in Miles

Source: Compiled
by Author

higher population density. In contrast the negative two standard deviation lots or those with excessively low percentages of land cleared tend not to cluster through time in any one area. This lack of continuity would appear to be the result of specific time oriented factors. Early attempts to clear and settle the limestone outcrop areas and the Canadian Shield lots may be useful in explaining, in a general manner, the concentration of low values in southern Fitzroy in 1842. Likewise the 1861 pattern, with its cluster of minus two standard deviation lots

Table 6.5

Comparison of the Characteristics of Plus and Negative
Two Standard Deviation Land Clearance Lots 1842 to 1861,
with Frequency of Vegetation Classes

Vegetation Quality Classes	<u>1842</u>		<u>1851</u>		<u>1861</u>	
	+2 lots	-2 lots	+2 lots	-2 lots	+2 lots	-2 lots
1) Good Land Indicators	59.3%	55%	63.9%	26.5%	57.1%	15.9%
2, 6, 7) Mixed- Middling	40.7%	45%	27.1%	67.6%	38.8%	65.9%
3, 4, 5, 8) Poorest Quality	0.0%	0.0%	0.0%	5.9%	4.1%	18.2%
Total number of lots	27	21	36	34	49	34

Source: Compiled by Author.

FITZROY TOWNSHIP

Land Clearance, 1851

Plus and Minus Two Standard

Deviations

Map 6.7

Percentage of Lot Cleared and Standard Deviations

■ - 58.65 to 83.95; 4s.d.	○ - 20.65 to 7.95; -1s.d.
▨ - 45.96 to 58.64; 3s.d.	▤ - 7.94 to 9.50; -2s.d.
▩ - 33.31 to 45.95; 2s.d.	N - Patented, Zero Acres Cleared
● - 20.65 to 33.30; 1s.d.	Sample Size N=216

Scale in Miles

Source: Compiled by
Author

around Fitzroy Harbour Village, could be found to be related to the demise of the many speculators who had controlled this area. Equally, a general economic decline in Fitzroy Harbour Village might explain the low cleared acreage rates in this area of early settlement.

The data constructed to this point in the chapter provide for substantial explanation of the patterns of the plus and minus two standard deviation lots through time. It is now possible to answer the question, did settlers select lands for agricultural expansion using tree species indicators, and if they did how successful were they at exploiting this initial advantage.

By reviewing Table 6.5 we find that lots with plus two standard deviations consistently show a strong relationship with "Goodland Indicators." From an 1842 value of 59.3 percent of the most progressive lots vegetation class one observations rise to 69 percent in 1851 before falling to a low of 57.1 in 1861. The use of tree species indicators are certainly evident given the total absence of occurrences of plus two standard deviation lots on vegetation classes 3, 4, 5, and 8, through 1842 and 1851. By 1861 a mere two of forty-nine lots occurred on this poorest of land qualities given tree species indicators. The 1861 occurrence may represent the occupation of good land by settlers who looked beyond tree species indicators or the fairly early clearance and drainage of highly fertile but excessively wet lands.

The occurrence of a significant number of the most advanced clearances in 1842 and 1861 can be seen to have occurred on the second land quality class, "Mixed or Middling". This situation supports Kelly's assumption that settlers often preferred the initial advantage inherent in occupying and clearing lands found under pines with an admixture of

FITZROY TOWNSHIP

Land Clearance, 1861
Plus and Minus Two Standard
Deviations

Map 6.8

Percentage of Lot Cleared and Standard Deviations

■ - 73.5 to 93.2; 3s.d. ○ - -33.8 to 14.2; -1s.d.

▨ - 53.7 to 73.4; 2s.d. ▤ - 14.1 to 0.5; -2s.d.

● - 33.9 to 53.6; 1s.d. N - Patented, Zero Acres Cleared.

Sample Size, N=266

Source: Compiled by
Author

Scale in Miles

hardwoods.⁽²³⁾ In Fitzroy as elsewhere, such tree species were associated with sandy soils, while the density of forest is widely reported to have been not as great as that of pure hardwood stands. Furthermore the advantage of faster drainage in this area of heavy clays and clay loams may have been understood by the initial settlers.⁽²⁴⁾ Using the 1842 land clearance data the hypothesis that settlers initially chose easier opened lands associated with middling or mixed tree species can be tested using analysis of variance. The computations for the analysis of variance are summarized on Table 6.6. The resulting F value of 5.73 with the corresponding degrees of freedom allows for the rejection of the null hypothesis that no relationship existed between land quality and the acreage cleared, at the .01 significance level.⁽²⁵⁾ Kelly's assumption can be seen to be correct, allowing us to conclude that settlers on the mixed and middling quality lands, as indicated by tree species indicators, did indeed have significantly more land cleared than those on the lots deemed inherently more fertile given tree species indicators.⁽²⁶⁾

This is not to say that settlers ignored the better Class One lands in 1842, they were merely making more rapid inroads in land clearance on the less densely forested and more easily opened light soils. It can be hypothesized that the 1842 land owners advancing the middling lots were doing so in order to accumulate adequate capital. This would allow them to purchase and bring into production the clay soil lands associated with the better tree species indicators and also with greater capital expenditure. From Table 6.5 and the testing of Kelly's assumption it can be safely stated that settlers in Fitzroy, particularly those achieving the highest rates of land clearance, had cognitively selected

Table 6.6

Analysis of Variance Test for the Variation Between
the Average Cleared on Lots with Differing Vegetation
Classes for Fitzroy Township, 1842

	Sum of Squares	Degrees of Freedom	Estimates of Variance	F
Total	16,205.14	N-1 149		
Between	1,172.15	K-1 2	586.07	5.73
Within	15,032.99	N-K 147	102.27	

Source: Compiled by Author.

lots which would enable them to achieve rapid advancement; these lots were selected using tree species indicators.

From Table 6.5 one can also note that those lots with the lowest percentage of land cleared in 1842 could also be argued to have been selected on the basis of good land tree indicators. Although the 1842 figure of 55 percent drops steadily, reaching 15.9 percent in 1861, it can be equally argued that the mixed and middling quality tree indicators, should not have been such a liability to settlers selecting them. Unfortunately the relationship between tree species and land quality was not perfect in nature, variation did occur. Given an entire township a settler was likely to select, using tree species indicators, the quality

of land desired, but one must stress likely. Between 1842 and 1861 all negative two standard deviation lots' tree quality indicators were compared against the soils for the respective lots. The results shown on Table 6.5 as a matrix are most informative. Those settlers using good land tree indicators acquired for the most part good quality land as judged by soil drainage and texture. That this advantaged group had not risen above the lowest level of land clearance may be a factor of timing of occupancy prior to the census. Equally it may have been the result of land speculation or instability in land ownership on the part of the settler. Good land indicators did though, on occasion, lead to the acquisition of mixed lots with a scattering of some good quality and fair quality soils scattered over the lot.

Surprisingly, those locating on lots characterized by the poorest vegetation indicators found themselves with a 40 percent chance of being on a lot with good quality soil (Table 6.7). On this occasion the ignorance of folklore, or the use of other than tree indicators of land quality, may have been prevalent.

Those taking the greatest risk were settlers attempting to limit their long term overhead and turn a fast profit by selecting lots with mixed pine and hardwoods. Of this group who selected mixed or middling tree species indicators 55.6 percent fared very poorly. These settlers acquired lots with shallow sandy soil and variable to excessive drainage.⁽²⁷⁾ In contrast the 20.6 percent who acquired mixed quality and fair category soils would have settled onto lots which had areas of sandy loams or sand spot clays, which had the advantage of fair to moderate drainage.⁽²⁸⁾ Furthermore this minority of settlers would have benefitted by the mixed soils on their lots, which would allow for

Table 6.7

Matrix of 1842-1861 Vegetation Grouping Compared to
Actual Soil Quality for Negative 2 Standard Deviation Lots

<u>Soils</u>	<u>Vegetation Class</u>		
	1 Good	2, 6, 7 Mixed-Middling	3, 4, 5, 8 Poor
Class 1 (Good land)	17	15	4
Class 2, 6, 7 (Mixed, Fair)	6	13	0
Class 3, 4, 5, 8 (Poor land)	3	35	6
Total Occurrences	26	63	10

Source: Compiled by Author.

initial clearing of the lighter soils and in time for the gradual movement onto the heavier clays. Mixed and middling vegetation indicators were just as likely though to locate a settle with limited finance on a "Class 1" clay or clay loam soil, thus defeating the purpose of his selection and probably explaining to some extent the observed limited cleared acreage. Fully 23.8 percent of the lots with the lowest acreage cleared are Class One soils with mixed pine and hardwood coverage. Variation in expected and observed soils though do not fully explain the resulting pattern of negative observations of land clearance. For a

full explanation of factors modifying the pattern of cleared acreage it is necessary to reopen the discussion of land tenure, speculation, and labour supply.

The cleared acreage on a lot can not come into existence merely due to the quality of the tree species occupying the lot. Indeed the two are diametrically opposed both in nature, and during the nineteenth century, in the eyes of the settler. For an explanation then of this seemingly incongruous situation, let us turn to the examination of land tenure conditions of the settlers.

In 1842 the land tenure condition of the majority of the plus two standard deviation lot holders (57.1%) was of a stable land owning nature (Table 6.8). In contrast negative two standard deviation lot holders were comprised of only 18.2 percent owner-occupiers while a full 81.8 percent of the residents of these lots were occupant non-owners. While 1842 settlers may have in general occupied good quality land those who were successfully clearing large areas were decidedly owner-occupiers. A high percentage of all the small cleared acreage population suffered from unstable land tenure conditions, which would have made the costs of land clearance a financial risk. This clear division between advanced cleared acreage lots and laggard land clearance lots based on land tenure status remains constant through to 1861.

Indeed stabilized land tenure conditions may be partially responsible for the drop in percentage of plus two standard deviation lots found in relation to the tree species indicators of good land. It can be hypothesized that as land tenure stabilized, owner occupiers could afford to take greater risks in selecting land for expansion and improvement, thus becoming less dependent upon forest lore to ensure

Table 6.8

Comparison of the Characteristics of Plus and Negative
Two Standard Deviation Land Clearance Lots 1842 to 1861,
with Land Tenure Status

Land Tenure	<u>1842</u>		<u>1851</u>		<u>1861</u>	
	+2 lots	-2 lots	+2 lots	-2 lots	+2 lots	-2 lots
Owner	57.1%	18.2%	54.4%	15%	83.7%	46.9%
Future Owner	28.6%	13.6%	27.9%	45%	9.2%	37.5%
Never Owner	14.3%	68.2%	17.7%	40%	7.1%	15.6%
Total number of Occupants	42	22	68	40	98	32

Source: Compiled by Author.

success. Movement onto wetter lands or middling quality lots contiguous to their primary residence could be assisted by greater capital outlay and labour input. Mortgaging of the original farm, once the deed had been acquired, would provide ready capital for the expansion minded resident-owner-occupier.

Coinciding with this increase in owner-occupiers was an increase in the number of adult head of household rural labourers, a minor decrease in tenants and a large scale transfer of lands from non-resident speculators into the hands of resident land owners. The expansion minded

Table 6.9

Comparison of the Characteristics of Plus and Negative
Two Standard Deviation Land Clearance Lots 1842 to 1861,
with Reference to Non-Land Owners and Speculators

Number of Lots by Period	1842		1851		1861	
	+2 s.d. 27	-2 s.d. 21	+2 s.d. 36	-2 s.d. 34	+2 s.d. 49	-2 s.d. 34
Number of Labourers on	n/a	n/a	20	8	44	8
Percentage of All Labourers			26.0%	10.4%	27.7%	5.0%
Number of Tenants	n/a	n/a	8	9	8	6
Percentage of All Tenants			16.0%	18.0%	19.5%	14.6%
Lots owned by Resident Speculators	4	3	4	4	3	11
As a Percentage of Lots	14.8%	14.1%	11.1%	11.8%	6.1%	32.4%
Non-Resident Speculators	2	4	3	13	1	9
As a Percentage of Lots	7.4%	19.0%	8.3%	38.2%	2.0%	26.5%

Source: Compiled by Author.

opposite situation of a speculator located on poor quality land, is illustrated by William Morris' holdings in 1861.

Land improvement by settlers was also closely related to initial land quality acquisition. The relationship though is not as simple as that of the speculators, as land quality did not necessarily determine the success of the farmer. In 1842 advanced land improvement was more likely to be associated with lots of middling soil and fair to mixed tree species groupings. By mid-century, though, the dominance of the more fertile soils found under the tree species grouping of maple/basswood, elm and oak had become apparent.

To achieve a conclusion regarding the thesis of this study, it was necessary to contemplate a series of hypotheses regarding the bases of the understanding of land quality and the dissemination of this knowledge. From the literature review it became apparent that various conclusions regarding the relationship between the settler and land quality interpretation existed. It was concluded that these often times conflicting views were to some extent explainable given the dating of the period of settlement and the area under investigation. The decision that future researchers must continue to weigh the necessity of analyzing the relationship between surveyor, settler and the perception of the Upper Canadian environment, lead to the analysis of the surveyor's records as a basis for the analysis of land interpretation for the period under study.

The analysis of Reuben Sherwood's survey of Fitzroy Township leads to the conclusion that not only was Sherwood a competent and experienced surveyor but that his perceptions of the environment of Fitzroy Township could be corroborated using the work of his contemporaries and modern

the acreage cleared on highly advanced lots. In 1851 the non-resident speculators occupied 38.2 percent of all the lesser advanced lots and employed 4 of the 9 tenants listed. In 1861 they still held nine of the lesser developed lots in the township; or just over a 25 percent. The percent of under developed lots in 1861 which speculators held had risen to 58.9 percent from 50 percent in 1851 and a mere 33.1 percent in 1842. The advent of the resident speculator in 1861 as the dominant speculator and the leading figure in the explanation of low clearance rates, implies that no alteration in the effect of speculators upon land development occurred given their residence. We also find no increase in labourers nor tenants on the lesser developed lots through time. The resident-speculator, much more likely to pay his taxes and participate in the township's affairs, would appear not to be opening new lands, nor putting capital forward for labourer's wages to expand his newly acquired lands. Indeed both labourers and tenants drop in percentage employed on these lots from 1851 to 1861. Resident speculators would appear to be acting in a similar manner to non-resident speculators; they are effectively holding viable agricultural lands out of production for future personal gain.

Conclusions

At the beginning of this chapter the reader was introduced to the need to clarify the role of vegetation indicators of goodland quality in the settlement decisions of settlers through time. In order to achieve a full understanding of the role of tree species indicators of land occupation it was deemed necessary to use a measure not only of occupation but of the level of success of such occupation. Furthermore this

measure of success, land clearance rates, was recognized as but one of a number of factors possibly influencing the settler's decision to locate. Land clearance rates themselves were noted as being the result of a number of socio-economic factors including both local and inter-regional economic conditions. For this study though concentration was put upon the local factor of land tenure.

Before analysis of the major standard deviation land clearance lots could commence, it was necessary to illustrate the land holding and land occupance patterns for the three time periods. While illustrating the linkage of the various data sources certain conclusions concerning land ownership patterns in each time period and through time were discussed. Firstly, land ownership was a privilege not necessarily a given right as of 1842, and this situation only barely improved for the majority of the townships' residents through time. Secondly it was shown that a steady stream of settlers filtered into and out of the township through time. Land tenure analysis through time clearly shows that land ownership stabilized during the period 1842 to 1861; with the majority of those acquiring title to their land doing so during this period. In contrast though, the years 1842 and 1851 were marked by large percentages of non-land owning farmers working towards stability of land tenure. Equally significant was the strong relationship between acreage cleared and land tenure status. Occupier-owners by 1861 had almost twice as much cleared acreage on average than non-land owning occupants. Concurrent with the rise of owner-occupiers to the forefront of land ownership and cleared acreage variables was a drop in the acreage held by non-resident speculators and an increase in the labouring population. The patterns of speculative holdings as late as 1861 and definitely in 1851 still showed

the problems created by the early land granting cabal of the two major land speculating parties in the township, the "Brockville Elite" and the Sherriff Family. Labourers on the other hand although mildly clustered at Antrim and Fitzroy Harbour Village were well distributed across the better quality farmland areas of the township. By 1851 and 1861 though almost all of the more highly advanced lots were found to have labourers located on them.

The use of tree species indicators by settlers was addressed in the latter half of the chapter. The conclusions must be considered mixed. When the plus two standard deviations lots for 1842, 1851, and 1861 were compared to tree species indicators the absence of all but two such lots on the poorest quality lands allowed us to conclude that settlers could avoid low fertility lots using tree species. Those who did locate on such lots in 1851 and 1861 showed for the most part retarded levels of land clearance, thus illustrating the viability of tree species as indicators of land quality. This line of reasoning though did not hold true for the minus two standard deviation lots for 1842. In 1842 the majority of the lowest land clearance rates were located on the best quality tree indicator lots. Likewise 1851 and 1861 saw very low land clearance rates on those lots deemed fair quality given tree species indicators. At this point it would appear that tree species indicators had failed the settlers and indeed, given the quality of soils found in relation to tree species on the given lots, this was the case. The imperfection of the tree species to soil quality relationship, although not a significant problem certainly affected the lives of a small sample of the population. But it was not just the imperfection of the tree species to soil quality relationship which affected the lives of these

lowest cleared acreage settlers. Their efforts were shown to have been further hampered by low levels of land ownership, high levels of ownership of their lots by land speculators, and an inability to harness a labour force for land development purposes.

The tree species indicators though assisted more settlers than it hampered in the selection of their lands. Even those who were shown not to be highly productive would still have had the advantage of good land upon which to invest if they could stabilize their land tenure position. Given the stabilization of land tenure and the movement of the settler from tenant or leasee to actual owner, then for Fitzroy Township, Gentilcore's closing argument regarding choice and initiative and the selection of good quality land can be supported. Selection of good quality land alone though without the ability to gain title was no assurance of success.

ENDNOTES

- (1) Clarke and Finnegan, 1984, p. 135.
- (2) Jones, 1946, pp. 70-74;
- (3) William Marr states that no difference existed in 1871 between the acreage cleared by tenants and owners. That this was the situation through time in Ontario or merely in this one County in 1871 has never been addressed in the literature. W.L. Marr, "Tenant vs. owner occupied farms in York County, Ontario, 1871." Canadian Papers in Rural History, IV, ed. D.H. Akenson, (Gananoque: Longdale Paper, 1984), pp. 50-71; p. 63.
- (4) P.A.C. Census of Canada; Manuscript Census of Canada West, Bathurst District, Fitzroy Township, 1842; Manuscript Enumeration Census Canada West, Carleton County, Fitzroy Township, 1851; Manuscript Agricultural Census Canada West, Carleton County, Fitzroy Township, 1851; Manuscript Enumeration Census Canada West, Carleton County, Fitzroy Township, 1861; and Manuscript Agricultural Census Canada West, Carleton County, Fitzroy Township, 1861.
- (5) McCallum, 1980, pp. 138-140; Jones, 1946, pp. 161, 199-200; Jones notes that by the 1853-1857 period successful farmers were attempting to cut back on wage labour due to scarcity and cost by purchasing labour saving machinery.
- (6) McCallum, 1980, particularly Chapter 2, "The rise and fall of the Ontario wheat staple," pp. 9-24.
- (7) P.A.C., M.G.9, D9-73, Fitzroy Township Collection Assessment Rolls: 1850, 1852, and 1861.
- (8) This stereotype although now less widely accepted amongst scholars is still widely presented in the popular histories of Ontario which are readily reprinted. A class example of over estimating land ownership and underplaying landlessness and the existence of a large labouring population can be found in G. P. de T. Glazebrook, Life in Ontario: A Social History, (Toronto: University of Toronto Press, 1968, reprinted, 1971), pp. 168-169.

- (9) Gagan's Peel County study found a core population of persistent families numbering 25 percent of the 1861 population, exactly the same percentage that existed by 1861 for Fitzroy Township, give or take one percent. David Gagan, Hopeful Travellers: Families, land and social change in mid-Victorian Peel County, Canada West; (Toronto: University of Toronto Press, 1981), p. 95.
- (10) Gentilcore, 1972 [b], p. 419.
- (11) Wm. Norton: "Agricultural evolution on the frontier," Professional Geographer, 36(1), 1984, pp. 18-27, p. 23.
- (12) Norton, 1984, p. 26.
- (13) Kelly, 1974, pp. 11-12.
- (14) The term occupant signifies a head of household claiming a section of land to be his own regardless of legal title. In analyzing land occupation it became readily apparent that the Agricultural Census's listing of land owned often deviated from taxation assessment and actual deeds held according to the "A.I.D.". Actual land occupation classes had to be constructed using the available sources. What resulted was a three class land tenure structure based on the title of the lot. Resident owner-occupants, classed tenure class one, owned and occupied lands claimed in the township's census records. Class 3 - occupant-future-owner represented heads of households who in time would gain ownership either to the land they they occupied, a neighbouring lot or on occasion land miles away from their given location. All settlers not owning land in the township at each time period studied were searched through to 1871 to clarify future land ownership chances. Those who never acquired land by 1871 were deemed to be occupant never-owners.

Land tenure conditions of this nature appear not to be addressed by Gagan, 1981, who uses free holder and tenant classes although he does state that 1) a tenant farmer was often on the road to property ownership, p. 155; and that due to the practice of not registering titles (A.I.D.) until a sale had been effected by the payment of several years quit rents posed severe and sometimes insurmountable difficulties in the matter of property ownership, p. 166.

- (15) A.O., R.G.1, Abstract Index to Deeds for Fitzroy Township.
- (16) A.O., R.G.1, F.T.P.
- (17) P.A.C., R.G.5, A1, Vol. 61, pp. 32694-32696. (C. Sherriff to Major Hillier, Secretary to His Excellency Sir Peregrine Maitland, Sept. 6, 1823).
- (18) P.A.C., R.G.5, A1, Vol. 61, pp. 32694-32696.

- (19) C. C. Kennedy, The Upper Ottawa Valley (Ottawa: Mortimer Ltd., 1970); reprint of Bouchette's Map of 1831; p. 12.
- (20) A.O., R.G.1, Abstract Index to Deeds for Fitzroy Township.
- (21) de T. Glazebrook, 1968, p. 168.
- (22) David Gagan, "The Security of Land: Mortgaging in Toronto Gore Township, 1825-95"; in F. H. Armstrong, H. A. Stevenson and J. D. Wilson, 1974, pp. 135-154, 139.
- (23) Kelly, 1974, pp. 11-12.
- (24) For discussion of soils see chapter three of this thesis in particular Table 3.9 - Soil Classifications.
- (25) Blalock, 1960, 242-272.
- (26) To extend the argument of the significance of 1842 land cleared in relation to good, middling, and poor land quality indicators, a student t test was performed to test if the middling quality lot's average acreage cleared was significantly higher than the good quality lots average acreage cleared. A resulting t of 2.471 with 36 degrees of freedom allowed for the rejection of the null hypothesis that the percentage of acres cleared for middling quality lots was equal to the good quality lots' average, at the .05 level of significance. Indeed the average acres cleared on middling lots of 20.08 acres was significantly higher than the 15.9 acres cleared on the better quality lands. Blalock, 1960, pp. 172-176.
- (27) See Chapter 3 of this thesis, Table 3.9 - Soil Classifications.

CHAPTER 7

SUMMARY AND CONCLUSIONS

From surveyor to speculator and finally to settler, the knowledge of what constituted "good land" in the nineteenth century has been shown to have existed. Occupants of Fitzroy Township readily and in significant numbers acquired lands characterized by fertile soils and adequate drainage, using as their primary guide the locally recognized tree species indicators of land quality. The ability to successfully select "good land" using this method can be seen as a common factor linking surveyor, speculators and settlers between 1822 and 1861.

The significance of good land selection by speculators and settlers did indeed have repercussions of their land holdings and land improvement situations through time. In the case of land speculators, selection of good quality land (particularly Class One or the heavier clay soils found in association with maple/basswood, elm and oak), which required higher levels of capital to clear and improve were the best investment. As the township matured and local farmers acquired capital and collateral and a desire to expand, the speculator would be in the position to sell at a strong market price what was likely one of the few remaining good quality lots. This assumption is borne out by the rapid increase in owner-occupiers, land clearance, and the large scale sales of non-resident land speculators' holdings between 1851 and 1861. The

opposite situation of a speculator located on poor quality land, is illustrated by William Morris' holdings in 1861.

Land improvement by settlers was also closely related to initial land quality acquisition. The relationship though is not as simple as that of the speculators, as land quality did not necessarily determine the success of the farmer. In 1842 advanced land improvement was more likely to be associated with lots of middling soil and fair to mixed tree species groupings. By mid-century, though, the dominance of the more fertile soils found under the tree species grouping of maple/basswood, elm and oak had become apparent.

To achieve a conclusion regarding the thesis of this study, it was necessary to contemplate a series of hypotheses regarding the bases of the understanding of land quality and the dissemination of this knowledge. From the literature review it became apparent that various conclusions regarding the relationship between the settler and land quality interpretation existed. It was concluded that these often times conflicting views were to some extent explainable given the dating of the period of settlement and the area under investigation. The decision that future researchers must continue to weigh the necessity of analyzing the relationship between surveyor, settler and the perception of the Upper Canadian environment, lead to the analysis of the surveyor's records as a basis for the analysis of land interpretation for the period under study.

The analysis of Reuben Sherwood's survey of Fitzroy Township leads to the conclusion that not only was Sherwood a competent and experienced surveyor but that his perceptions of the environment of Fitzroy Township could be corroborated using the work of his contemporaries and modern

soil survey techniques. This chapter using techniques derived from Clarke¹¹ and Clarke and Finnegan's⁽¹⁾ work on Essex County supported their opinions. Thus for the first time standardized methods were followed which lead to the ability to closely compare the results of two sample area studies at opposite ends of Southern Ontario. The Fitzroy study supported the opinion of Clarke and Finnegan, that a significant relationship existed between the surveyor's interpretation of tree species as sifted through the eyes of the historical geographer and the modern soils survey.⁽²⁾ The importance of the relationship in explaining settlement patterns became apparent in chapter six where it was shown that lots with low cleared acreage commonly occurred where the relationship between tree species and soils faltered.

The capacity of one group of early Ontarians to acquire large areas of good land above that which could be expected is clearly illustrated in chapters four and five. Here the dissemination of the surveyor's knowledge can be seen within one year of the completion of the survey, to be narrowly focussed towards an elite group in society. While government direction of land was found to be active in 1820's those doing the directing were also relatives and associates of the surveyor. The acquisition of significant numbers of lots of good land by all grantees was over shadowed by the acquisition of thousands of acres of the best quality land in the choicest area of the township by the Brockville elite of whom Reuben Sherwood and the government officials directing land granting were charter members. The most significant and longest occupying non-resident speculators in Fitzroy were members of this cabal.

That land selection was based upon tree species indicators and that accurate use of these tree species indicators had significantly positive results for speculators and settlers alike is the conclusion of this thesis. Selection of good quality land alone, though, did not equate with success, nor did the relationship between tree species and land quality always bring the desired results, anomalies did exist. A number of factors were found to influence land clearance rates including personal land tenure, labour force availability, and the existence of land speculators. Future research might focus on the individual farmer's adaptation to his physical environment. This adaptation could be measured by comparing the land quality of various farmers against their land use patterns; particularly the ratio of cleared land to pasturage and the acreage devoted to specific crops.

ENDNOTES

- (1) Clarke, 1970, pp. 70-81; Clarke and Finnegan, 1984, pp. 119-136.
- (2) Clarke and Finnegan, 1984, p. 136.

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