

**A Geographical Study
of
Tecumseth Township**

A Thesis

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Bachelor of Arts

by

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Tecumseth Township

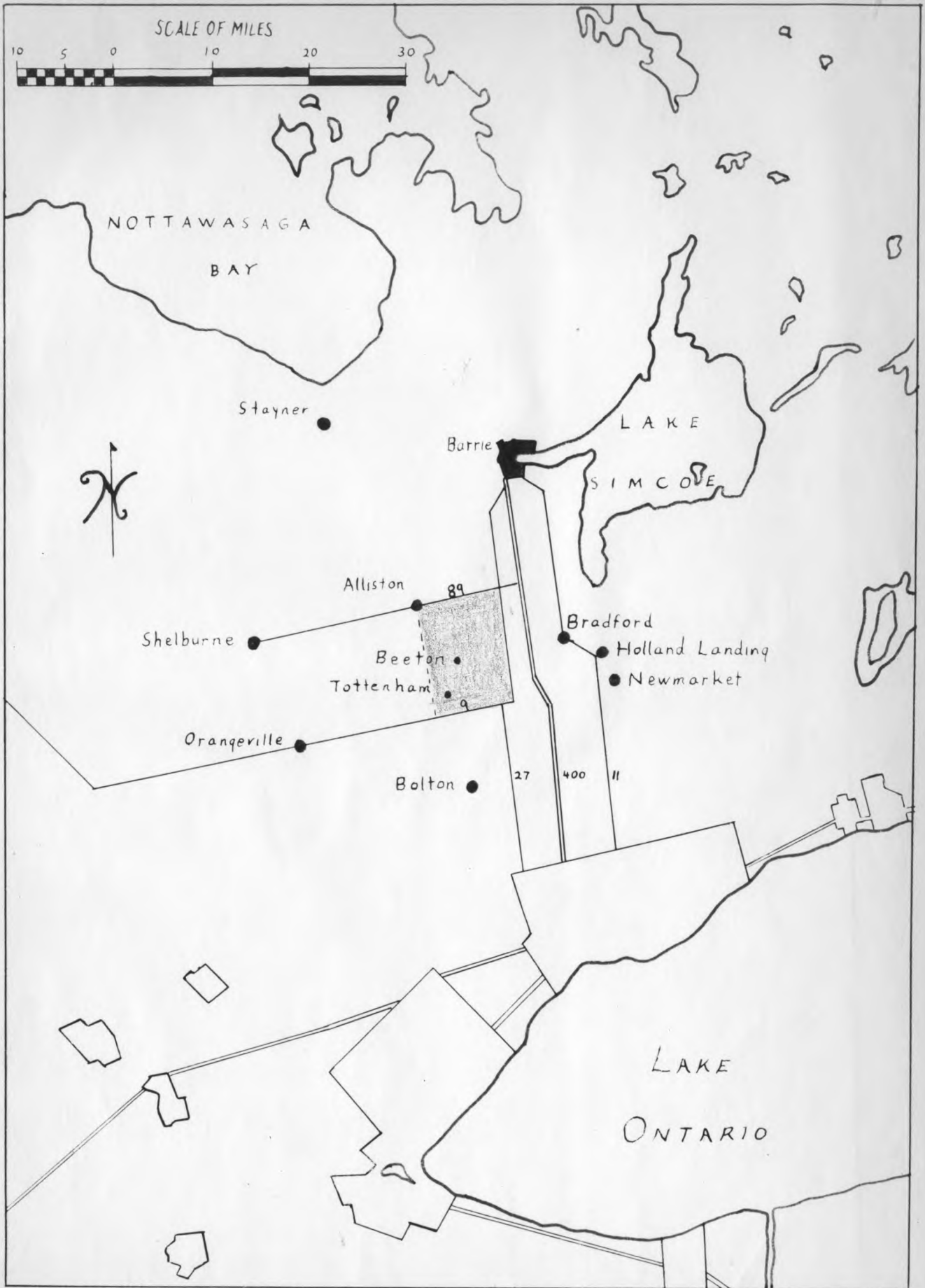
Introduction

Tecumseth Township which secured its name from the great pro-British Indian Chief Tecumseh is located at the southern end of Simcoe County. (Fig 1a). In shape it is a parallelogram with sides nine and thirteen miles respectively and contains about 68,500 acres.¹

A dominantly rural township it has a favourable location between the large urban Toronto-Hamilton market to the south and the summer resort areas of Lake Simcoe and Georgian Bay to the north. Transportation links by road and rail are excellent in both directions although present day travel is primarily on the modern highways. These roads lie adjacent to the township on three sides and an internal road grid of 196 miles² in length provides connecting links with the main arteries.

The physical landscape is quite diverse. Altitudes vary from a peak of nearly 1100 feet in the southwest to a minimum of 700 feet giving a local relief of 400 feet. The broad, flat valley which occupies the northwest corner and extends in a narrowing belt in an easterly direction across the township separates the highland of the south from the land which rises up again in the northeast. (Fig. 2).

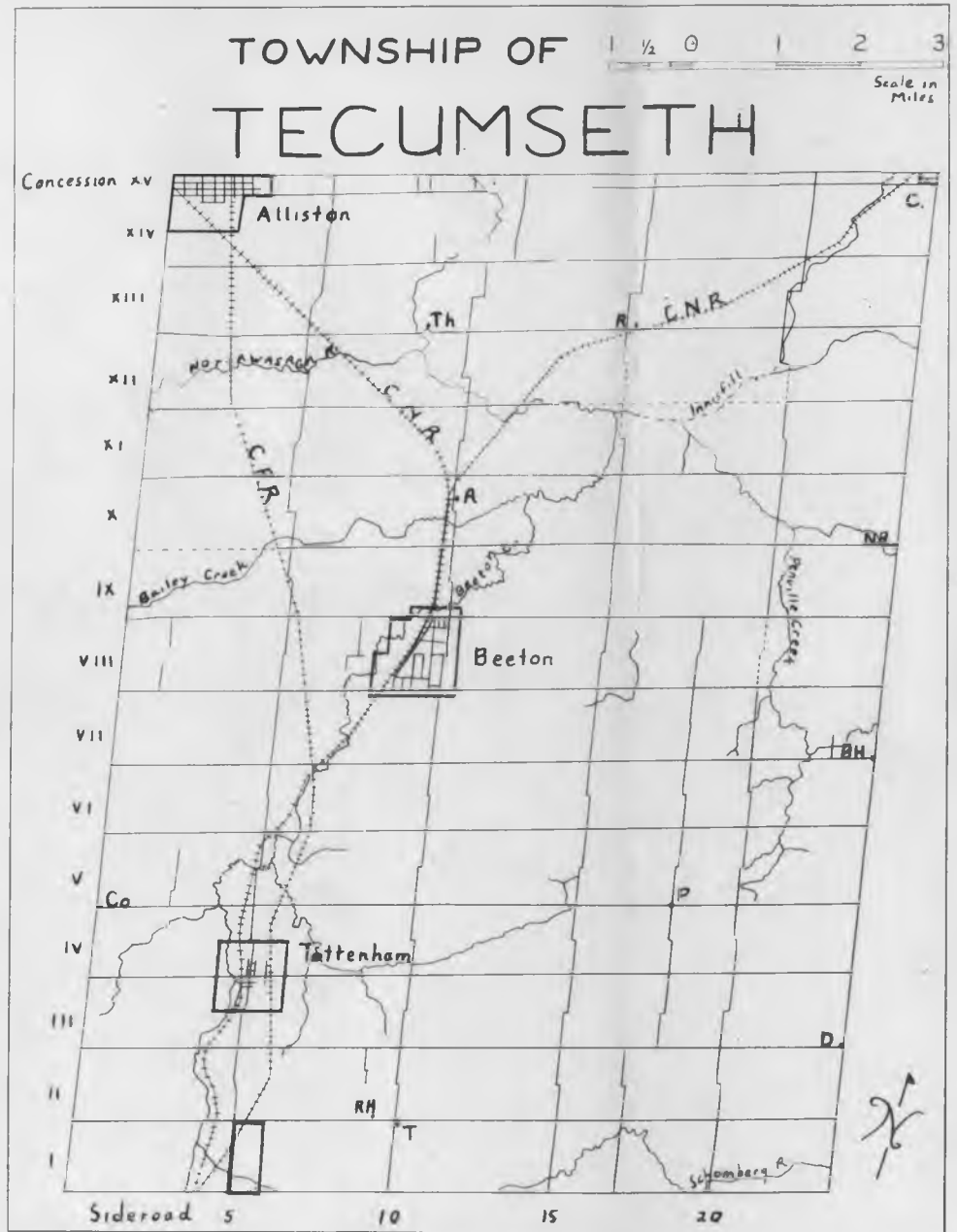
The area is underlain, except in the northeast corner where Trenton limestone forms the bedrock, by Utica shales. However glaciation has affected the entire area and bedrock outcrops are not found in the present day landscape.



Tecumseth Township in Southern Ontario

Legend

- C Cookstown
- NR NewtonRobinson
- BH Bond Head
- D Dunkerron
- P Penville
- R Randle
- Th Thompsonville
- A Allimil
- T Tuam
- RH Rich Hill
- Co Colgan



Internal Orientation Map

Glacial History

Pleistocene geology provides the key for understanding present day landscape. In addition to general comprehensive studies, work has also been done on a detailed local scale. Publications of Deane (1950); Putnam and Chapman (1936) and the Upper Holland Conservation Report (1953) were the major reference sources. The ultimate importance of Pleistocene geology from an economic and agricultural standpoint is pointed out by Deane.³ Pleistocene deposits are also of major significance as aquifers.

At the beginning of the glacial epoch ice and water set to work moulding the preglacial bedrock surface. The original surface is not reflected in the present day surface configuration. Bedrock contours reveal a major drainage link between the present Upper Great Lakes and Lake Ontario. One possible course of the valley of the preglacial Laurentian river⁴ extends from the basin of the Nottawasaga southward between Alliston and Cookstown across Tecumseth towards Newmarket where it turns south toward the Ontario basin. Although this form may still be traced in bedrock present day drainage is quite different. The Oak Ridges moraine which stretches across the southern edge of Tecumseth is the major feature causing the interruption of pre-glacial drainage. It is a dominant feature of the landscape of south-central Ontario.

The ice affected valleys which lay across the path of ice advance differently from those which lay parallel to the direction of movement. As Deane points out⁴ valleys transverse to the ice advance became filled with drift while the parallel valleys were

preserved and in some cases deepened. Schomberg River and Innisfill Creek both represent lowlands that were once occupied by ice.

The advent of the glacial epoch witnessed the advance of the ice front from the north-east. The southwest dipping Paleozoic limestones were easily attacked by the advancing ice front. Large quantities of debris were incorporated later to be deposited in a variety of forms.

The erosive capacity of ice has long been in question and evidence would demonstrate that it has in the past been overestimated. The tensile strength of ice is much less than the strength of the bedrock materials with which it came in contact. Therefore an advancing ice flow could not pick up and carry off bedrock unless it was first prepared by the weathering processes. The weathered surface zone is relatively shallow and would offer only a limited amount of material to the ice. The great depths of glacial deposition found in Tecumseth and in many areas throughout Southern Ontario must then be attributed to recurring glacial advances. With each advance of the ice, the drift would have increased in depth to the north.⁵ The major topographic change resulted from the interruption of the pre-glacial drainage by the formation of the Oak Ridges moraine.

With each subsequent glacial cycle the landscape was built up. The advance of the ice did to some extent shape the landscape and some forms are directly attributable to advancing ice. However, it was more important in that it assembled the materials with which the details of landscape would be constructed during deglaciation. The accompanying map adapted from that produced by R. E. Deane illus-

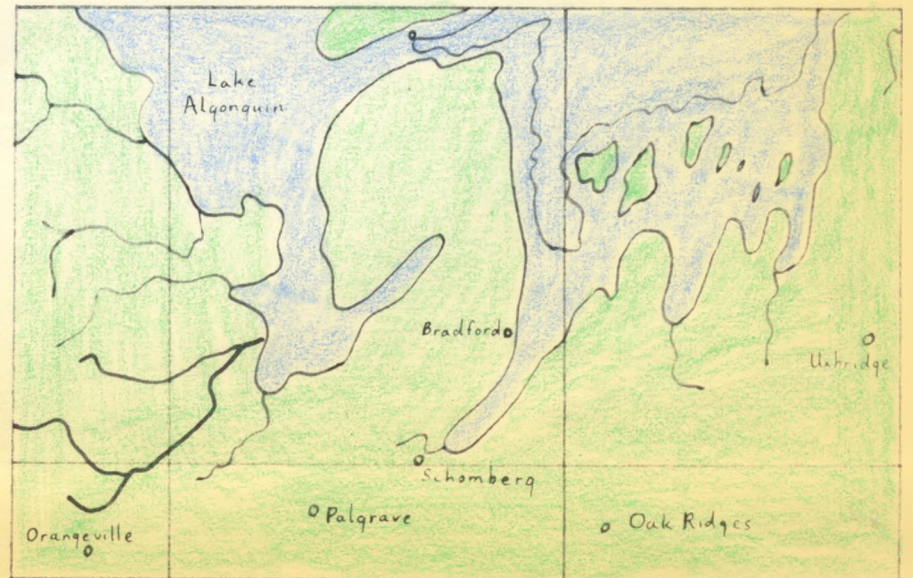
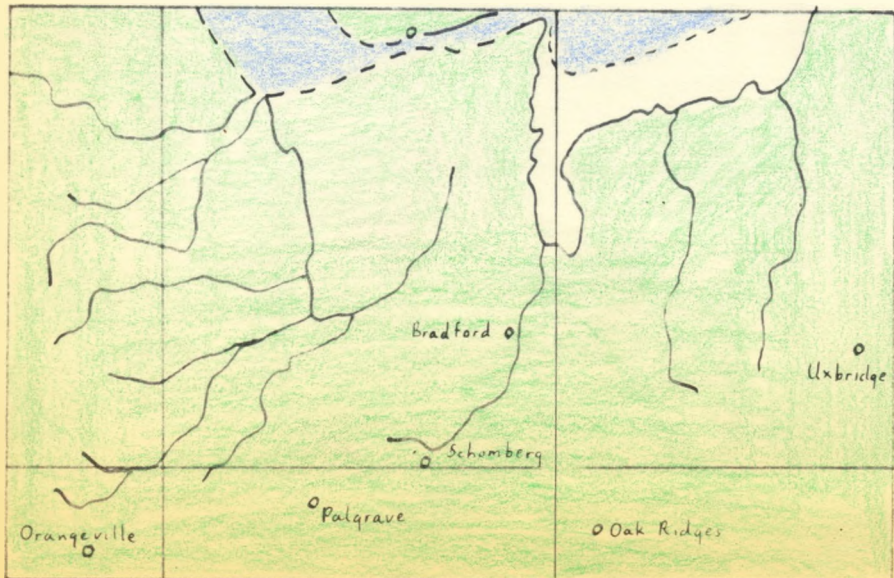
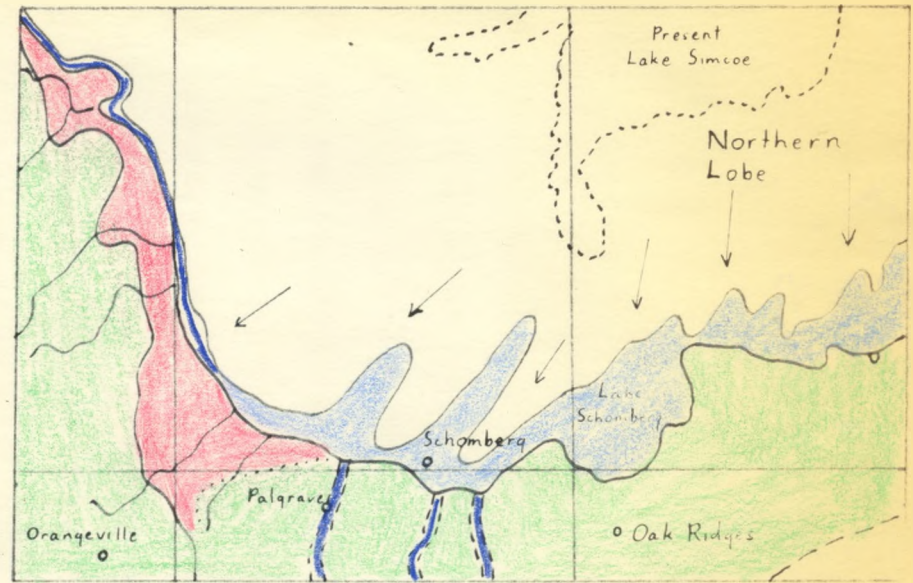
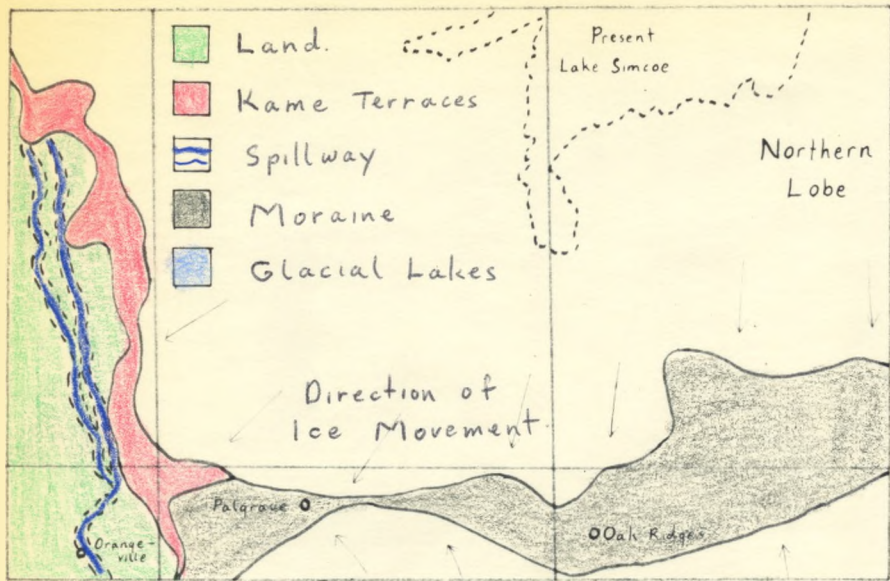
trates, in four stages, the final deglaciation of the area (fig. I-3).

In the first stage the Ontario and Georgian Bay lobes are shown at a relatively advanced state. They lie adjacent to each other in an east-west plane fronting up against the Niagara Escarpment. The glaciers are in retreat formerly having overridden the escarpment. Kame deposits were laid down near the margin of the retreating ice front. The development of the interlobate moraine between the two ice lobes was proceeding apace. Retreat to this stage affected only the south western part of Tecumseth.

In the second or Lake Schomberg stage the northern lobe has further retreated and resulted in ponding of meltwater between the ice front and the northern side of the interlobate moraine. Investigation has revealed an increase in grain size in a northeasterly direction indicating that the meltwater streams feeding this glacial lake came principally from the northern lobe.

The Lake Schomberg stage was relatively short lived and featured by a fluctuating ice front. The existence of two Lake Schombergs has been suggested⁶ from investigation which revealed varved sediments of an early stage separated by till from varved clay of a later stage. Because of the relatively short duration of the ponding no recognizable shore features developed.

The problem of identifying the outlet for Lake Schomberg remains unsolved. Varved sediments have been found up to an elevation of 875 feet in the vicinity of Schomberg and it is felt that the lake level did not go much above 900 feet.⁷ Possible spillways are indicated on the map. During the early stages meltwater may have drained by



Deacidation

way of these channels which extend south from Lake Schomberg.

All are just over 900 feet in elevation and in all cases the valleys are at present occupied by misfit streams. A more plausible route would have been to the north-west along the ice front. Although a well established outlet cannot be located there is evidence of water action up to 100 feet above the Algonquin shore.⁸ An eastern outlet is another possibility but as yet has not been investigated.

The matter of elevations becomes important in a discussion of deglaciation. To simplify, the general area of the Schomberg ponding between the Oak Ridges moraine and the retreating ice front was of a higher elevation than the Lake Algonquin basin which lying further to the north was filled with ice at this earlier stage. The phenomena of isostatic adjustment associated with the release of the ice load during deglaciation need also be considered. However the position now held accepts the fact that the major uplift following deglaciation did not take place until the ice had retreated far to the north.⁹ Therefore as regards isostatic rebound the area under study may be considered as a unit and there need be no concern for variations in the amount of uplift over the area.

The varved sediments deposited at this time vary a great deal in annual and total thickness.¹⁰ To the east a section of 100 varves is not more than four feet thick whereas along the southern border of the lake the section is nearly 50 feet thick. An absence of varved clays below 875 feet is taken to indicate that ice occupied these lower elevations at the time of Lake Schomberg.

The presence of deposits resembling shore features pointed

out by other investigations at an approximate elevation of 1000 feet in scattered localities, including bluffs south of Beeton and west of Schomberg, have been refuted by Deane because of the absence of glaciolacustrine sediments between the level of the supposed shore feature and the varved clays at 875 feet.

During the third or Fenelon Falls Outlet stage the area under consideration was predominantly dry land. The retreat of the glacier well to the north permitted drainage to the east through Kirkfield and the Trent Valley to the Iroquois Basin. As a result of the opening of this outlet early Lake Algonquin fell an estimated 50 to 100 feet¹¹ and the lake, in its early stages, did not inundate Tecumseth.

The last diagram of the sequence involves two stages. A re-advance of the ice front closed the Fenelon Falls outlet diverting the water to the Port Huron and Chicago outlets and causing a general rise in the water level. The area of glacial Lake Algonquin was greatly expanded.

After a relatively short period the ice front retreated once again and the Fenelon Falls outlet was reopened. The Port Huron outlet continued to carry a quantity of meltwater thus giving to the period the title of the two stage outlet. The well developed Algonquin shorelines, dating from this period, indicate that it was a relatively long stage. The subsequent retreat of the ice front far to the north and the eventual draining of the glacial meltwaters completed the sequence of events giving rise to the landscape which together with the scars of subsequent erosion, we see today.

Physiography

Although the physiography of Tecumseth township is varied the pattern which has evolved may be understood given the background of the glacial history. The existing landscape basically represents that which was moulded during the Pleistocene. Subsequent changes have been caused by the processes of erosion and by man. The description which follows is based mainly on the work of Putnam and Chapman. Figure 4 is a modification of the Putnam and Chapman map on the basis of additional information derived from the Simcoe County soil survey, interpretation of aerial photographs, and field observations.

The entire landscape may be viewed as a composite of glacial forms. These are mapped as kame moraine, spillway, drumlinized till plain sand plain, and lacustrine plain. They are not to be regarded as isolated features but as integral parts of the glacial landscape of Southern Ontario. Putnam and Chapman in studying the glacial landscape have not merely described glacial forms in isolation. Landforms together with their distribution and pattern of interrelation have been used to interpret the sequence of glaciation. In this process a great number of physiographic regions have been established. Four of these regions lie at least partly within Tecumseth.

The area first uncovered by the ice at the south-west corner of the township is part of the Oak Ridges moraine. This sandy kame moraine extends in an east-west direction from the Niagara escarpment to the Trent Valley. Also known as the interlobate moraine since it developed between the Ontario and Simcoe ice lobes, its major

geographical significance is derived from its function as the major drainage divide in south central Ontario.

The moraine is composed primarily of sandy materials in this area and is principally an outwash feature. Materials have been derived from both Trenton and Black River limestones. The surface is quite rugged with many short slopes. In spite of the dissected appearance, there are few surface streams. This is related to the general porosity of the deposits. Although the moraine is a headwaters area for many rivulets these do not appear on the surface here. Available surface water penetrates the porous material and flows downslope until it comes in contact with impervious underlying material at lower elevations. It then returns to the surface in river channels.

The spillway mapped in figure I-4 lies within this region. A small misfit stream flows north-south in the valley. A lack of well developed spillway features near the crest of the valley is apparent. This spillway was one of the three early meltwater channels described in the history of glaciation.

The moraine is not a continuous feature but pinches out toward the east. Variation in breadth is a feature of the entire east-west extent of the moraine and is attributed to the scalloped margin of the Simcoe ice lobe. The use to which this land may profitably be put is limited. Drought and erosion susceptibility make cultivation hazardous.

The natural lime and phosphorous content in the soil give rise to good pastureland. Much of the land could best be left under forest cover and both private and public reforestation projects have

been undertaken. Barren areas of blowout still persist and further reforestration as a conservation measure, especially for the purpose of retaining the ground water supply, should be followed.

The mapped boundary coincides with that of Putnam and Chapman. Differences in grey tone between this and the heavier soils of the adjacent lacustrine plain make this boundary easily identifiable from aerial photographs.

The areas in figure 4 mapped as drumlinized till plain or drumline do not form a contiguous region. The area along the northern margin of the township constitutes the westernmost extension of Putnam and Chapmans Peterboro drumlin field. Deane refers to this area as the Lake Simcoe till plain. During the period of glacial Lake Algonquin this area stood out as a peninsula above the reach of the water.¹² At one stage of the Pleistocene it is possible that the remnant drumlinoid and till features mapped in the south central part of the township were contiguous with the northern till plain. However intervening processes have reduced the landscape to its present form. The boundaries of the remnant till features of the south have been drawn to coincide with areas having soil which developed from till materials. The smaller scale mapping techniques of the soil survey have in this case been accepted as more accurate.

The till plain and drumlins are composed largely of the soft easily eroded Trenton limestone. Deposits throughout the area are highly calcareous but there are local differences. The sand content reaches a maximum in the southern areas of Tecumseth. Surface boulders which are in evidence are foreign and of Shield origin. The high

sand content is again evident from the light grey tone on aerial photographs. Deposits in this area well south of the Precambrian-Paleozoic contact are thick and the associated drumlins are well developed. Drumlin alignment indicates the direction of ice movement. Detailed study of an area reflects the importance of local topographic control of glacial flow as opposed to a general statement regarding direction of ice movement. Drumlins in Tecumseth are elongated toward the centre of the Simcoe basin.

Drumlinoid features are found within both lacustrine and sand plain areas in the township. These have been to some extent reworked by the glacial lakes and pondings. North of Beeton to take any example a shorecliff has at one stage been cut into the nose of a prominent drumlin altering the original form. Till features are found above the general level of the adjacent water deposited features.

The use to which these drumlinized till plains may be put is in some measure regulated by topography. The zone along the northern margin is gently rolling. It is nearly all farmed. Bondhead soils which have developed from the till material are among the most productive till soils in the province. Areas of drumlinized till plain mapped in the south are more rugged and the agricultural utility of the land is more limited. Development is less uniform in these areas.

A third physiographic area and one which occupies a large areal extent, is the Schomberg clay plain. The greatest area of the township by far has been moulded by the process of deposition in water. Both the Schomberg ponding and Lake Algonquin at its maximum extent inundated the area. In general terms, the area indicated as lacustrine

plain can be attributed to deposition from the Schomberg ponding whereas the sand plain is an area of deposition from Lake Algonquin.

Reference to the soils map for comparative purposes does not reveal this relationship as readily and does suggest that the lacustrine plain boundary should be moved north especially in the eastern part of the township, to coincide with the northern boundary of the lacustrine soils. However field investigation has led the writer to agree with the original findings of Putman and Chapman and the boundary has been unaltered from their map.

The problem resolves itself into an explanation of textural differences of surface materials. Materials south of the boundary are of silty clay loam, those immediately north of the boundary of silt loam, and those beyond the shaded area of sand loam. This forms a natural transition from coarse to fine in a north-south direction.

Consideration must be given to the two depositional environments, the Schomberg ponding and Lake Algonquin. These environments were unrelated. Deposition took place at different stages in time. Deposition associated with the Schomberg ponding is in general finer textured. The Algonquin stage represented shallow water deposition on the southern margins of an extremely large water body. It has been noted above that the Schomberg deposits increase in grain size to the north-east; that is closer to the margin of the meltwater source. The shaded area, which in this situation represents the area of intermediate textured materials, could be interpreted as the zone adjacent to the ice front and a product of Schomberg deposition.

Using evidence from the soil survey alone this conclusion

could be reached. The boundary would be moved to the northern margin of the lacustrine soils and a convenient correlation could be illustrated between the lacustrine soils of the Schomberg ponding and the coarser soils on the bed of Lake Algonquin.

Inconsistency in terminology reflecting the differing outlooks of the physiographer and soil scientist create this problem. The soil scientist pays very close attention to texture. On the sand plain soils are coarser than on the lacustrine plain.

The soil scientist has classified the deposits on the bed of Lake Algonquin as outwash. This is based mainly on texture of materials. The discrepancy actually occurs within the body of the soil survey. Here it is stated that the lacustrine soils occupy the lower flatter areas and represent the ancient bed of Lake Algonquin.¹³ Although recognized this principle has not been applied in the classification of origin of materials. Both depositional environments were lacustrine. Texture is dependent upon the particular conditions within the environment.

Three features which are apparent in the field justify leaving the boundary as originally mapped. First the shaded area is at the same elevation as the area to the north which is undisputably sandplain. The area is a topographic unit. Secondly, the zone is entirely below the level of the Schomberg ponding deposits; that is, it was entirely beneath the ice at the earlier period. Finally, the existence along much of the length of the sand plain boundary of a marked Algonquin shore definitely substantiates the original boundary as located by Putnam and Chapman.

The difficulty created by the resolution of the problem in this way is that of explaining the presence of finer textured Algonquin deposits closest to the shore. However as has been noted the textural differences actually represent a transition. Within the limits established by definition of the two categories, silt loam and sand loam, it is apparent that the two textural categories do blend together and overlap at their extremes. This problem if it is in fact that, cannot be further investigated without laboratory work. Slight variation in texture of materials could be caused by varying local conditions in the depositional environment.

The Schomberg lake plain is more rolling than is usual for this type of landform. The explanation lies in the rather short duration of the Schomberg ponding. The underlying surface is that of a drumlinized till plain. Lacustrine deposits only partially masked the underlying topography and many of the hilltops which were never inundated are composed of till material. Modified drumlins and drumlinoid forms are features of the area.

The sedimentary materials are typically varved clays which in their stratified form reveal the duration of the stage and the seasonal fluctuation of meltwater as related to the quantity of deposition. These sediments form a very valuable base for a viable mixed farming economy.

The fourth and final physiographic region is part of Putnam and Chapman's Simcoe lowlands. This area of sand plain may be subdivided into regions of good and poor drainage. The extremely flat areas of the east and south are poorly drained. Stream channels are

not well entrenched and two major bogs, one at the western boundary in the basin of the Bailey Creek and the other in the basin of Innisfill Creek toward the east of the township, are easily identifiable on aerial photographs. Some development and reclamation is taking place but these areas still present major problems to development.

The better drained area is the north-west corner of the sand plain where the Nottawasaga River is deeply entrenched. Once again the presence of the underlying topography manifests itself. South-east of Alliston one large gently sloping feature rises above the flat landscape. The relative resistance of the underlying till plain which comprises this feature as compared to the sandy deposits is reflected by the course of the Nottawasaga River which deflects around the southern edge of the feature before abruptly turning north to continue its journey toward Georgian Bay. The area of better drainage has proved to be of value for agriculture specialties.

Climate and Soils

The climate of a region is important with regard to both physical and human geography. In Tecumseth the effect of climatic change upon the physical geography has already been discussed. Climate also is important in determining human activity.

Tecumseth now lies in an area of humid continental short summer climates. Following the Koppen classification it is an area of Dfb climate. In these humid microthermal areas the average temperature of the warmest month is below 72° and four months are over 50°. Precipitation would be considered adequate in each month.

Tecumseth is located in a central position within the Simcoe

Kawartha Lakes climatic region proposed by Putnam and Chapman.¹⁴

Temperatures are somewhat lower than in surrounding areas. Winters are colder and spring is later in coming. To illustrate the average length of the frost free period at Beeton is 121 days or 17 days shorter than at Delhi on the Lake Erie shore. The township is located in an elevated interior position midway between Lake Huron and Georgian Bay to the north and Lakes Ontario and Erie to the south. These bodies of water serve to moderate the temperatures of the adjacent areas.

Precipitation is somewhat lower than in surrounding areas. The highland area to the west referred to as the Western Uplands creates a minor rain-shadow effect. Better than one half of the precipitation falls in the growing season. The total amount of precipitation is adequate except in exceptionally dry seasons.

Climatic statistics of temperature and rainfall for selected climatic regions and stations within the Simcoe Kawartha Lakes region are compiled in appendix I .

For the purposes of this thesis study of climate is most important in its application to agriculture. With this in mind the most significant climatic contrasts with surrounding areas have been pointed out above and in appendix I . Climatic differences which appear quite minor may be of greatest significance when related to agriculture. In addition to the regional variations which have been pointed out above study of microclimates within the township would reveal significant differences. Factors such as temperature moisture relationships between the rolling, sandy, porous soils of the kame

areas and the heavy soils of the lacustrine deposits, the effect of topography on air drainage, and slope exposure would provide further local differences. However study of these matters lie beyond the range of this thesis.

No page 17.

The development of soils in situ is highly dependent upon climate and vegetation. Soil too is an important factor relating to the agriculture of an area. Rather than deal with individual soil types as such the question will be considered in the context of land types. The accompanying map, figure 5 represents a grouping of individual soil types of a marked similarity from a physical standpoint. The land types categories and criteria used in classifying materials for the preparation of the map are compiled in table I-A .

This information has been extracted from the Simcoe County soil survey with some slight modifications as they relate to the one particular township being studied. The problems relating to the origin category have been discussed under physiography. The sandy soils of category III are all classified as being of fluvial glacial origin although it has been demonstrated that those in the northwest of the township were deposited on the shallow margins of Lake Algonquin. They are however distinguished from the other lacustrine soils on the basis of texture. For the purposes of soils and agriculture this is an important distinction and the classification has been maintained unaltered to emphasize it. The close correlation between land types and physiography is to be noted. Following the classification of the soil survey, the two types of fluvial-glacial material fall into two separate land types and fit into different physiographic regions.

The general qualities of the soils of each land type can be briefly summarized leaving the more technical descriptions to the soil survey. The Schomberg soils overlay a drumlinized till plain and are

Table I-A

Land Types

Land Type	Soil Series	Origin	Soil Material	Natural Drainage	Topography	Surface Stoniness	Surface Reaction	Great Soil Group
I	Schomberg	Lacustrine	Calcareous, varved, silt loam and clay parent material	Good	Smooth to steeply sloping	stonefree to stony	Neutral	Grey Brown Podzolic
II	Smithfield Simcoe	Lacustrine	" "	Imperfect Poor	Smooth to gently sloping	Stonefree "	Neutral to alkaline Alkaline	Grey Br. Podzolic Dark Grey Gleysolic
III	Tioga	Fluvial-Glac.(Fine)	Grey calcareous outwash sand	Good	Smooth	Stonefree-Moderately stony	Medium acid	Podsol
	Alliston	Outwash	" "	Imperfect	Smooth-Gently sloping		"	"
	Bookton Berrien	"	Outwash sand underlain by calcareous clay or silty clay loam at depths of 3 feet or less	Good			Slight to medium acid	Grey Brown Podzolic
IV	Bondhead	Till	Light grey calcareous loam and sandy loam till	Good	Moderately to rather steeply sloping	Slightly to very	Neutral	Grey Brown Podzolic
	Guerin			Imperfect				
V	Tis-El.	Glacio-Fluvial	Kane	Good	Moderate to rather steeply sloping	Slightly to very		Grey Brown Podzolic
VI	Muck	Organic	Recent deposition	Poor	Flat	Stonefree		Gleysolic
	Bottomland Granby	Alluvial Outwash	Grey Cal. Outwash Sand	" "	" "	" to slightly stony		" "

therefore more rolling than would normally be expected with soils of lacustrine origin. However they are among the best fine textured soils in the Province and are used for a general farming economy. This varies widely with individual operations but it has been noted that an unusually high percentage of winter wheat is grown in the Schomberg area on these soils.

The poorer drained members of this catena are grouped in category II. They differ from the former with respect to drainage, have a flatter topographic appearance and the farm economy shows a stronger orientation toward livestock.

The third land type groups soils of only moderate general agricultural utility. However specialties well adapted to the physical conditions have developed and the area to the northwest is one of specialty farming. The soils in category III beyond this region are of true fluvial glacial origin.

The till soils are found above the elevation of the lacustrine soils. Within Tecumseth these soils are used primarily for mixed farming and dairying. There are areal differences as to use, the more intensively used land appearing near highway 27. However differences in farm operation are mainly related to the individual operator. In a study of the Holland Valley Conservation Authority it was found that almost 90% of the Bondhead soils, which comprise the major portion of this land type, were fully workable.¹⁵ These soils appear to be as extensively used throughout Tecumseth.

The fifth category represents true kame country. Steep slopes, drought susceptibility and erosion are the main limitation to

the use of this group. It is on these soils that reforestration need be most vigorously applied. There is some discrepancy and areal overlap between the categories related to till and kame in the classification of the physiographer and soil scientist. However resolution of this difficulty would first require rigid definitions of what actually constitutes kame and till deposits. This would have to be followed by field sampling and analysis to permit accurate boundary drawing.

The final category comprises soils which in their natural state are of little economic importance. Much of the bottomland is used for natural pasture. The muck areas if cleared may be used for the same purpose. The most important use, which requires large scale development, is taking place on the western margin of the township where a miniature Holland Marsh is being created.

Vegetation

The original forest cover as described by the Lount Brothers¹⁶ in their surveys of 1819 and 1832 has been for all practical purposes removed. In general terms the original cover could be divided into two categories. South of the eighth concession on the well drained land the bulk of the forest consisted of maple, beech, elm, basswood and hemlock. Pine was prevalent in the area around Tottenham. North of the eight line cedar, tamarack, fir and black ash dominated the lowland. Pine was again found in small quantities. As a present day feature natural forest cover exists as it does in most areas, only on those parts of individual farms where the expected benefits of clearing would not compensate for the costs of clearing. Thus it is the rugged terrain, the poorly drained land and in some cases the isolated sections of the farmsteads which remain covered.

In general, the forests have been poorly conserved. A study of the Schomberg watershed,¹⁷ has pointed out the general neglect of woodlands. Only a small portion of this watershed is in Tecumseth but the areas are similar and the findings comparable. Forty one per cent of all woodlots were grazed. The predominance of trees of small girth, although on a township basis Tecumseth fares more favourably than the watershed as a whole, indicates the extent of cutting in the past.

Conservation of present resources and reforestation especially on sandy soils should be practiced. Concrete steps in this direction are as yet extremely limited. Reforested land in Tecumseth as of 1963 amounted to only 200 acres in toto.¹⁸ The proposed formation

of a woodlot association taking its direction from the Department of Lands and Forests at Angus as well as wide spread public and private reforestation schemes are still well in the future and many economic problems lie in the path of fulfilment.

Drainage

The township, except for the southeast corner, lies within the Nottawasaga watershed which flows north into Georgian Bay. Although not as insurmountable a barrier to settlement as in the early days drainage conditions still have a bearing upon land use. There are two areas of recent deposition, Bailey Creek on the west townline between the ninth and eleventh lines and the Innisfill area in the northeast quarter of the township, where flooding is still an annual problem. The latter area, in a general zone between the eleventh and thirteenth lines and from just west of the fifteenth sideroad east toward the twentieth, is submerged every spring. In 1954 when Hurricane Hazel struck, over 400 head of cattle and several human lives were lost in this area. The poorest drained and most inaccessible land is still under forest cover.

In spite of the annual spring inundation in the Innisfill area the land is workable at an early date. A drainage canal and tile drains are adequate to drain the area rapidly. Muck deposits in the area to the west are of a greater depth and a large scale vegetable undertaking has begun.

Numerous small streams and rivulets necessitate many bridges on the township roads. Seventeen of these were washed out in the torrent of 1954 and permanent structures are still being re-built at

great expense to the municipality.

Except for the two areas discussed the stream channels are sufficiently entrenched to handle the normal run-off.

Chapter I

Footnotes

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13. Soil Survey of Simcoe County. Ottawa: Canada Dept. of Agriculture. 1962. p. 15.
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17. Proceedings of the June and Special Session 1962 of the Municipal Council of Simcoe County, Barrie: 1963.

Chapter II

History of Settlement

Historians in recording the history of Simcoe County have been tempted to dwell upon the story of the romance of the fur trade. Although of significant historical interest, from the point of view of this study it will suffice to say that modern Simcoe County was a part of Huronia. In pre-settlement days the importance of the area was derived chiefly from the presence of land-water routes which linked Lake Ontario to Georgian Bay by way of Holland Landing. In this regard the northern part of the county was more important, the location of Tecumseth being somewhat to the southwest of the most important routes.

The land, having been duly acquired from the natives by treaty, was thus not entirely unknown when population pressures, the desire for land and the advancing frontier brought the vanguard of settlement to the south Simcoe district. The typical survey before settlement into townships and individual lots established the framework for the influx of settlers. The Tecumseth survey was undertaken in June 1819 by Gabriel Lount.¹ His instructions were elaborate. The arduous survey was not finished in one stage but was completed in its northern sections in 1832 by George Lount.

The chief difficulty then became the effective allocation of lands. The major problems associated with land grants, which were rampant through all of Southern Ontario, posed a problem in Tecumseth. The land problem was in fact one of the factors of discontent leading to the ill-fated rebellion of 1837. The majority of the lands fell into the hands of a number of 'privileged' groups and individuals. An ever increasing reaction opposed this development. It was a struggle between

privileged conservatives and frontier democrats. Certain portions of the 'better' land were automatically set aside for the Crown and Clergy Reserves. The system of highly subsidized and free land grants was extended to United Empire Loyalists, the veterans of the War of 1812 and retired British officers. The township surveyor was awarded 2368 acres² of land in payment for his work. There were in fact very few who were required to make an outright payment for their land in the early years. Speculation hindered the filling in of the land and greatly increased the social costs of development for those settling at any early date. The accompanying map of settlement history represents the pattern of allocation of lands and not of their effective settlement.

Prior to 1818 there were absolutely no controls on the granting of lands. After this date legislative measures requiring that a habitable house be erected and that a fenced clearing be provided for in the proportion of 5 acres per 100 on all lots was in effect. The prior acquisition of tickets of location became another prerequisite for settlement.³ Such title to the land was acquired through York upon payment of a settlement duty. However the problems of administering such legislative measures were difficult in the early years.

Settlement in Tecumseth was rapid from the beginning. By 1821, 181 tickets of location had been issued for Tecumseth. This figure is only slightly below that of West Guillumburg and these two townships accounted for over 50% of the total settlement of the entire County. The rapid filling up of the land is apparent from population figures compiled in appendix II. Like many of the townships in Southern Ontario the peak settlement was reached at an early date.

Figure 6 illustrates the historic pattern of settlement.

Four settlement periods explain the pattern of development. The first from 1820-1824 is chosen to delimit the areas of initial rapid influx. The year 1825 is also significant for in that year the British government undertook more stringent measures aimed at regulating land grants. A valuation of lands throughout the entire Province was undertaken. In this way an attempt was made at standardization of land values. The period 1825-1836 could be termed that of the later pioneers. Hunter divides the entire history of settlement of the County into pre- and post-rebellion periods. This period witnessed the major influx of settlers. The process of settling the land was affected by a variety of factors and inflow was by no means steady. The intermingling of politics with land grants is one instance of this. The years 1836 and 37 at which time the Province hung on the brink of rebellion saw extensive allocation of land to Tory followers of Sir Francis Bond Head. In those years some 7000 acres were granted in Tecumseth alone. Much of this land was awarded to loyal Tory supporters.

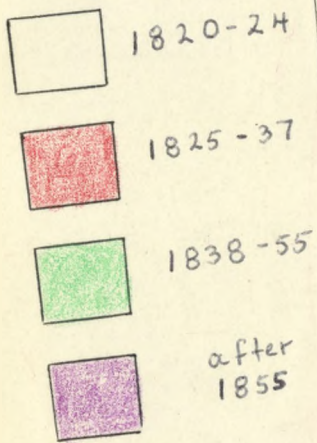
The period after the rebellion witnessed the final filling up of the land. The break at 1855 dissociates settlement of the pre- and post-railway ages. However the significance of this date in the Tecumseth area must not be overemphasized. The Northern Railway which opened at this time passed to the east of the township and its effect on settlement must be regarded, in this area, as minor. The effect of this division is thus mainly that of isolating the late comers.

This classification does illustrate trends in the pattern of settlement. The early years witnessed development in the south. This

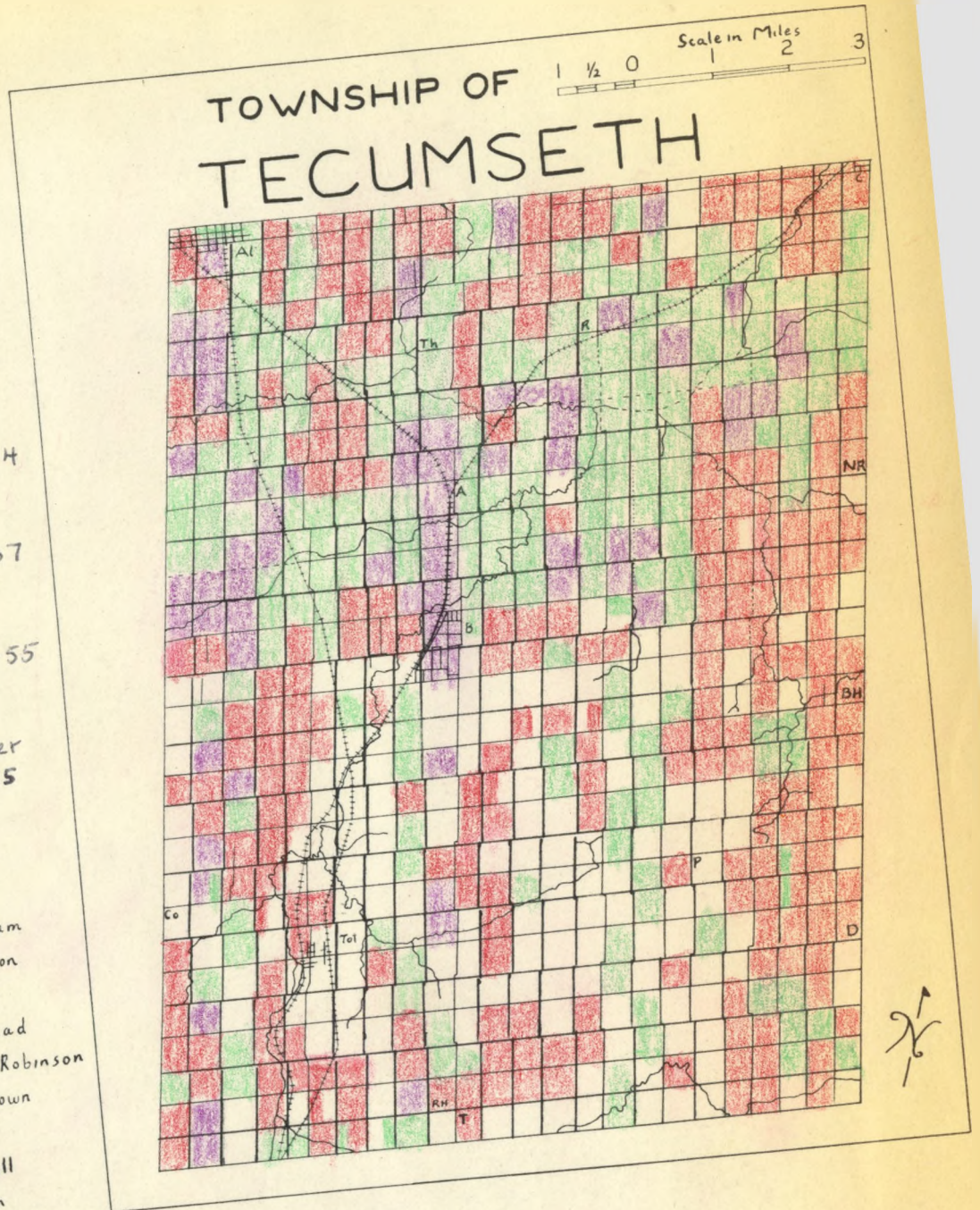
History of Settlement

Legend

Settlement Periods



- Al Alliston
- B Beeton
- Tot Tottenham
- D Dunkerron
- P Penville
- BH Bond Head
- NR Newton Robinson
- C Cookstown
- T Tuam
- RH Rich Hill
- Co Colgan
- Th Thompsonville
- A Allimil
- R Randle



was simply a matter of pushing back the former settlement frontiers. Development was confined almost exclusively to the more accessible land below the eighth line. The pattern does show a marked clustering in several locations. Tottenham was a focal point of early settlement. The Penville area was an eastern centre of active settlement. Most of the early settlers were found in a band between these two centres south of the eighth line. However as has already been noted it must not be assumed that all of these lands were occupied at this time. Although title had been awarded the effect of land speculation and absentee landlordship in spite of efforts made by administrators was still a factor. Further action to combat this problem was taken in 1844 when the District Council legislated 'wild lands' tax.⁴ One penny per acre was to be assessed against all titled land which did not meet the occupation requirements. This claim on the part of the District did not go unchallenged and at length led to many legal disputes through which individuals challenged the right of the administration to collect such monies.

The rest of the period till the time of the rebellion witnessed the filling in of most of the land which would in the early days be regarded as fit for habitation. The eastern and western margins as well as the better locations along the northern margins and in the interior were filled up. The lowlying land which was subject to flooding alone remained. The time sequence of early settlement was related to many factors, some of which have been alluded to. The more important were the desire for land, the physical qualities of the land, and the prospects for development as related to technology. Discussion of the factors of development which will be undertaken in more detail later

in the chapter give meaning to the geographical distribution of early settlement.

Additional information regarding the distribution aspects of settlement may be gleaned from the statistical information compiled in the appendices on the origin and religious affiliation of settlers. The value of the application of the term origin in census investigations has long been questioned. Its usage has been defined as 'an attempt to distinguish groups in the population having similar cultural characteristics based on a common heritage.'⁵ However it has been found, even with various attempts at refining the questioning procedure, that the validity of the information extracted with relation to what is actually wanted is apt to decline with successive generations beyond the original immigration. For this reason such figures are of the greatest value in the early years of settlement history.

The first settlers in the area were a band of Scotsmen who comprised the famous Scotch Settlement of West Guillumbury.⁶ This group of early settlement spilled over into Tecumseth along its eastern margin. The early prominence of Irish immigrants is the most striking feature revealed by these statistics. An extensive area of Irish settlement was centred on Cookstown.⁷ The main influx of these Protestants from Ulster began about 1830. A second but quite different area of Irish immigration comprised of Irish Catholics was begun in the western part of the township near Colgan. The decline of those of Irish origin in the township relative to the decline of the total population has been well above the mean. Many of the original settlers who arrived in the early 1820's came from the northern counties of England. However random

dispersal rather than any specific nucleated core typified the settlement pattern of this group. The numbers of those proclaiming English origin has been steadily on the rise.

There is an absence of any ethnic clusters which can be attributed to 20th century migration. The largest group is that of Ukrainian origin who are located mainly in the tobacco growing area. Other groups are relatively few in number and widely distributed throughout the area.

The figures on religious groups found in appendix IV are of interest again primarily in the early years because of the structure of society at that time. All activity in the early days of settlement centred around the family and church. These were the two fundamental units of society. Three aspects relating to the township as a whole are significant. There has been a decline in the numbers professing Anglican affiliation. The Roman Catholic population has declined in numbers and the rise of the United Church of Canada resulted in a major redistribution of numbers among the various Protestant sects.

Having this skeletal framework of the settlement history in mind it remains to see how the factors of development promoted this pattern. A great variety of factors played an active role. Many of these although important to a complete understanding lie beyond the scope of this thesis. These could be called the external factors and would include those developments and events in other parts of North America and in Europe which tended to propel the settlement frontier on this continent.

The early settlers were for the most part dependent completely

upon their own resources and resourcefulness. Therefore a basic consideration was the physical state of the land. The more accessible and easily worked land south of the eighth line filled in first.

Land allocation was a second of the internal problems. This was in many respects a negative factor since the system of disposal of public lands prevented the development of large areas with a fairly uniform population distribution and it contributed to the isolation in which many settlers lived.⁸ As late as 1854 more than one half of the country was still in the hands of speculators.⁹

A third vital factor which must be related to the extension of settlement is the development of transportation. Three mediums were employed, water, road and at a later date the railway. The road network was very poor in the early years. Roads were important primarily as portages between waterways. York soon became the focal point and the York-Holland Landing-Lake Simcoe-Georgian Bay routes gained early prominence. However Tecumseth lay somewhat off the main axis. In 1820 there were no roads as such into the area. By 1850 the road from Bradford had been extended west to Bond Head. Hunter also mentions a route from Etobicoke township which passed north to Adjala and Tecumseth,¹⁰ and the present route of highway 27 was open along the eastern margin except for the swampy section south of Cookstown.¹¹

Road development was restricted by the lack of capital for investment. Prior to 1841 grants came directly from the Upper Canada legislature. Local needs could not be effectively administered from this level. In 1844, by which time a District Council had taken over this jurisdiction, the area was divided into eight sections and a road

surveyor was appointed in each. After 1850 the township councils received the power to construct and keep in repair all their own internal roads and bridges. The wild land tax revenues were to be devoted to this end.¹² In 1903 the legislation of a County Roads System became operational through which the County and Ontario government divided the costs of construction equally.¹³ By these successive stages the development of an integrated road network was accomplished.

The coming of the railway age led to important changes throughout the province. As Drury points out these changes were neither all good nor all bad.¹⁴ The railway age although late in starting in Southern Ontario exploded across the landscape. Although the far reaching effects were closely tied to the growing metropolitan rivalries of centres such as Toronto, Montreal and New York the development of railroads was also a factor of intensive local interest. Because of a lack of capital funds for such large scale development towns and municipalities were called upon to mortgage their futures on the railway.

The railway age came to Simcoe County in 1849. The County harnessed itself with a debt of £ 50,000 to finance the first railway.¹⁵ The first manifestation of this faith in the future became apparent in 1854 when the Northern Railway Company began operations. It was some consolation that Simcoe County, although destined to have a woeful experience in the costliness of early railways, could at least claim the honour of having, in the Northern Railway, the first line of any extent in Ontario.¹⁶ The route of this first railway followed the old York-Lake Simcoe-Georgian Bay axis and thus passed just east of Tecumseth township.

The building of the Hamilton and Northwestern in 1873 saw the establishment of a major railway through the township. Tecumseth was one of ten municipalities granting financial support.¹⁷ The main line passed through Beeton north of which a spur continued to Collingwood, the main line going to Barrie.

However both these lines were beset with financial difficulties from the earliest days. Overbuilding, the sharp competition between towns and an overall lack of capital to undertake such a venture on this scale led to their amalgamation in 1880 and their later incorporation in 1888 with the Grand Trunk as a further step to remedy the problem.¹⁸ Control of what had been viewed as local projects by municipalities who invested in the railways passed from their hands with these amalgamations. The municipalities were no longer in a position to command special local services they had hoped for when the investment was first made. The problems created by the early optimism in the field of railway construction brought the Dominion government into the field of transportation.

The economic base as related to development is a final factor to be considered. Until 1850 the main sources of wealth were the products of forest and agriculture.¹⁹ The countryside was organized in a state of rural self-sufficiency. Because of inadequate transportation the pioneers of Tecumseth saw the value of their crops cut in half by the cost of transportation to York. All manufacturing was centred around these natural products.²⁰ It was a period of village handicraft and service industries. Any further development depended solely on personal initiative.

After the beginning of the railway age the improved state of transportation favoured the development of commercial agriculture.²¹ Wheat from the earliest days assumed importance as a staple crop in the south part of Simcoe County most notably around Schomberg. The railways also opened the pine stand found on the sandy soils to commercial lumbering. Simultaneously there were basic changes in industry. The dawn of the capitalist age went hand in hand with new sources of power and improved transportation. However the old structure of society did not break down quickly in Tecumseth. Only very recently has the factory age made any significant impact on the township and overall, although the agriculture practiced is very different from that of the early agrarian society, Tecumseth still retains its rural complexion.

Having investigated the pattern of early settlement and the factors of development within the township it is of interest to reconstruct some of the features of the geography of the past. To avoid repetition the three incorporated places, Alliston, Beeton, and Tottenham, which are dealt with in another section, will not be touched upon here. A number of hamlets sprang up along the eastern margin of the township. The Irish element was strong at Dunkerron. Peter Doyle, a Quaker was one of the original settlers. Charles Corbett, a British Wesleyan Methodist was another early citizen. The two churches of Dunkerron stand to this day. Never a commercial centre the hamlet retained the name Corbetts Corners until the 1870's when it was renamed Dunkerron to memorialize the visit of the Earl of Caledon from County Tyrone in Ireland where a town of the same name is to be found.

Lloyd Penville was an early settler at the crossroads settle-

ment named after him. Although there are no commercial establishments now to be found it was once a busy and prosperous centre. It was made the capital of the township at an early date but, like so many centres, when by-passed by the railway, declined.

Bond Head was a stronghold of Tory conservatism and played an important role in the rebellion of 1837. The loyal militia under the famous Colonel O'Brien wintered here during the 1836 crisis. It was also a religious stronghold in the early days. A Presbyterian church was located here from the early 1830's. The Episcopalian church was represented after 1837 by Reverend F. L. Osler, sire of one of the areas most famous families. Other indicators of its pre-rebellion importance were four taverns, the Masonic and Orange Lodges, and its early role in education.²² The composition of population at Bond Head and to the north becomes less predominantly Irish although they still were present in large numbers.

Through the southern area of the township Tuam, Rich Hill and Colgan were all settled at an early date. Tuam rose as a typical central place in the agrarian society of the pre-railway age. It comprised a general store, post office and a saw mill located on a stream to the south. Rich Hill is merely a name transplanted from his native Ireland by an early settler. Finally Colgan was established predominantly as a religious centre. Site of a large Roman Catholic church, it had become by 1840 a separate parish and served as a focal point for the Irish Catholics who settled on the first four concessions of Tecumseth.

The agricultural marketing centre of the early agrarian society in the north was Thompsonville. At one time a thriving commercial centre, it declined like so many other early hamlets when by-

passed by the railway. Allimil and Randle Station products of the railway age were latecomers to the 'urban' scene. They were established as way-stations along the railway where passengers were able to flag a train. Neither centre ever gained any commercial importance nor left any imprint on the overall organization of the landscape.

These were the nodal points of the early agrarian society. Their distribution along with the three incorporated places demarcates the areas of most extensive settlement in the early years. The hardships of these years were at times severe and the trial and courage of individual settlers would be another method of relating the history of settlement of the area. However this approach shall be left to the historian. From a geographical point of view where the concern is with spatial relationships the pattern of settlement and the distribution of the non-agricultural conglomerations tell a great deal of the story.

Chapter II

Footnotes

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8. J. Spelt, Urban Development in South Central Ontario. Assen: Van Gorcum and Co. 1955, p. 33
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11. ibid VI p. 122
12. ibid VI p. 95
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14. E. C. Drury, The Story of Simcoe County. Barrie: County Council of Simcoe Ont, 1958. p. 23
15. op cit A. F. Hunter VI p. 180
16. E. P. Weaver. The Story of the Counties of Ontario. Toronto: Bell and Cockburn, 1913. p. 78
17. op cit, A. F. Hunter VI p. 187
18. op cit. J. Spelt p. 100
19. ibid p. 62
20. ibid p. 67
21. ibid p. 109
22. op cit A. F. Hunter VI p. 281
23. ibid VI p. 122
24. ibid VII p. 40

Chapter III

Urban Geography.

A. Town of Alliston

Site and Location

Alliston is located along the banks of the Boyne River west of its confluence with the Nottawasaga. The well entrenched stream valley is the only feature interrupting the broad flat sand plain which extends over the area. Although the river does flood its banks periodically the high water mark lies below the crest of the stream valley. The town is located in the midst of a zone of agricultural specialties namely tobacco and potatoes.

Alliston occupies a central position with regard to a number of centres. Stayner, Shelburne, Orangeville, Bolton, Bradford and Barrie are all located in a circular pattern around Alliston at a distance of 15 to 20 miles. All of these with the exception of Barrie are of a comparable size. Its function as a marketing and distribution centre is facilitated by its position on a major east-west highway which links the town to highway 400. Although of less importance today the town is equally well serviced by railway. A C.N.R. spur and the C.P.R. main line to the west pass through Alliston.

History¹

Alliston's first settler was William Fletcher an immigrant from Yorkshire, England. In 1821 Fletcher established himself on Lot 15 of the third concession. In 1847, in company with his eldest son, he set out to find a mill site. He chose a location on the first concession of Essa township which lies along the northern margin of Tecumseth. The site proved to be excellent. It was endowed with water

power, a fine stand of timber and adequate soil. Fletcher purchased 1200 acres of land in the environs.

From this mill site origin at the junction of the grids of four townships the town slowly began to take shape. In 1848 the first industry in the town, a saw mill, was established and this was followed in 1853 by a grist mill. By 1856 demand was sufficient to permit the establishment of a general store. In the same year the suggestion was first brought forward that a village be formed under the name Alliston. The building of the first school was completed in 1862 and was followed later the same year by the establishment of Knox Presbyterian Church. In 1868 three early settlers established a foundry and agricultural works near the present intersection of Church and Victoria Streets.

The town had become firmly established and the period of the 1870's was one of great activity. The establishment of a newspaper, the Alliston Herald, and the completion of the Wesleyan Methodist church preceded the formal incorporation as a village in 1874. The first officer of the village was George Fletcher a relative of the original settler. The railway was relatively late in coming to Alliston. The North Simcoe Railway company, an early project was never completed. An agreement was later concluded between Reeve John Stewart and the Hamilton and Northwestern railway. Alliston promised \$8000.00 to assist in the development of a railway from Clarkstown (Beeton) to Glencairn, which was a section of the spur line to Collingwood. The first train was to run on or before January 1, 1878 some years after regular service had been established on the main trunk of the Hamilton and Northwestern. The final link was added in 1906 when the C.P.R. main line to the west

was built through the town.

In 1891 when Alliston was incorporated as a town it had a population of 1371. The growth had been quite rapid to this time. Immediately after this period population declined, to be followed by a slow rise (appendix II). The decline of the late 19th century was attributable not only to a general decline in the level of prosperity but also to a disastrous fire occurring in the year of incorporation. Thirty acres were burned over and the fire was not controlled until the Collingwood brigade arrived. A large part of the business area was destroyed and scores of families were left homeless. The following year, a waterworks system complete with hydrants was installed as part of the reconstruction plan. However the growth rate had been slowed and in 1941 population was still just 1733. In the succeeding years the rate of increase has been increasingly rapid and in the last 10 years a 45% increase has been registered.

The inhabitants have always been overwhelmingly of British Isles stock. Those of Irish origin predominated in the early years. Trace of twentieth century migration appear in the latest census figures. These groups are dominantly of a Western European origin. The religious affiliations of these people reflect their backgrounds. The leading group in numbers, from the beginning was the Methodists, later to become part of the United Church movement. The Presbyterian and more significantly of late the Anglican church have also been strong. The Roman Catholic element in the population decreased after the fire of 1891 and is now less than 10% of the total.

Land Use

The town of Alliston in 1963 comprised an area of 700 acres of which 643 were taxable. The assessment for general purposes was \$6,504,095.00.² This was broken down to 11.4% industrial, 25.6 % commercial and 63% for all others.³ All major classifications of land use are represented. The urban core focuses on the intersection of Victoria and Church. Although the original homes were built north of the Boyne River, along Fletcher Crescent named after the founder, the main axis of growth in the early years was in an east-west direction along Victoria, the main through highway. Development was restricted largely to the south of this route in the early years and residential growth north of the river is recent.

The area devoted to residences comprise the largest proportion of the land. Homes have been subdivided into three categories based on the quality of the structure, upkeep and the size of the lot. Following this simple scheme a large proportion of the homes are classified in the middle category. These differ widely in the type, quality and age of structure. Significant distinctions which do not appear on the map may be cleared up in the accompanying text.

The homes classified as superior are few in number. The new subdivision north of the Boyne has a limited number of superior homes. This select few are distinguished from the general fine quality of residences in the area mainly by the elaborate landscape design and a larger lot. Many of the fine original homes along Victoria Street notably east of Banting High School and to the west beyond Caroline Street would no doubt have been superior at the time of building.

Urban Land Use

Alliston

Present Land Use

Proposed Land Use

Residential

Rs superior
R average
Ri inferior

R1
R2

Residential (first density)
Residential (second density)

C Commercial



General Commercial

I Industrial



Neighbourhood Commercial

Institutional

I

Industrial

C Churches

G

Greenbelt

S School

A

Agricultural

L Library

R Community Centre

M Municipal offices

H Hospital

Open Space

a agriculture

i idle

e greenbelt



200 400 600 800 1000 1200 1400 1600 1800 2000

Scale in feet



These are now classified in the average category because of their age.

Homes in the second or average category predominate. Those located north of the river possess an areal symmetry. They are all of post-war development, the great majority dating from the last few years. A similar type of development is taking place beyond the northern municipal boundary. The other major direction of recent growth is to the east. The area behind Banting High School and a development to the east along Victoria Street beyond the municipal boundary are being built up with fine quality brick bungalows. Residences south of Albert Street at the west end of Alliston and those adjacent to the Salada plant are of comparable development. Homes classified as average in the old core residential area south of Victoria Street show great diversity. Old and new are intermingled with architectural design representative of several periods. There is no pattern in the contrasting qualities of residences in this zone. Features which are often thought of as being offensive such as the railway and industrial locations have for the most part no apparent effect.

The homes in the third or inferior category are also limited in number. A block of homes along the edge of the valley of the Boyne west of Caroline Street are classified inferior. The valley behind does not make this an attractive location as part of it is occupied by the town dump. The homes in the inferior category along King Street at the west end of the town are ripe for redevelopment. The building of such structures would not be tolerated under existing zoning by-laws. The block of inferior homes in the core area is a multi-family barrack type structure which is quite out of place in the general setting. Residences along Nelson Street in the southeast have been very

poorly maintained. They have been placed in the inferior category for this reason. Those in the third category along the Boyne ravine toward the west of the town are backed by the sewage treatment plant and lie adjacent to the railway.

The residential structure as depicted in the plan which is now before the municipal board will remain essentially the same. The residential second density (R2) is essentially the present built up area. Some allowance has been made for an expansion of the commercial zone into this area. Areas currently under development or designated for future development are classified as residential first density (R1). The zoning by law is such as to assure the continuation of the development of only fine quality structures.

In summary, the residential development of Alliston in the past has resulted in a compact structure. The large lots of the original homes have been subdivided and built upon in subsequent years. The main axes of development are now to the north and east beyond the municipal boundary. In general the residential landscape of Alliston comprises a mixture of fine old homes and well built modern structures. It affords a pleasant setting in which to reside.

Commercial

Form and function are the two aspects of the commercial area of a urban centre which need to be studied. Form is important with regard to the pattern of development of the commercial areas within the overall urban structure and function not only with respect to the town itself but with regard to the entire area it serves. The principal commercial area of Alliston is a strip development along Victoria

Street centring on the Church Street intersection. Some development has taken place to the north of this axis near Church Street. Aside from this concentration commercial development is extremely limited. Isolated neighbourhood commercial centres do appear in the old core residential areas. These carry such goods as are required to serve the immediate needs of residents. To the east and west beyond the CBD a broken strip development continues but its function is somewhat different. The establishments in this area which include motels, service stations and restaurants are along the main route and geared to the automobile. There is a lack of any commercial development in the major expanding residential area to the north.

It is possible to derive a great deal regarding the function of Alliston and its importance in the overall landscape from an analysis of the C.B.D. To facilitate this analysis a classification of commercial and service functions has been prepared in table III-A. With the exception of a few residential lots near the eastern end of the strip, one industrial establishment and the public library the first floor use of all buildings between Centre Street to the foot bridge have been incorporated in the chart.

<u>Commercial Function</u>	<u>Number of Establishments</u>
Retail Food Outlets	7
Restaurants & Lunch Bars	4
Department Stores	5
Clothing and Shoe Specialty	10
Appliances and Furniture	5
Hardware and Farm Equipment	4
Specialty Function	
Drugs	2
Jewellery	1
Florist	1
Shoe Repair	1
Gift shop	2
Pet shop	1
Sporting goods	1
Tattooing	1
Monuments	1
Funeral parlour	1
Institutional	
Department of Agriculture	1
Post Office	1
Ontario Hydro	1
National Employment Service	1
Public Utilities	1
Children's Aid	1
Professional and Personal Service	
Barber and hairdresser	8
Hotel	1
Dry cleaner	1
Newspaper	1
Real estate agent	1
Insurance agent	1
Credit union	1
Funeral parlour	1
Lawyer	1
Solicitor	1
Barrister	1
Dentist	1
Optometrist	1
Chiropractic centre	1
Stenographic service	1
Other	
Automobile oriented	4
Variety	1
Theatre	1
Parking lot	2
Vacant	1

Table III-A

The retail food outlets category comprises large food chain stores as well as small specialized shops marketing such commodities as fruit, meat and baked goods. The four restaurants within the town cater to the local demand which is primarily for light lunches rather than full meals. Both Eatons and Simpson-Sears order offices are included in the list of five department stores. The ten clothing and shoe specialty shops include four ladies, three mens, and one childrens clothing store as well as two shoe stores. The hardware and farm equipment establishments are large and well equipped. They serve the surrounding rural area. A second large dealer in farm equipment is located along Church Street north of Victoria.

The specialty function establishments are an important category. Each deals with a specific commodity or range of commodities, some of which require a large potential market if they are to be successful. Establishments in the institutional category do not perform solely a commercial function. The presence of such institutions as a Department of Agriculture regional office and Ontario Hydro district office do indicate the importance of Alliston as a central place and as an organization point. The professional and personal service category performs a similar function as an indicator of centrality. Although the lawyer, barrister and solicitor are all concerned with law there are technical differences as to title. Five barbers and three hairdressers are located in the C.B.D.

The establishments which are oriented to the automobile in the final category include new car dealerships, auto repair and parts shops. There is only one service station in the area being considered

and that is at the margin just west of the foot bridge. The movie house fulfills an entertainment function for a wide area. Movies are shown six nights per week and the picture changes twice weekly.

Even in a town of 3000 there appears to have developed a degree of hierarchy of function with regard to location within the C.B.D. For instance, both banks, the modern drug store, and the liquor and beer stores which generate a great deal of traffice are located near the peak intersection or 100% location. In contrast the appliance and furniture stores and the auto oriented establishments are toward the margins. The commercial function is almost excusively confined to the ground floor with some apartment space on the second level. Certain of the professional service establishments would not be anticipated in this environment. The most notable exception is the dentist. Most of the medical and dental clinics and offices are in the residential areas especially along Victoria Street. The commercial area is being intensively used. Only one vacant building was apparent. The official plan does not at present include any great extension of the commercial area. The blocks surrounding the central intersection are to become completely commercial. No new developments are planned in other areas. The existing number of commercial establishments and their diversity would indicate that Alliston plays a significant role in the organization of the surrounding countryside.

Industry

The rapid population growth of recent years in Alliston has been largely the result of the establishment of modern new industries. Baxter Laboratories and Salada Foods both of which have located in Alliston in the last ten years have been the leaders. Table 3B illustrates the growth over the past decade. The industrial structure in the past has been one of dispersal. Some of the older industries are located to the C.N.R. rail line. However this has now fallen into disuse and the C.P.R. line is of greater importance. Both Baxter and Salada are located adjacent to this line. Transportation is certainly one of the significant general factors prompting industry to locate in Alliston. The well established road net which brings the large Toronto market and the main routes of Southern Ontario within an hour's traveling time is now more important than the railways. The ability of the rural area to supply a labour force is a third general feature afforded industry. The generally lower wage level than would be found in a large metropolitan centre is an added bonus to industry. In addition the town has in the past made a practice of subsidizing new industry. Although now strictly illegal the granting of a fixed assessment, of free water, and of cash grants to help the industry establish were offered to entice development in earlier years.

The most important of the existing industries are listed in Table 3C. Baxter and Salada are pre-eminent. Baxter Laboratories Incorporated is a large international organization having its headquarters in Morton Grove, Illinois. They have had manufacturing facilities in Canada for 25 years but have only been in Alliston 6 years.

Table 3B

Growth of Manufacturing - Alliston1950 - 1960⁴

	Establishments (No.)	Employees (No.)	Salaries & Wages (\$000's)	Cost of Plant of Materials \$000	Net Value of Products \$000's	Selling Value of Factory Shipments \$000's
1950	11	92	141	440	252	706
1956	10	122	278	736	509	1268
1957	11	235	639	1110	1175	2321
1958	10	187	561	1169	1220	2417
1959	10	186	569	1359	1378	2765
1960	12	196	603	1524	1329	2883

Table 3C

Existing Industries⁵

Name of Industry	Nature of Product	Employees		Sales Volume
		M	F	
Baxter Laboratories	Pharmaceuticals, Intravenous Solutions, Hospital Supplies	55	52	over \$1,000,000.
Diamond Wood Products	Burial Caskets	14	5	not revealed
Salada Foods Ltd	Potato Processing	100	150	over \$1,000,000.
Peter Thompson & Son	Hardwood & Dressed Lumber Trim Sash and Doors	31		\$500,000-1,000,000.
Potato Co-op	Grade & Pack Potatoes, Potato Storage	seasonal 20 at peak		
McLoughlin Packing Co.	Eggs, Chicken Processing	Not available		
Alliston Farmers Co-op	Feeds and Supplies			
Alliston Creamery & Dairy	Milk and Butter			
Bishop Plastics	Plastic Novelties			

The three general location features discussed above had a bearing upon Baxter locating in Alliston, especially the presence of the C.P.R. main line to the west since their main warehouse is in Vancouver. However the most important specific factor is the availability of a good supply of water. The process of manufacturing intravenous solutions requires a supply of water which must be of a very high purity. Alliston in seeking to enlarge the local sources some years ago tapped a large supply. Baxter uses 20,000 gallons of this each day in their manufacturing process. In addition to the hospital supplies which have a national and international market, an enzyme which is a bi-product of the Baxter process is produced and sold to breweries for use in their manufacturing process.

Water supply and the rich potato area were the specific location factors prompting Salada Foods to locate in Alliston. The Alliston plant is the only one of its kind in Canada. Potato flakes, chips and dehydrated potatoes are produced using a patented process.

Salada Foods requires 40 million pounds of potatoes a year at their current rate of production. Half of these are grown on local Salada farms, the other half are contracted. The period of the potato harvest from early August until the coming of frost is a busy time. The peak is reached in September. Trucks are continually bringing the harvest in from local farms. Storage facilities in the plant itself are adequate to handle 25 million pounds. Additional storage is available on the farms.

During processing the plant is in operation twenty four hours a day for fifteen continuous shifts after which follows a clean up

period. The process takes place entirely in water and Salada, when in full operation consumes 450,000 gallons in a 24 hour period. Speed and efficiency is important with regard to the potato chip. The product, which is marketed nation wide, must be in the hands of the distributor 14 days after the completion of the process. The other products can be shipped out to be held in storage at Montreal or Don Mills for later distribution. The need to continually process the potato chip throughout the year helps to stabilize employment although the fall is by far the busiest time. Total employment climbs to 300 at this season. Although the majority of employees are local, some commute up to 25 miles to both Salada and Baxter.

This well developed modern industry would be impossible were the town of Alliston not adequately serviced.⁶ Sewage and water are the two most important. An activated sludge system and lagoons meet sewage needs. The lagoons were especially developed to handle waste matter from the Salada Plant. Water supply is a strong feature. Average daily capacity is 1,200,000 gallons or 400,000 gallons over average daily consumption despite demands made by existing industry.

An allied industry is the Alliston Potato Co-operative begun just this year. A group of thirteen independent growers have combined to build two large structures which will be used for grading and storing potatoes. Each of the members was required to put up \$5000 to join. The capital investment in buildings and machinery is already \$160,000. Because of the large supply of working capital required in modern potato farming a man with less than 100 acres is not able to compete and some of the members are growing up to 300 acres. The

co-op is administered by a hired manager who is responsible for finding the market. Response on the Toronto market has already been favourable.

Of the older industries, Thompson Lumber is the most important. Operations in the mill and bush provide employment for up to 50 men at peak periods. Cutting rights are bought up within a 100 mile radius of Alliston. Company owned trucks bring the cut lumber to the mill. Distribution of the finished product takes place by rail, using the C.N.R. which adjoins the mill in the northwest section of Alliston, as well as by road. Diamond Wood Products, makers of burial caskets, is the only other industry which is really significant through more than just the local area.

The official plan aims at consolidation of the industrial area into a zone to the south of the current built up area. The total area zoned industrial, as is so often the case, reflects great optimism. The fulfilment of this aspect of the plan lies far in the future.

Transportation

The road net within Alliston comprises 12 miles of paved roads.¹⁷ The only section not paved is that between the Boyne River and Victoria Street. Present development which visualizes industrial growth in the south and the majority of new residential growth north of the Boyne should recognize the funnel effect created by the bridge over the river which will have to be crossed by those making this daily trip. The valley of the Boyne is greatly contracted at this point and no other point within the municipal boundaries can afford

such a convenient and easily bridged crossing point. Modern building practices could certainly do the job. The point is that the most favourable bridging point has already been taken. This early choice of a crossing point has had an effect on the present structure and is the principal reason for the centrality of the Victoria-Church Street intersection.

The C.N.R. which extends diagonally across the town plan and the C.P.R. in the east end are prominent features of the urban landscape. They are principally through rail right of ways. Supplementary features associated with large scale railway development which are often considered as having a depressing effect are largely lacking. The main obstacle is created by the C.P.R. Only along Victoria and Albert Sts. is road traffic able to cross the tracks. Along all other roads the rail right of way forms a barrier to west-east movement.

Institutional

Buildings belonging to this category show a random distribution in the urban structure. The municipal administrative offices are located just south of the central intersection. Educational institutions include two elementary schools serving 800 students, the modern 700 pupil, Sir Frederick Banting High School, a district school which serves all of Tecumseth and the public library located in the C.B.D. Five churches representing a variety of denominations are scattered through the urban landscape. The district hospital located in the northwest quarter of the town which is currently undergoing expansion to 125 beds serves a population of 20,000. The large ultra-purpose community centre building has also been mapped in this category.

Open Space

Land in this category comprises greenbelt, subdivided land yet to be developed and areas still in agricultural use. The principal area of greenbelt follows the trend of the valley of the Boyne River. The area at the west end of the town is more intensively used. Community recreation facilities including a swimming pool, baseball and picnic areas which are located where the valley is quite wide. The land in the ravine to the east is still under heavy natural forest cover. Within the old town core nearly all available land has been built upon. There are three areas of open space all of limited space. Two other areas are given over to cemeteries. Beyond the limits of the built up area south of Victoria Street the majority of the land is still in agricultural production. In the developing area to the north of the Boyne the subdivided zone fronts directly on land still in agricultural production. Along Banting Drive the lots which have been subdivided have not yet all been built upon. The official plan is merely the fully developed component of the present actual pattern.

The present day land use is fully expressed in terms of these six categories. The official plan cannot violently alter past development without incurring great expense in redevelopment, which in the case of Alliston is not necessary. Its purpose is therefore to guide future development.

Hinterland

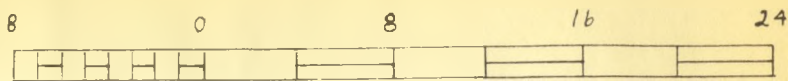
Urban places are organizational points for the surrounding countryside. The extent of area which an urban place serves is in part a function of the size of the urban place. The area served is known as the hinterland. The extent of the area served also varies

depending upon the particular function that the urban place is performing. The hinterland is therefore a collective term defining the area served by a composite of functions performed by the urban place.

The hinterlands of selected functions performed in Alliston have been determined in the field and mapped on figure 9. The hinterland of the Alliston dairy for the purposes of fluid milk delivery is a circle of five miles radius centring on Alliston. This circular hinterland which has been defined by the terms of the contract delimits the extent of fluid milk distribution. The area serviced by the Bank of Montreal also closely approaches a circle. However the centre of such a figure would lie to the north and west of Alliston. The area served by the largest grocery chain in town is also displaced to the north and west. The area of newspaper circulation approaches a circular form but is displaced to the north and west. The singular exception to this pattern is reflected in the boundary of the zone serviced by Alliston Canadian Tire outlet. The choice of location of branch stores in a chain is important. The Alliston outlet is designed to serve the area encircled which has a calculated total population of 15,000.

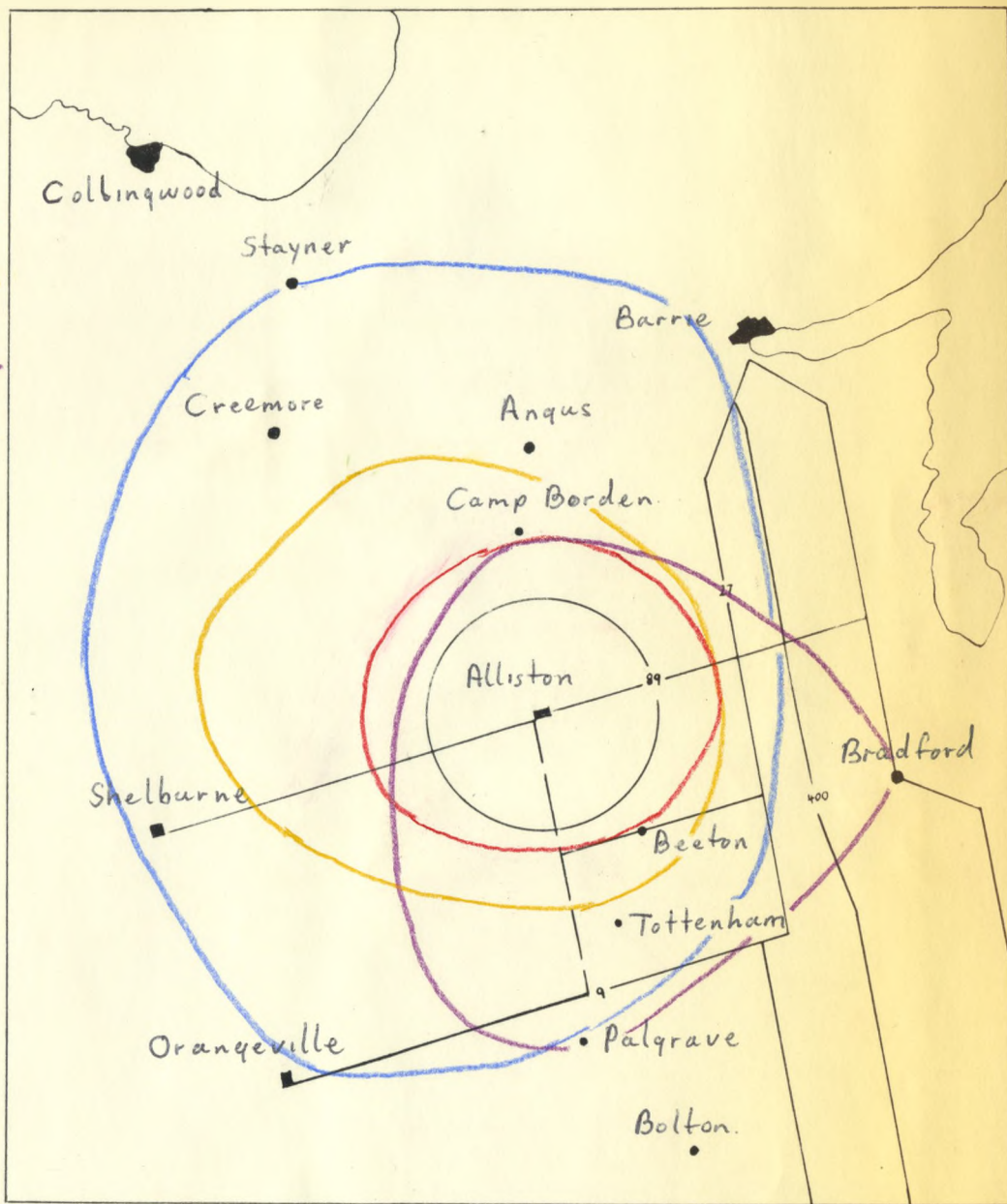
The general pattern of the displacement of the hinterland areas to the west and north can be explained by several factors. Highway 400 to the east has become a barrier. The east-west flow is directed north-south by this new super highway. From Alliston people and goods travel east to 400 and south to Toronto. The influence of the Toronto conurbation which reaches out toward Tecumseth is a factor in displacing the Alliston hinterland toward the northwest. Those living within easy access of highway 9 are inclined to travel south to the

Scale 8 miles to 1 inch



Legend

- Dairy — black line
- Banking — red line
- Retail Food — yellow line
- Canadian Tire — purple line
- Newspaper — blue line



Alliston Selected Hinterland Boundaries

areas of denser population for many of the necessary services. The southern part of the township does not lie securely within the Alliston hinterland. Toward the northwest there are fewer competing centres.

The northwest quadrant of a circle described around Alliston is the direction of easiest penetration from the urban focus. Lower overall population densities than encountered to the south and a lack of towns of a size and comparable development to compete with Alliston suggest that the natural extension should be in this direction. There is one factor of overwhelming significance which augments this natural direction of growth. This is the presence of Camp Borden. It has a great economic impact on the area both through its employment of local labour and through the trade generated. Some 5,500 military personnel and their families are stationed at Camp Borden. An additional 2750 civilians are employed at the Camp.⁸ Many residents of Alliston commute to Camp Borden daily. Alliston has also become a place to shop and spend leisure hours for many of the residents of the base.

There is then ample justification for the elongation of Alliston's hinterland in the northwest quadrant. The theoretical hinterland is thus described as a circle whose centre lies somewhat to the northwest of Alliston.

This geographic study of the form and function of the town of Alliston shows it to be a progressive centre having a degree of importance as a minor regional centre. It gained its early importance as a service centre for the surrounding agricultural community. This inertia has been maintained. Today major industry is geared to agricultural. The commercial function has been strengthened by the



The north side of the C.B.D. in Alliston backs onto the valley of the river Boyne. The valley is steep sided and narrow at this point. The river channel is confined low down in the valley here.

At the west end of the town the river valley broadens and the banks are not steep. The valley is suitable for recreation. The South Simcoe County Museum is situated here. One of the exhibits is a cabin built by one of the early pioneers.





Recent rapid development in Alliston has been closely connected with the prosperity of potato production. The Salada Foods plant at Alliston processes large quantities of locally grown potatoes.

Subsidiary potato industries have sprung up. The largest potato co-operative in the township has been built at Alliston. Under the direction of a hired manager local growers market their product principally to the large Toronto-Hamilton market to the south.





The town hall with its bell tower is a relic of earlier days. It is located immediately south of the principal intersection.

An intermingling of old and new buildings is found in the C.B.D. The banks, the post office and a modern drug store are clustered around the main intersection.



Banting Memorial District High School, named after one of the towns most famous native sons is an 700 pupil school serving all the secondary school students of Tecumseth.



Fine old homes are to be found in the old residential core of Alliston. Some of the most elaborate and best maintained are located along highway 89 the main east-west route.

Recent population growth has witnessed a building boom in Alliston. The majority of the homes are modest single family brick bungalow structures.



establishment of a large military base nearby. In an age which is dominated by the large urban giants such as Toronto, Alliston can never aspire to greatness. Nevertheless the town is of local importance and has forcibly exerted itself upon the geography of southern Simcoe and eastern Dufferin Counties.

Beeton and Tottenham

The incorporated villages of Beeton and Tottenham which lie within 5 miles of each other are similar in many respects. The urban functions performed by centres of this size are necessarily very limited. Therefore this aspect of the study is not an urban study as in the case of Alliston. In spite of the similarities found in the two centres underlying differences were detected. The investigation is concerned with discovering the reason for these through a comparative study of the development of the two centres. In the first instance a basic disparity became apparent merely through visual acquaintance with the two villages. To this writer it seemed that Beeton was a more favourable and pleasant place in which to live. The appearance of the buildings, largely as a result of upkeep and not original structure, and the general attractiveness of the surroundings were superior in Beeton. Some quantitatively measurable criteria will be offered in an attempt to develop this theory but in the final analysis a certain degree of subjective judgement must be used.

Because of the close proximity of the villages a great many of the broader factors influencing development would have affected the two centres equally. However the importance of precise location cannot be overlooked. Settlement history reveals that there were a

larger number of earlier settlers in the Tottenham area. This brief head start did not prove to be significant. Information concerning early development in the Tottenham area is limited. John Totten settled on the southwest quarter of lot 8, concession two⁹ and it is thought that this individual gave his name to the village. Tottenham was incorporated in 1884. Robert Clark was one of the few very early settlers in the area of modern day Beeton,¹⁰ The centre which developed was at first officially called Clarkesville although the more frequent title of Clark's Mudhole was quite appropriate in the early years. The arrival in 1867 of David Alliston Jones, Canada's first commercial beekeeper was to have far-reaching consequence.¹¹ Jones was the first man to introduce honey bees, which were not native to North America, to Ontario. As well as marketing the natural product Jones instructed students at his bee yards in Beeton and operated a beekeeping equipment manufacturing concern. To commemorate his contribution the post office was renamed Beetown (later Beeton) in 1874.

In 1893 the combined hardships of the ravages of foulbrood, a disease affecting bees, and fire drove Jones into bankruptcy. He then turned all his energy toward the building up of the community. He envisioned a large thriving town at Beeton and the effects of his elaborate early survey are still felt.

Comparative classification of urban centres in the early years proved difficult because of the difficulty of finding comparable statistical material. Urban places in one study have been arranged in a service classification dependent upon services performed in the centre.¹² Urban places were classified as rural villages, urban vill-

ages as sub-towns and fully fledged towns. In 1851 neither Beeton nor Tottenham qualified for even the lowest category. By 1881 both had risen to the urban village category. The requisite service criteria in that year included banks, a newspaper, a high school, members of the legal profession and physicians. Centres performing two or three of these services were classified as urban villages. In 1911, a public library was added to the five criteria. Both centres were again classified as urban villages which included all places in which two or three of the services were absent. The final classification of 1952 necessitated a readjustment of the service functions to be used because of the advanced state of urbanism. The six key services chosen were banks, newspapers, public libraries, public secondary schools, moving picture theatres and hospitals.¹⁵ Following this classification Tottenham which has only the bank dropped to the category of a rural village while Beeton which performs three of the services remained an urban village. On this basis Beeton made a slight gain at the expense of Tottenham. However the newspaper and library in Beeton are very small.

In contrast to the apparent relative development of Beeton by this measure analysis of the historic population trend would indicate growth has been more rapid in Tottenham. Beeton held its greatest advantage in numbers over Tottenham in 1891. At that early date Beeton has a population of 771 or almost 200 more than Tottenham. (Appendix II). The gap has steadily been closed until Tottenham surpassed Beeton in 1956 although it did drop slightly behind again in 1961.

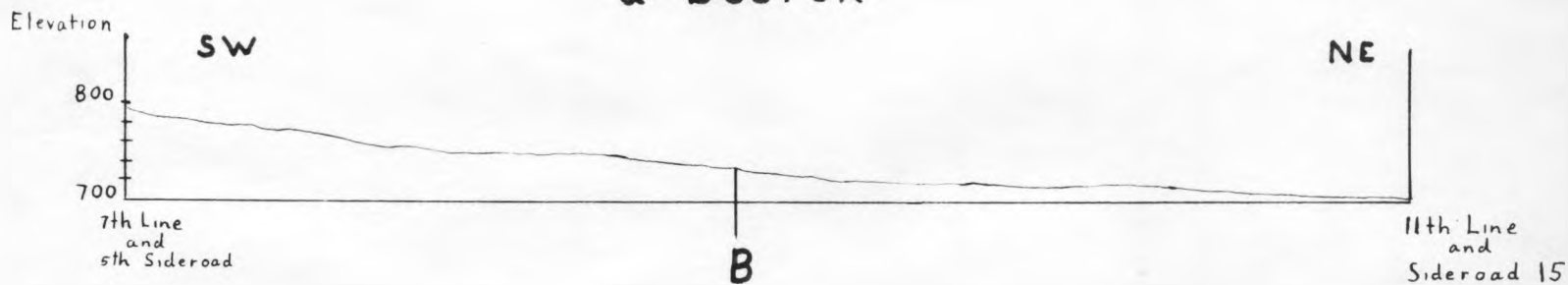
Differences in the religious composition of the population are also apparent. The percentage of population declaring Roman Catholic affiliation has always been more significant in Tottenham. This was especially apparent in the early years. In 1891, 33% of the population of Tottenham was Roman Catholic compared with only 2% in Beeton. The Protestant centre would appear to have been more strongly concerned with matters concerning the surficial development and external appearance of the community.

Study of the environs of the two centres also suggests reasons for variation in development. Tottenham is situated near the northern margin of the rugged sandy hame country where it comes in contact with the rolling deposits of glacial Lake Schomberg. Beeton lies within the zone of lacustrine sediments just south of the sand plain boundary. Cross-sections taken through both Beeton and Tottenham depict the varying nature of the terrain. (figure 10). More favourable topographic and soil conditions in the Beeton area fostered the development of a more prosperous agricultural community. Close interrelations between farm and service centre would make this an important factor in the development of the urban places during the age of the agrarian society. The hinterland relationship between urban and rural areas is a reciprocal one. Whether in the final analysis the country organizes the town or town organizes country is still a point of dispute.¹⁴

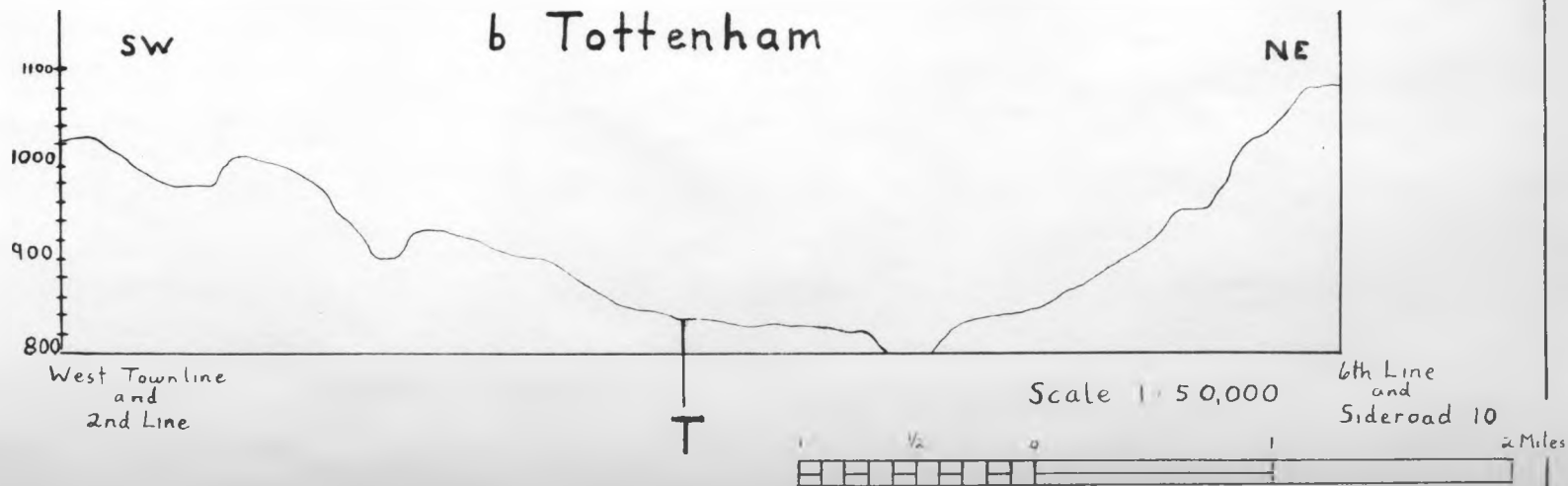
This would appear to be the principal difference in the physical geography of the areas. Aspects of the human geography of the surrounding areas such as transportation would not appear to be sig-

Cross Profiles

a Beeton



b Tottenham



nificant although Beeton has long been situated on a paved County Road.

Land use, past and present, may be invoked to suggest reasons for the apparent disparity in the modern day external appearance of the two centres. It is difficult to assemble information casting light on past land use. Generally it might be said that both centres showed a great deal more apparent activity in the past. This is a generalization that could be levelled at most existing small centres. The activities of the agrarian society involved great community activity. Both centres performed the traditional agrarian functions. These included the servicing of local residents and the processing of natural products of field and forest. However Tottenham traditionally has had a more active and diversified industrial base. A foundry and tannery both of which were lacking in Beeton were found in Tottenham. A specialty industry in Tottenham was the Coleman Box Factory which manufactured fare boxes for the Toronto Transit Commission up until 1910. As is apparent in table III D Tottenham is still superior in industrial development.

Table III-D

Industry Today

<u>Beeton</u>	<u>Tottenham</u>
Borden Metal Products	Tottenham Creamery
Grain elevator and Coal Distribution	Grain elevator, coal and oil Distribution
Parsons Seed Company	Tipping Motor Bodies
International Nutrition (Health Bread)	Leather goods Chemicals (wax, floor cleaner) Schley Woodworking.

Borden Metal Products which employ eighteen is Beeton's largest industry. It is an efficient and progressively administered operation dealing basically in metal grates. The Beeton grain elevator

is a larger operation than that in Tottenham. The other industries are small employing less than 10 workers. The creamery in Tottenham is comparatively a very large operation. Its 360 suppliers are distributed over a wide area. Tottenham Creamery serves 80% of the stores through its pick up area. Other markets include Donlands, a large Toronto dairy, and the Victoria Harbour Dairy, which commands large quantities of the product during the summer holiday season. The remaining four industries located in Tottenham are not large. However they are representative of an industrial diversification. The economic base of Tottenham is not as strongly allied to the agricultural community as it is in Beeton.

The commercial areas of both towns are similarly compared in table III E.

Table 35E Present Commercial Outlets

		<u>Beeton</u>	<u>Tottenham</u>
A. Establishments dealing in retail goods	Drugs	1	1
	Food Outlets	3	5
	Hardware & Farm Supplies	2	2
	Department Stores (small)	1	2
	Electrical goods	1	0
	Antiques	1	0
	Bicycles sales	0	1
	Harness maker	0	1
	Furniture	0	1
	A. Establishments dealing in Services	Restaurants	4
Hotel		1	1
Hair styling		1	1
Barber		1	1
Service station		3	4
Bell telephone		1	1
Paper		1	0
Real estate and insurance		1	1
Law office		0	1
Undertaker		0	1
Laundromat	0	1	
C. Institutional establishments	Bank	1	1
	Post office	1	1
	Township office	1	0
D. Other	Vacant building	3	3

In an age of rapid automobile traffic and commuting the service function of the commercial area of small centres such as Beeton and Tottenham is limited. Seven service establishments are geared solely to the auto. Only the number of food outlets exceeds this total. Each town can lay claim to a limited number of specialized functions. The most significant of these are the presence of the Township offices and a paper in Beeton. Something of a centripetal force, especially in the earlier years, would have been created by the presence of these functions. The relative stagnation of the centres, as

shown by the number of vacant buildings which formerly performed a commercial function, is equal.

The principal contrast as shown by the comparative land use maps is the difference in the structure of the two centres. The sprawling grid of the Beeton town plan is a outgrowth of the ambitious early survey undertaken by D. A. Jones. The majority of the planned streets of this first survey have never been opened up. A great deal of open space remains within the town limits. The spacing of residential structures and extent of open space creates a great deal of the hamlets charm. The compact structure of Tottenham is in complete contrast. Structures are crowded both toward each other and toward the street. (figs 11 and 12.)

The effect of the differing town plans is being felt today. Tottenham is equipped with a primary treatment sewage system. However because of the sprawling structure of Beeton the length of sewer pipe that would have to be laid to provide a sewage system would raise the cost to a prohibitive \$190,000.00. Prospects for attracting industry by the addition of this service would not justify the expense. The Corporation owned dam at Tottenham could offer water to any industry which might like to locate here, but Beeton too has a good water supply. The advantages which Tottenham holds with regard to services for future development has created a degree of land speculation in the area. An option on the agricultural land surrounding the village was purchased by a Toronto real estate firm a decade ago but no development has yet taken place.

Figures on taxable assessment made in 1962 point out the

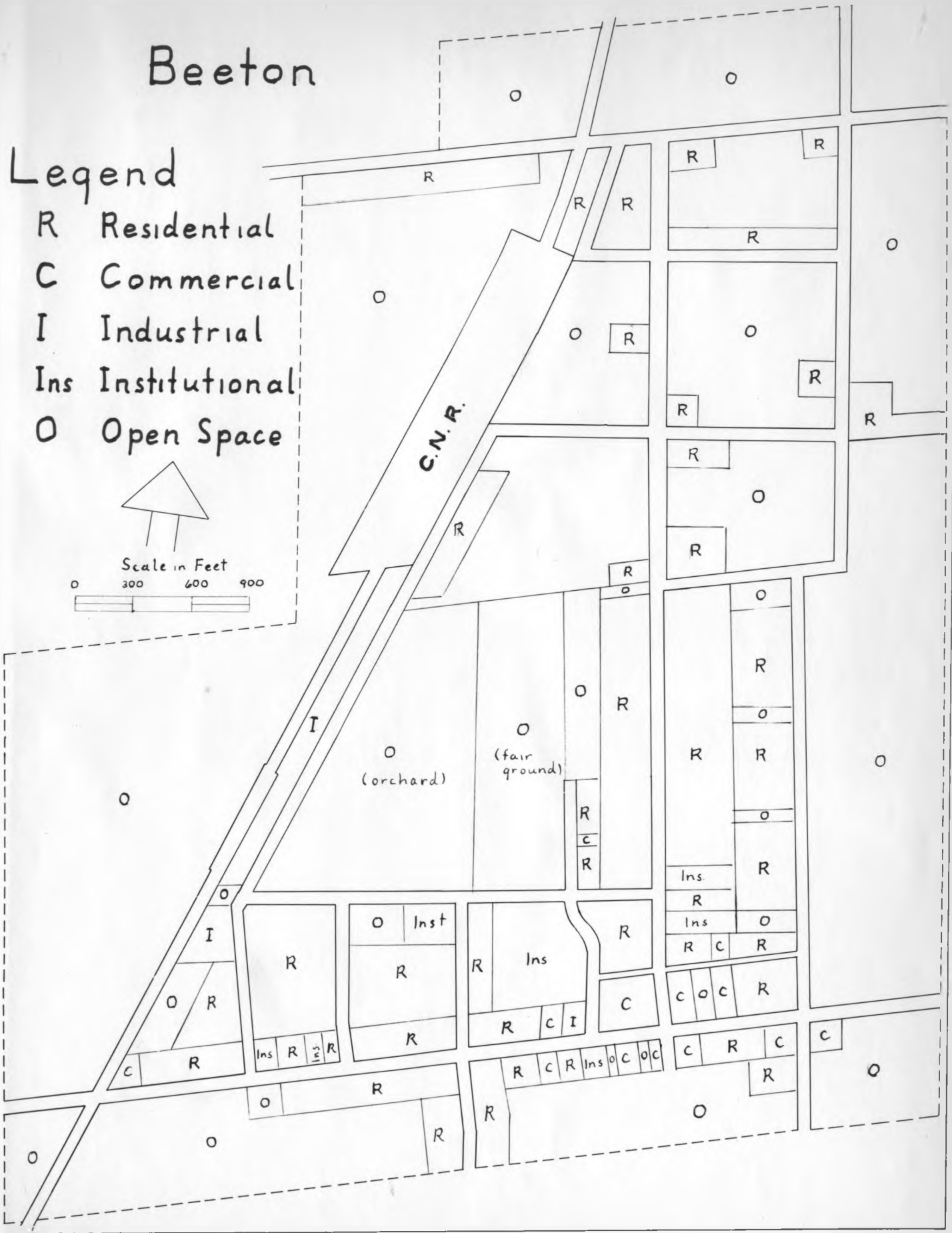
Beeton

Legend

- R Residential
- C Commercial
- I Industrial
- Ins Institutional
- O Open Space

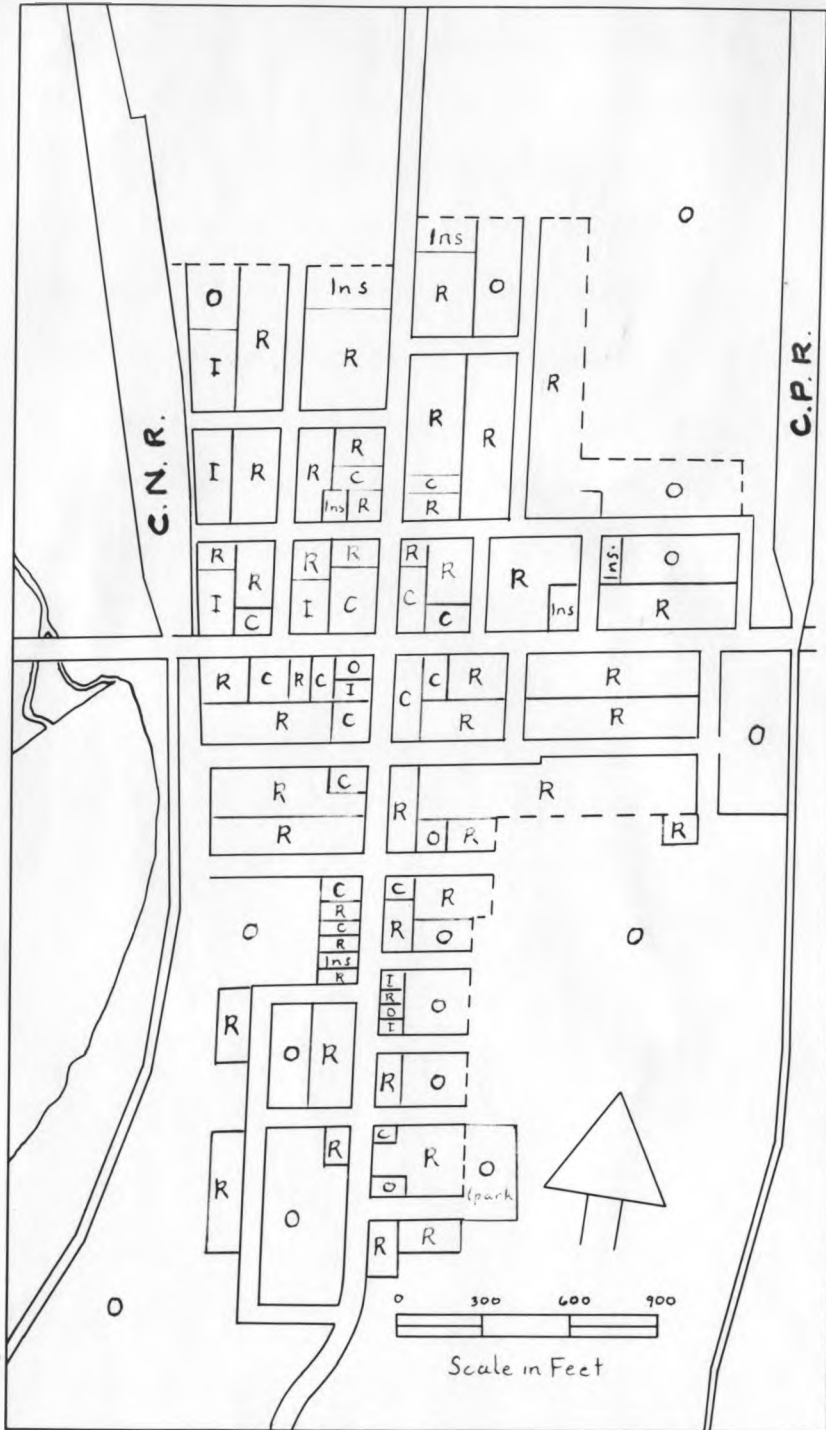


Scale in Feet



Present Land Use

Tottenham



Legend

- R Residential
- C Commercial
- I Industrial
- Ins Institutional
- O Open Space

Present Land Use

similarity of the two centres measured in this manner.

Population and Local Taxable Assessments Made in 1962¹⁵

<u>Municipality</u>	<u>Population</u>	<u>Acreage for Taxation</u>	<u>Total Acreage</u>	<u>Taxable Land</u>	<u>Taxable Buildings</u>	<u>Business Assessments</u>	<u>Total Taxable Assessments</u>
Beeton	834	365	475	\$ 104,044	\$ 634,940	\$ 43,000	\$ 781,984
Tottenham	746	361	400	\$ 109,055	\$ 627,140	\$ 54,360	\$ 790,555

In toto Tottenham registers a slightly higher total taxable assessment based upon a smaller acreage and population although the latter is not a good indicator in this case when not combined with the age and sex figures of population. The value placed on taxable buildings is the only category in which Beeton leads. Although this is far from being a positive indicator of the overall superior quality of the buildings in Beeton because of a great number of other factors which would also have to be considered, it does provide an indication which can be used with other findings.

Two additional indicators of a community spirit and pride of community are to be found in Beeton. The Beeton Fair Grounds annually hosts a large two-day fall fair. The fair attracts crowds of up to 6,000 for a day and requires a great deal of organization from the community. The memorial archway marking the main entrance was erected in honour of the local war dead. The large community centre was built and has been operated and maintained by virtue of an active community spirit which has centred on Beeton.

A number of factors have been investigated in an attempt to provide reasons for the disparity in the present day structure and appearance of Beeton and Tottenham. The historical sequence of events

showed the villages to be quite comparable in their development. Neither ever appeared to overshadow the other to any great extent. The relative prosperity of agriculture in the immediate hinterland of Beeton is suggested as being in part linked with the present higher assessed value placed on buildings in the village. There are a large number of spacious well-kept residences in Beeton. The close inter-relation between village and country, so important in the early years when these homes were built is seen here. The structure of the village of Beeton is another feature adding to its overall attractiveness. The partially developed town plan has meant that much land remains vacant. Residential lots are for the most part large. Beeton was found to exhibit a more active central function within the area and possessed a greater community spirit.

The problem is not altogether measurable in a quantitative way. However this situation exists in all social sciences where value judgements must be made using information which is related to the problem. In the present day landscape, Beeton which lies at the geographical centre of the township, looks longingly back toward the age of the agrarian society. It will remain a quiet residential centre for retired folk and for an increasing number of commuters. Tottenham on the other hand, which is more strongly bound to the modern age and industry, looks hopefully to the future and an industrial boom. These two points of view sum up the contrasting positions held by the respective municipal leaders. Beeton with its strongly rural complexion remains the more favourable place in which to live.



Tottenham commercial
area

The commercial function of former agricultural service centres has been all but eclipsed. The greater mobility of the modern age has permitted the consolidation of urban functions in fewer larger centres.



Beeton commercial
area



Centre Street, Beeton
The internal spaciousness is one of Beeton's greatest charms. The village with its wide grassed boulevards and large residential lots has distinctly rural aspects.

Queen Street, Tottenham
In contrast Tottenham is a more compact village. Buildings crowd into each other and toward the street. Buildings are not as well maintained.





The Beeton community spirit is overtly expressed in its park and fair grounds. A 2-day fall fair attracts crowds of 6000 per day.

A dam constructed at Tottenham affords opportunity to industry and recreation. Industrial growth has not proceeded and possibilities for recreation have not been extensively developed.



Chapter III

Footnotes

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3. Industrial Handbook of Georgian Bay Region.
Midland: Georgian Bay Development Association, 1962, Section III,
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Ontario Dept. of Economics and Development. 1963. p. 114.
5. op cit. Industrial Handbook of Georgian Bay Region. Section I.
6. ibid. Section III. p. 4.
7. op cit. Municipal Directory p. 63
8. op cit. Economic Survey of Georgian Bay Region p. vi.
9. A. F. Hunter, History of Simcoe County. Barrie: Simcoe County
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10. J. Cole. Centennial History of Beeton Fair and the Pioneers.
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11. P. W. Burke. D. A. Jones Memorial Day. unpublished, 1957. p.1.
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13. ibid p. 208
14. Mayer & Kohn, Ed. Readings in Urban Geography. C. D. Harris, & E. L.
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15. Proceedings of the June and Special Session 1962 of the Municipal
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Chapter IV

Agricultural Land Use

Agriculture in Tecumseth is the most significant aspect of land use. Reports of the local agricultural society dating from as early as 1845, pay a glowing tribute to the prosperity of agriculture.¹ The township today is still primarily a rural township. The official township plan was formulated with this in mind and is designed to protect agricultural interests while remaining flexible enough to accommodate diversified growth.²

This study will be developed by considering the general agriculture of the township. This will be accomplished first by a general overview in which differing regional emphasis will be brought out and in which studies of sample farms will be used. The general study will conclude with an examination of seven selected blocks of land for which land use has been mapped. Statistical information concerning crop production and matters of the farm economy to serve as reference for this general study are compiled in appendix 5. An examination of the agricultural specialisms of the township will conclude the study.

The agricultural capability of this township, which is favourably situated for the development of commercial agriculture, is indicated by the percentage of improved land to total occupied land shown in figure 14. Although it is not possible to define distinct regions especially with regard to a mixed agricultural economy differing emphases may be noted.

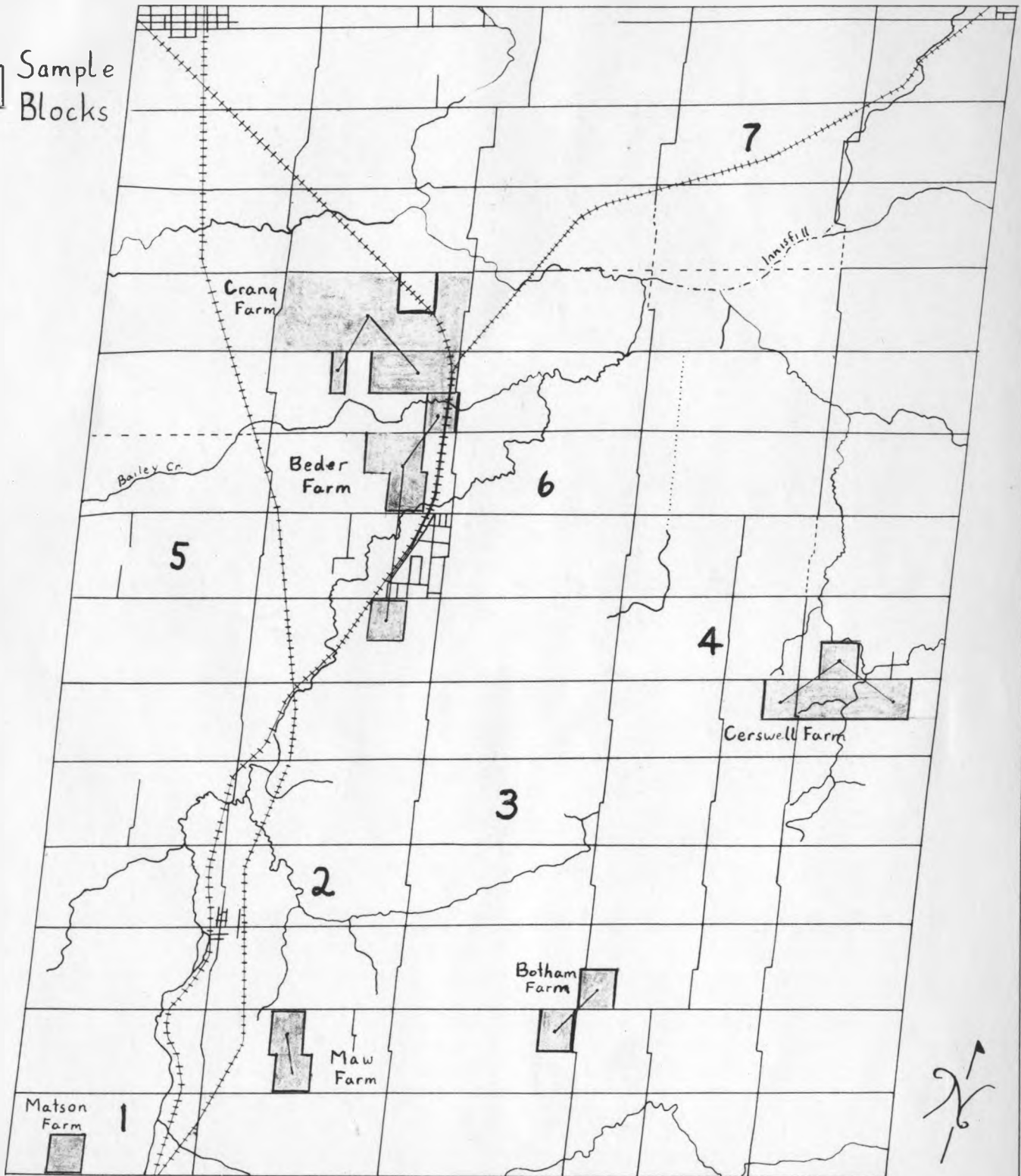
The southwest quarter of the township is an area of mixed farming. The area comprises a variety of land and soil types. Much of the land which is poorest adapted to agricultural development

TOWNSHIP OF TECUMSETH

Scale in Miles

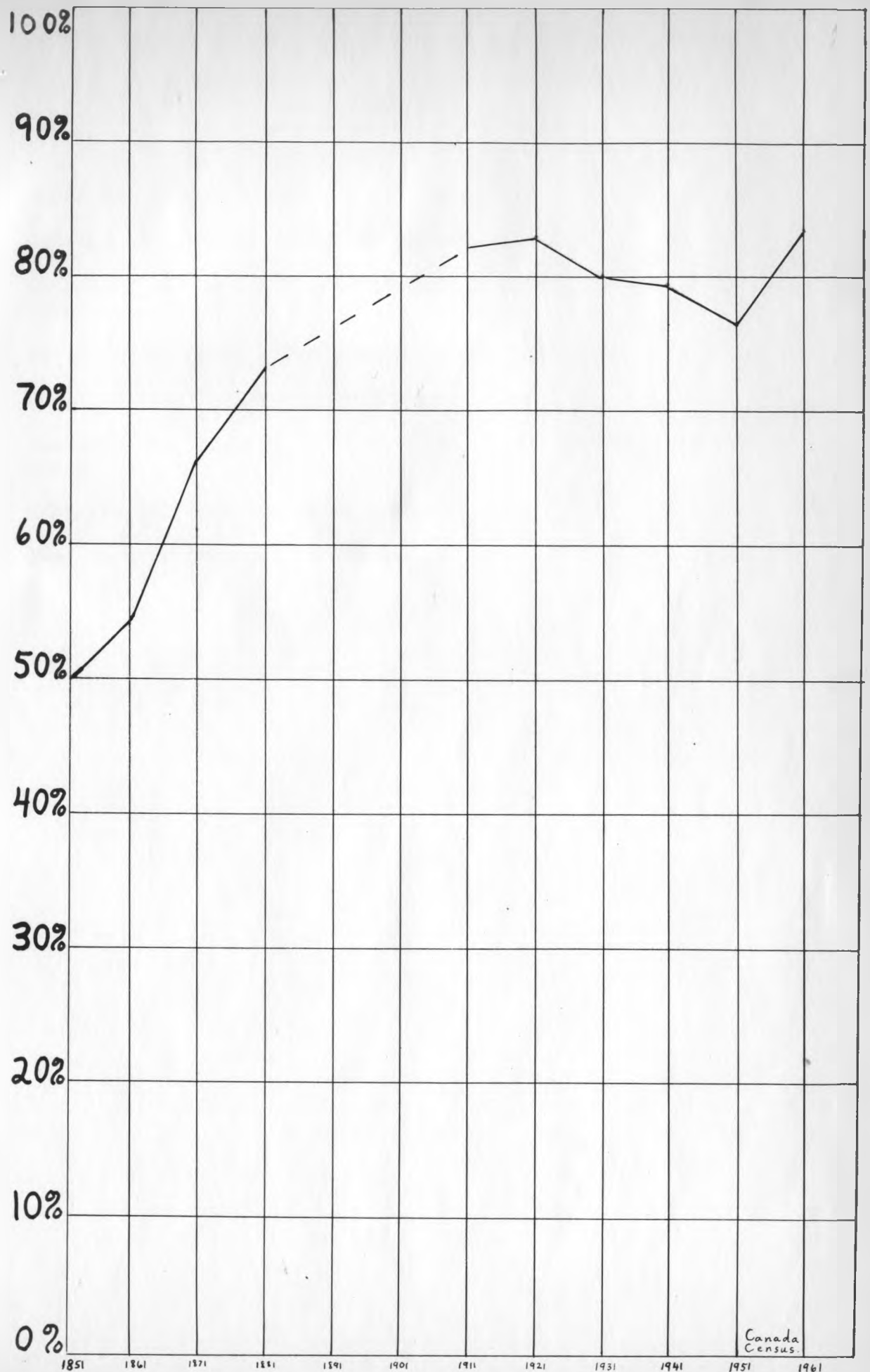


Sample
Blocks



Agricultural Orientation Map

fig 13

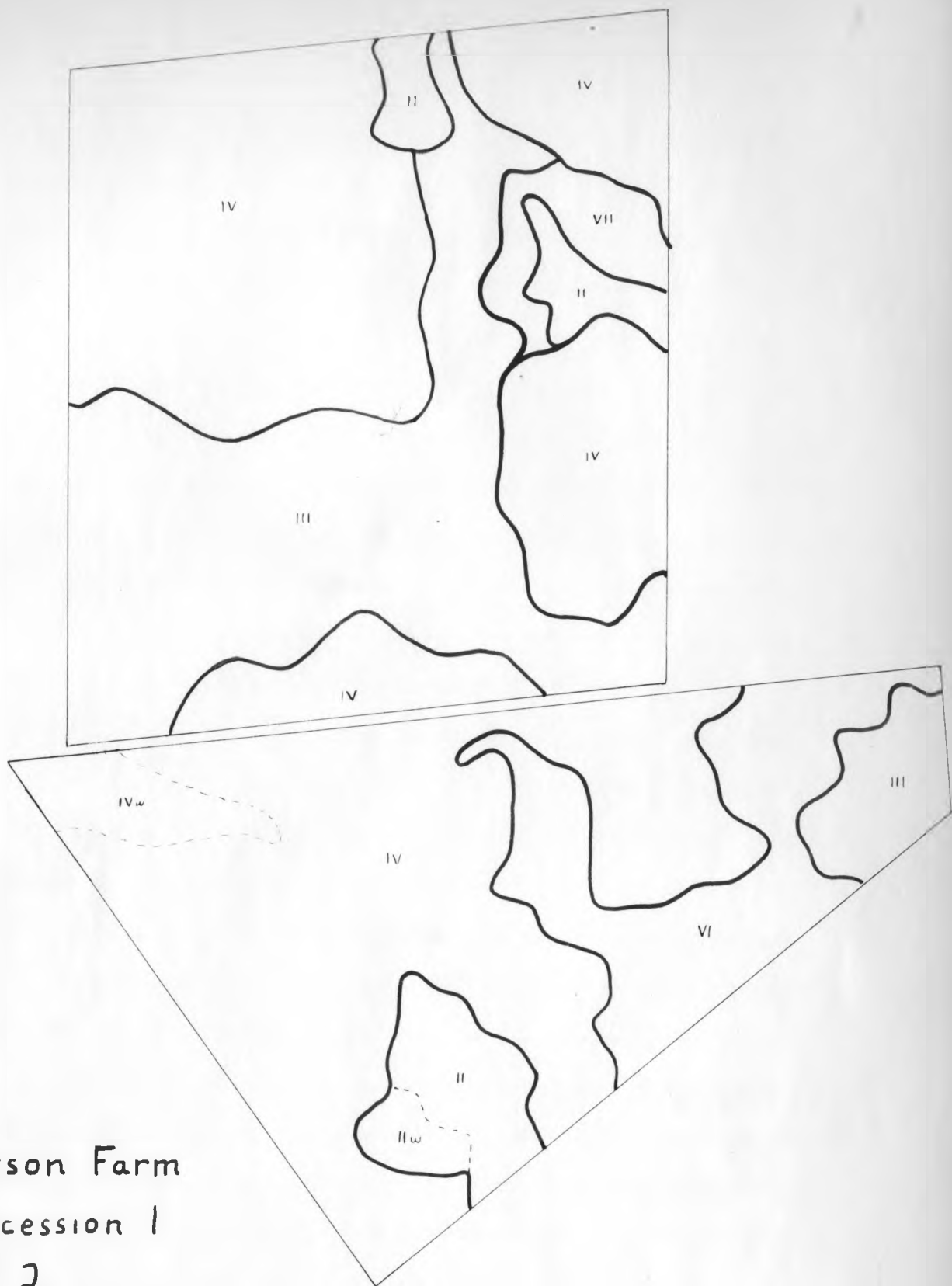


Canada
Census.

% of Improved Land to Total Occupied Land

Land Classes

- I prime agricultural land
- II moderate limitations for crop production
- III moderate limitations requiring more adequate protection or treatment
- IV severe limitations for use in farm crop production
- V unsuited to cultivation, suited to grazing
- VI suitable for moderate grazing, must be kept under vegetative cover
- VII suitable only for limited grazing
- W land suffers from poor drainage



Matson Farm
 Concession 1
 Lot 2
 175 acres

Physical Land Classification

occurs in this area. The sandy kame land of the extreme southwest corner, the more steeply sloping of the till land, and even the lacustrine land, which in this area suffers from severe stream dissection, are of limited use for agriculture. Much of the land along the stream valleys remains in woodland and permanent pasture.

The Maw farm on the third concession is typical of the area although somewhat larger than most (fig. 13). One hundred and eighty acres of land are owned and another 250 rented. No grain is produced for sale although a large quantity of feed is grown. General practice involves keeping a variety of livestock. There are some farms in this area which are used solely for pasture. Commuters or part-time farmers are most prevalent in this part of the township.

To illustrate the general physical unsuitability of this land for agriculture, reference has been made to a farm plan drawn up for a farm situated on the sandy kame of the 1st concession. This plan, drawn up by the Ontario Agricultural College, divides the land into seven agricultural categories, based upon the overall slope, the degree of irregular slope, the susceptibility to wind and water erosion, stoniness and soil type. In figure 15 no first class land was mapped. The amount of second class is limited and fragmented. The majority of the land was divided between third and fourth class. Land placed in category III is considered to require adequate protective measures for farm crop production and Class IV land is subject to severe limitations for use in farm crop production.³

There is some variation from this general pattern. To the

south along highway nine, estate farms, a poultry farm and dog kennels are scattered among residential and other types of agricultural development. Specialized dairying is developed to a limited extent along the main highway and the paved north-south county road. On the same land to the extreme southwest only 50% of the land is arable and a 5 year rotation system was formerly suggested. New practices of scientific agriculture have diminished the importance of a planned rotation. Throughout this area of mixed farming the human element is of paramount importance in accounting for differences in individual farms.

The northwest quarter of the township is distinguished for its specialized and highly developed commercial agriculture. Leaving the specialisms to be dealt with later, an examination of the operation of the largest mixed commercial operation will serve as a good example for this area. The Crang Holdings comprise 1200 acres in Tecumseth of which 900 are owned. Mr. J. Crang is an individual whose business ventures extend far beyond the field of agriculture. The operation is extremely diversified. Annual production includes some 500 acres of potatoes, 400 acres of grains, 100 of which is corn, 150 acres of sod and the remainder is left in pasture. Sheep and cattle are raised here. A railway siding on the property services this operation. In addition another 650 acres of land is owned in an adjacent township. The latter holdings on heavier soil are devoted to producing a hay crop and the raising of pigs.

The sale of an old airport in the last decade enabled Crang to gain control of this large acreage. Taking advantage of his personal knowledge of farming, diverse business interests and contacts,

and the nearby Toronto market, he has developed a prosperous and highly diversified agricultural complex.

The till plain along the northern edge of the township toward the eastern margin is another zone of general farming. As in the southwest no pattern can be recognized readily. However the physical base is somewhat better than in the former area and holdings are larger in this northern area. Land has been almost entirely cleared for agriculture.

The zone of flat sand plain south of the railway is an area of general farming with a beef, dairy, sod emphasis. This low lying area suffers from poor drainage and is subject to annual spring flooding. This is most pronounced along the 11th and 12th concessions from the 15th sideroad east toward the 20th sideroad. Much of the land adjacent to the forested muck deposits of the central area of lowland are used solely for grazing large herds of cattle which are predominantly beef. This poorly drained bottomland is never cropped.

The majority of the beef cattle are of eastern Canadian origin. Most farmers buy their stock locally. Cattle are purchased which weigh 300 to 400 pounds. These may or may not be finished when marketed depending upon the individual operator. As a secondary pursuit beef cattle are also bred in this area, although cattlemen realize that without top stock they are better off to sell to the market for slaughter. Cattle will usually be kept for two years before being sold. Dairy cattle are also common but shipments are to creameries rather than to fluid milk dealers.

The soils which have good moisture holding capacities produce

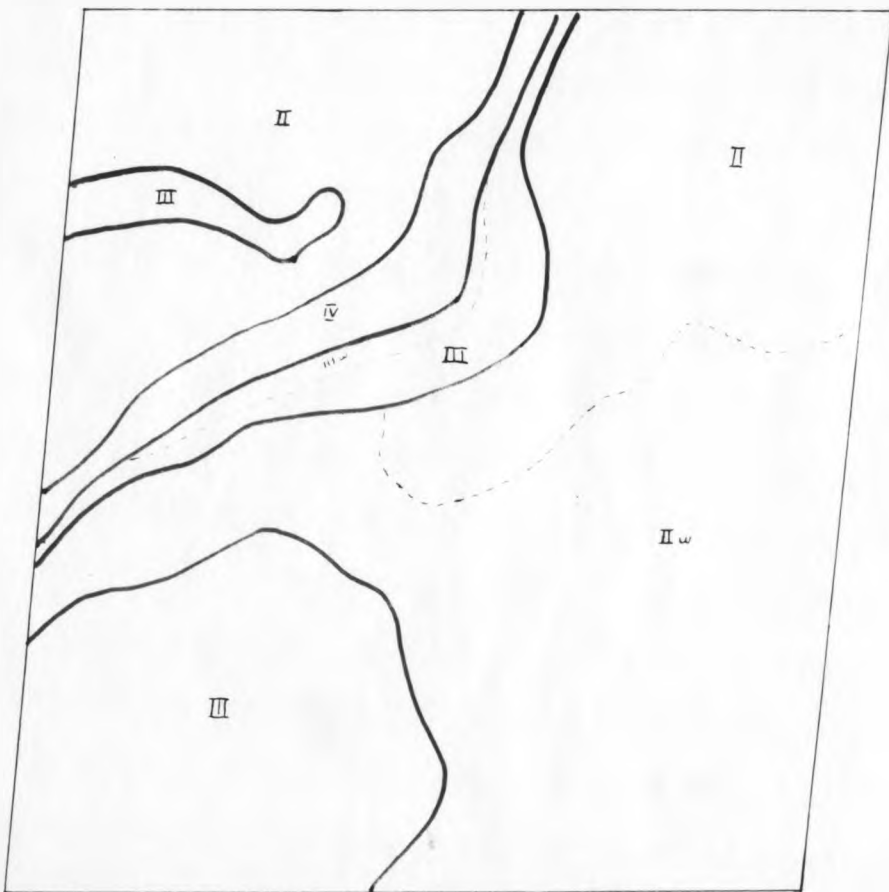
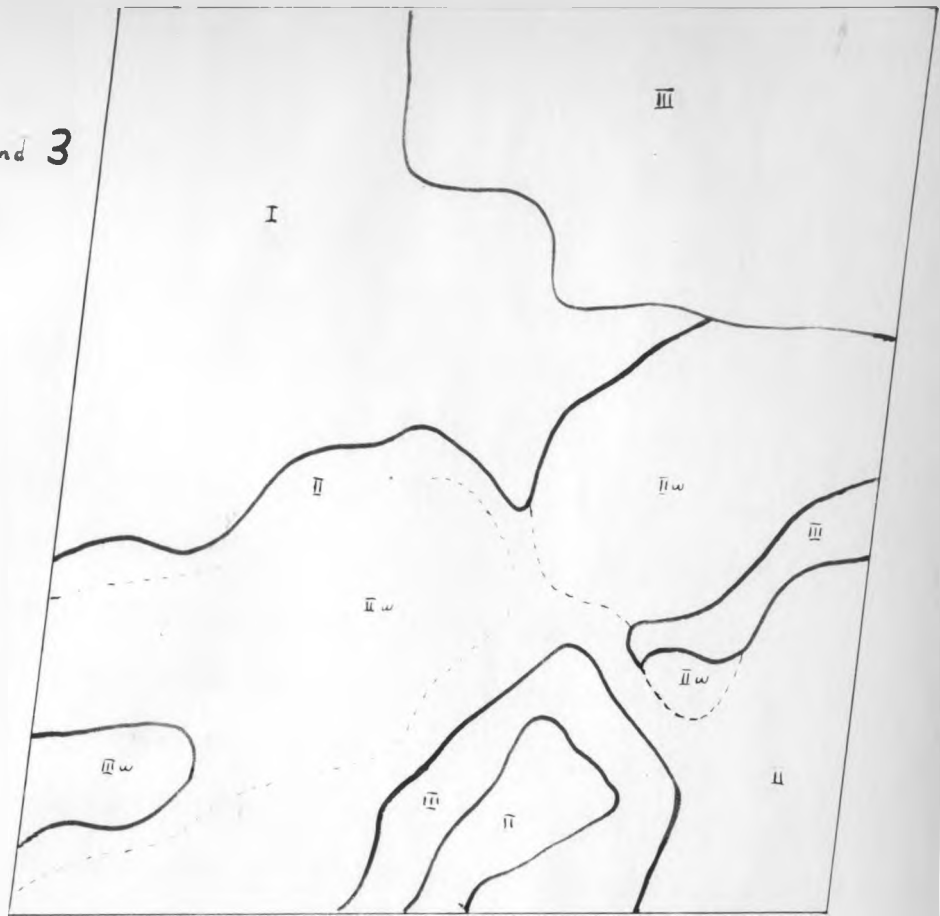
an excellent hay crop. Feed grains are also grown and corn acreages are significant and on the increase. Growing of fall grains is limited by drainage conditions. Their production is dependent upon the precise location of well drained land.

Small acreages of sod are also found in this region. Single fields rather than whole farms as in the true specialty area are devoted to this purpose. A variety of other farming activities are carried on depending upon the individual operator. All three farms visited in this region were large and 200 acres was proposed as the average size of holding.

The remaining southwest portion of the township is also a region of mixed farming but with an emphasis on dairy, beef, and grain. The physical conditions are favourable for agricultural. This area was settled early and had the first good road connections to the south. The Botham farm on the third line, for which a farm plan has been prepared, is illustrative of the physical suitability of the land (figure 16). In comparison with the farm in the southwest, a large proportion of the land here is in categories I and II. This is the prime agricultural land. Some of the finest farms in the entire township are to be found adjacent to highway 27. A significantly large number of farms which lie within this region deal in specialties. The remaining farms exhibit a general diversified type of economy. Overall quality is high.

The area is distinguished by the production of wheat for sale which was found to be a factor in the general economy of all farms visited in this sub-region. Although the days of eastern wheat prod-

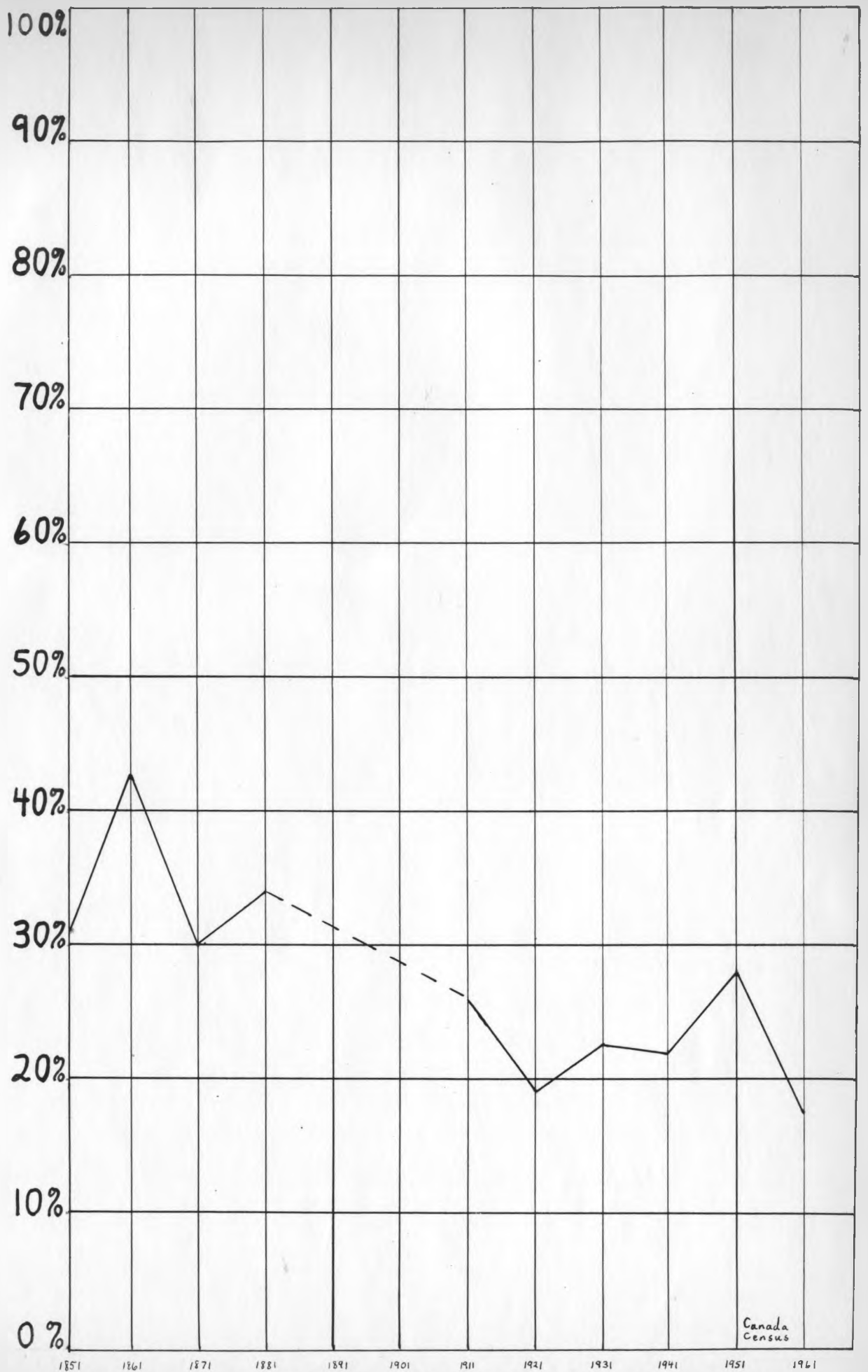
Botham Farm
Concession 2 and 3
Lots 15 and 16
200 acres



Physical Land Classification

uction have long passed, this area has a long history of wheat production. Its importance has declined for the township as a whole as is seen in figure 17. However inertia has maintained a place of importance for this practice in the southwestern section of the township. The planting of fall wheat also helps solve a labour problem on the farm by distributing the seeding of grains over two seasons.

Differences in the agricultural pattern become more observable and measurable if discussed in terms of land use. To this end seven blocks of 1000 acres each were selected and the land use mapped. Blocks were chosen to represent different physiographic and land type regions. Areas exclusively devoted to specialty farming were avoided and this aspect of agriculture will be treated separately. The classification of agricultural land use includes five categories; hay and rotation pasture, small grains, corn, freshly ploughed land and woodland and natural pasture. Any distinction between hay and rotation pasture recognizes merely a difference in present emphasis not in actual land use. Small grains have been grouped together. Wheat is included with small grains throughout, although it is separated out where possible. Corn which is becoming increasingly more important in Ontario was mapped separately. The freshly ploughed land was being prepared for planting fall wheat. The practice of summer fallow is not as important as it used to be. Modern methods of fertilization and weed control have reduced the need for this practice. An idle field is a luxury which few farmers can today afford. In many cases land formerly in the hay, rotation pasture category is ploughed up and left idle for a short period before the fall



% of Wheat to Cropland

Canada
Census

Agricultural Land Use

Legend



Woodland and permanent pasture

HP

hay and rotation pasture

SG

small grains

C

corn

PL

freshly ploughed

S

sod

O

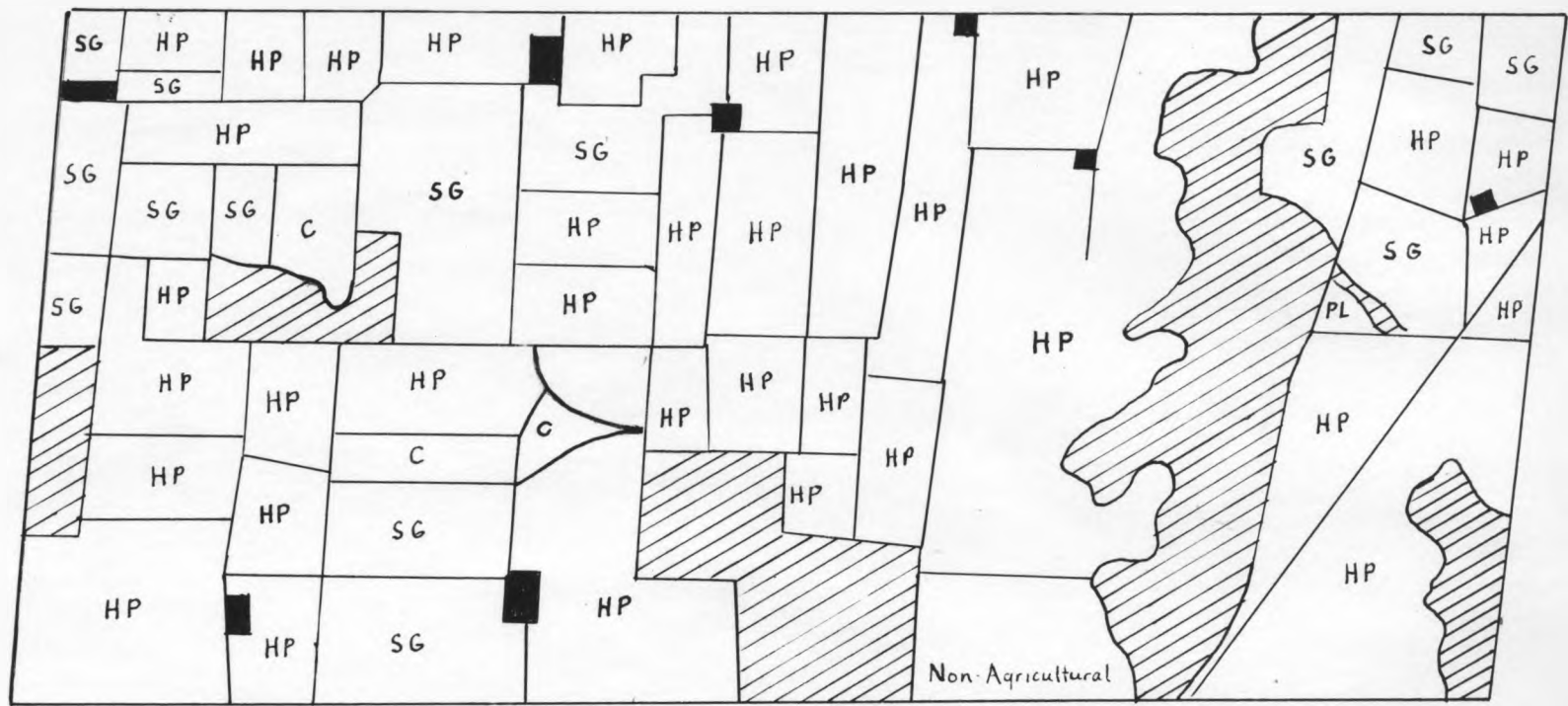
orchard

P

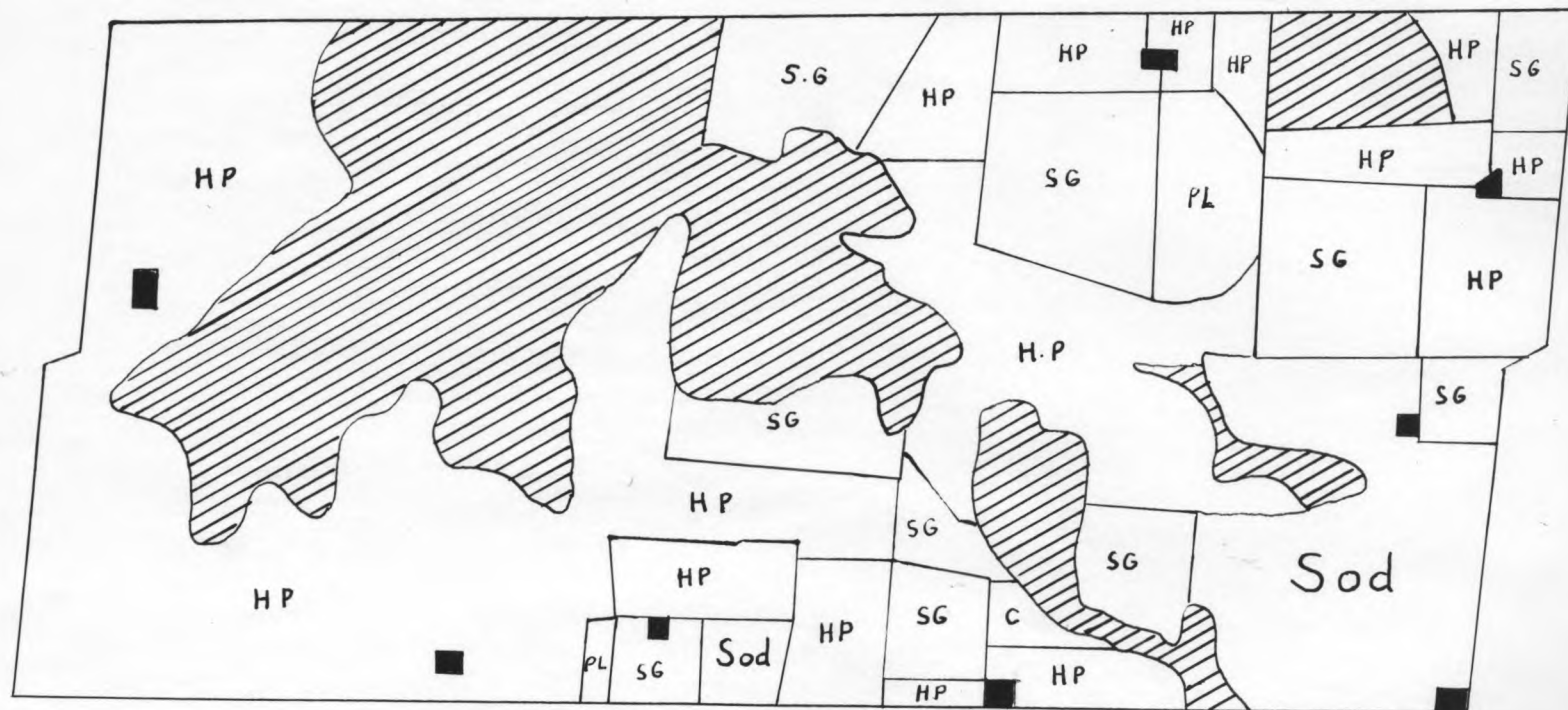
potatoes



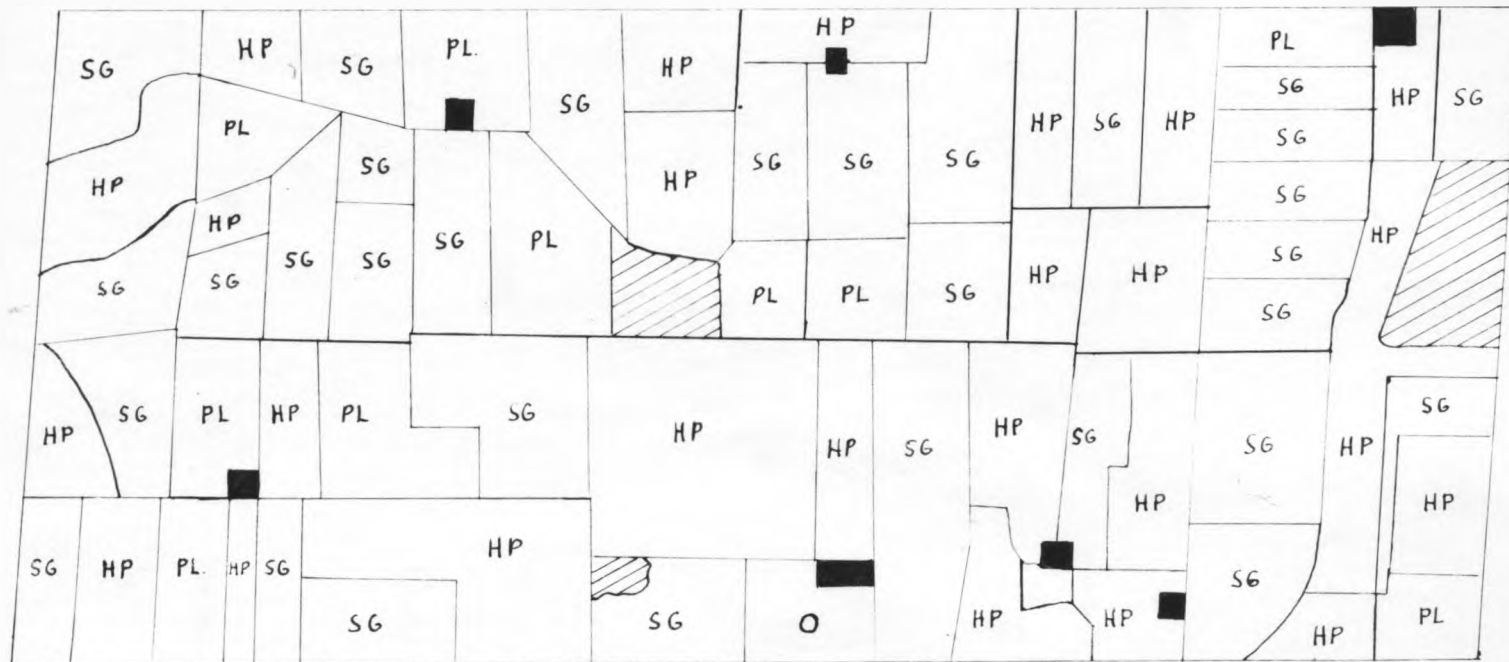
farm buildings



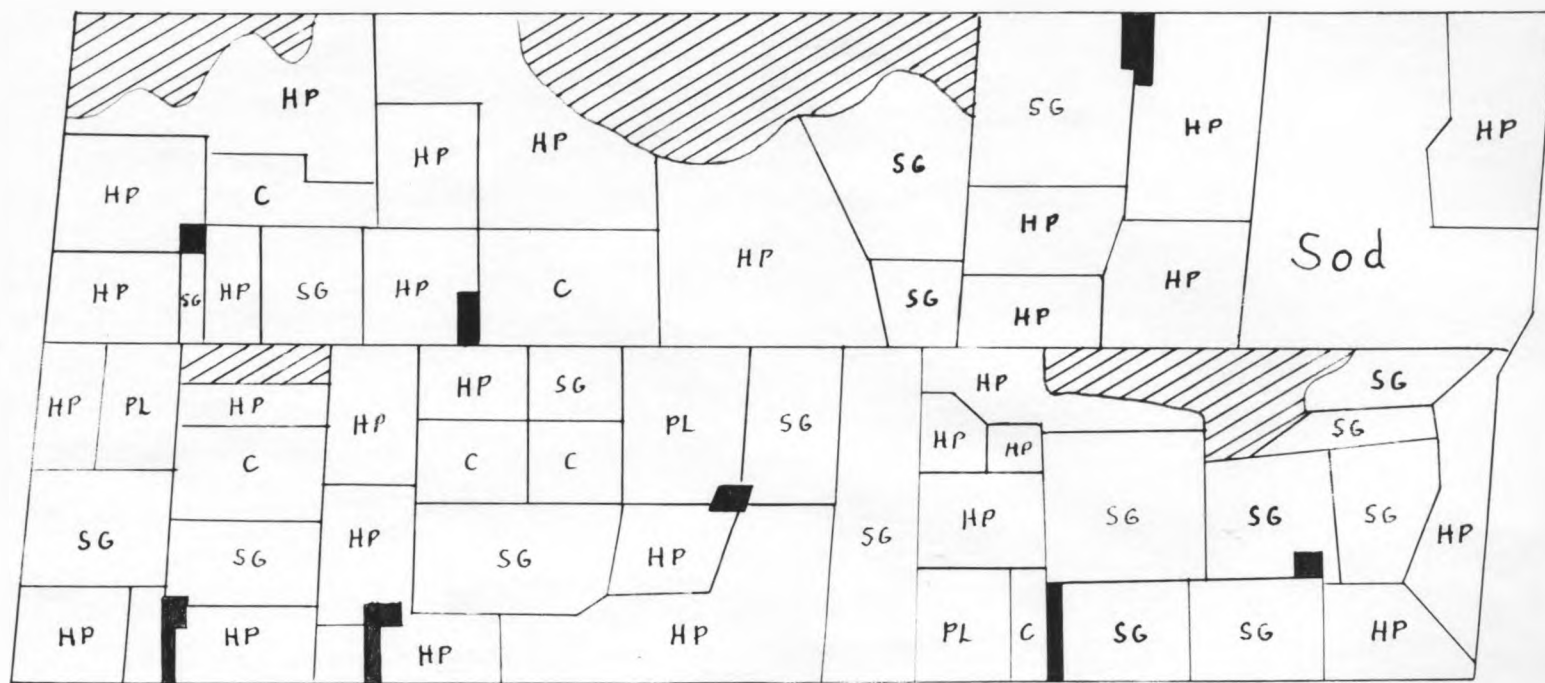
Sample Block One
 Concession I Lots 1-5



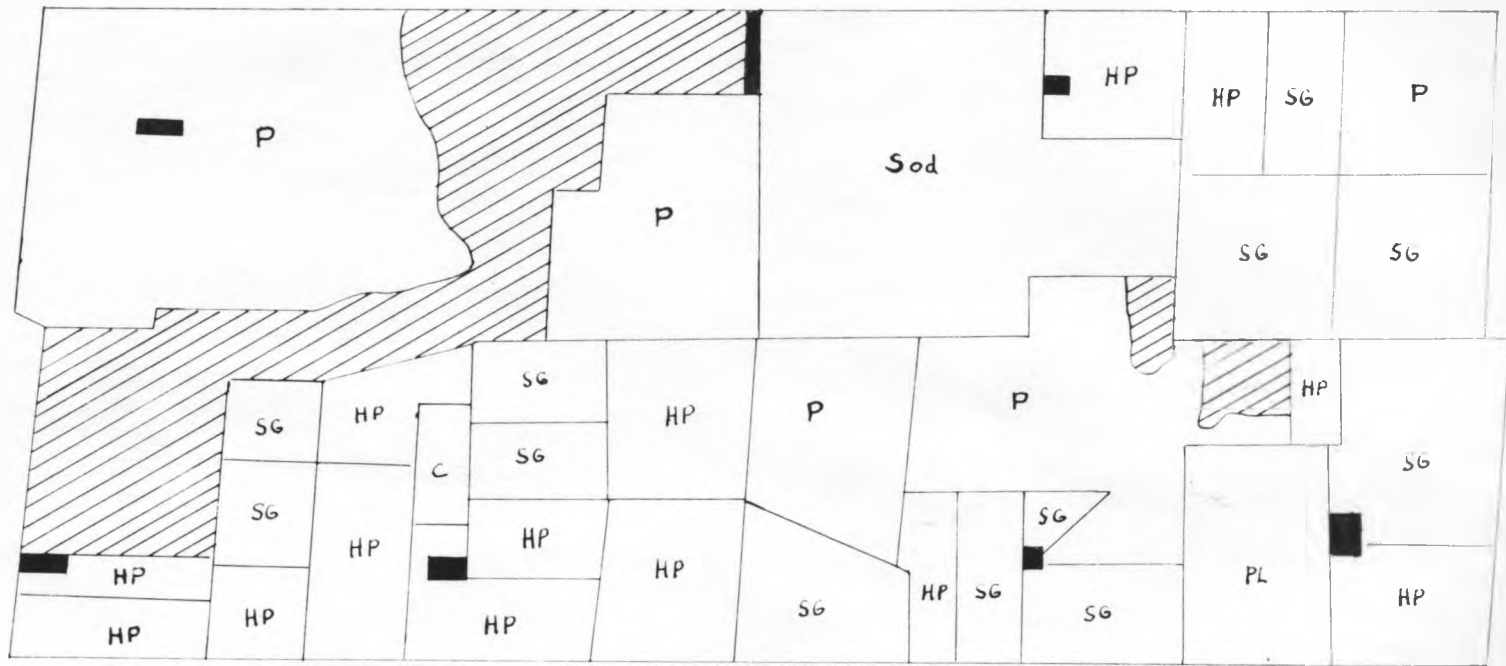
Sample Block Three
 Concession V Lots 11-15



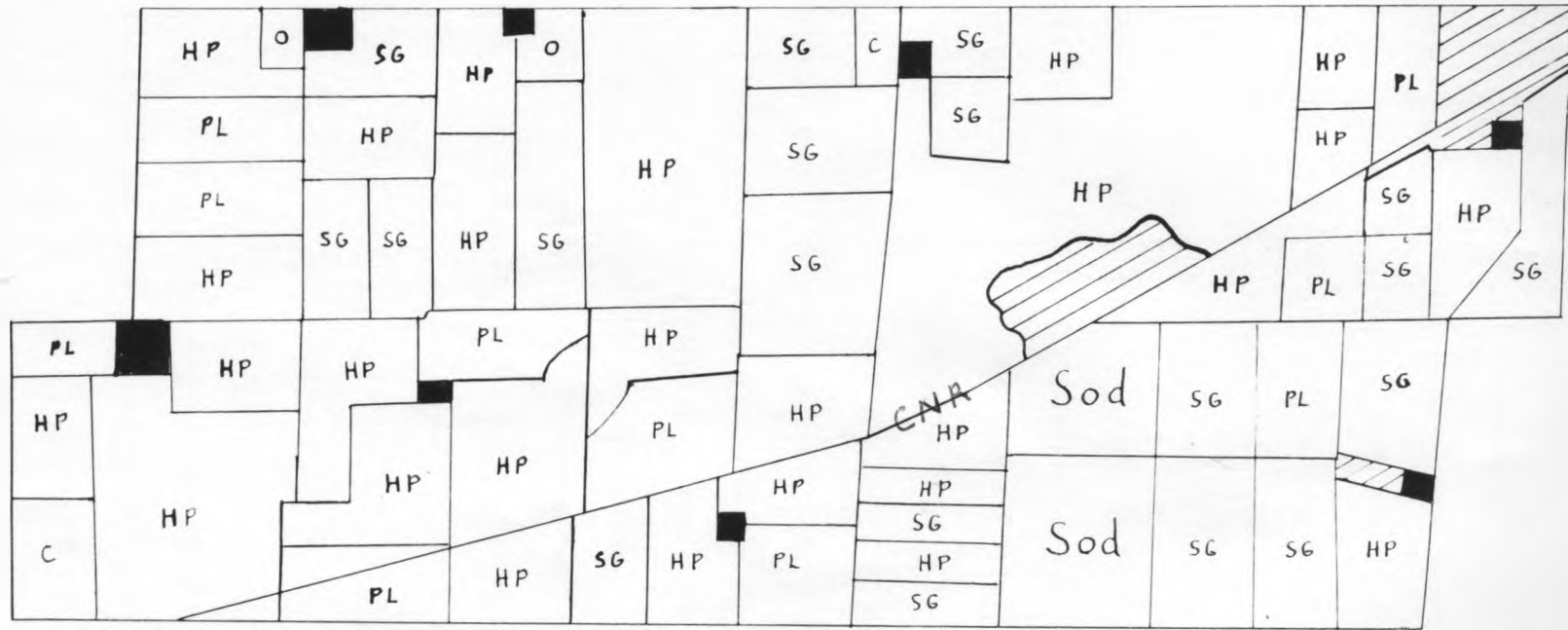
Sample Block Four
 Concession IV Lots 16-20



Sample Block Five
 Concession VIII Lots 1-5



Sample Block Six
 Concession IX Lots 11-15



Sample Block Seven
 Concession XIII Lots 16-20

planting. The woodland and natural pasture category is usually indicative of rougher land and less intensive use.

Block one is located in the southwest corner of the township, in the region of sandy kame deposits (figure 18). The high porosity of the soils tends to create droughty conditions. This condition was especially noticeable with regard to the corn grown in the area. In the late summer when the crop was flourishing further north in the township stands of corn in this area appeared pale and parched. Later in the season a combination of dry and cool weather caused the deciduous trees of the area to shed their leaves relatively early.

The land is used principally for hay and rotation pasture. One farm was used solely for pasturing cattle. Small grains which are produced are used for feed. Only three small fields of wheat were found in the original mapping. The percentage of land in woodland and natural pasture is significant. Merciless stripping of forest cover from this land has had a detrimental effect. A forest and vegetative cover is required to keep the soil water level up. Woodlot management as well as reforestation on these sandy soils is an important part of present land use. Agriculture in this block is of a low intensity. The block is representative of a less productive area of the township. The principal limitations on agriculture are found in the poor physical conditions.

Block two is located on the fourth concession northeast of Tottenham. Except for the northeast corner the block lies within a zone of lacustrine plain. The majority of the block falls within land type II. However the intensity of use is not as great as often

found on the Schomberg soils. A deep winding stream valley which cuts across the block imposes a physical limitation on the extent of cultivation. Topographic conditions preclude the use of this land for any purpose other than woodland or natural pasture. Beyond this valley, land use is diversified. Small grains constitute a large proportion of total land use. Wheat, although still of relatively minor significance is more prominent than in block one. Hay and rotation pasture is the other major use. Small quantities of ensilage corn are produced. Strip cropping was practiced as a conservation measure in this block.

Considerable non-agricultural development was found both within the municipal limits of Tottenham and in a strip east of the village. The strip development which comprises residences of varying quality could not be instigated today under the existing township plan which restricts residential growth to specific area where schools, water, sewage and other services already exist.⁴ These areas are adjacent to the incorporated places or near the old hamlets such as Cookstown and Bond Head. The sand gravel quarry in the elevated northeast corner of the block marks the contrast between lacustrine and till deposits.

Block three is situated on the 5th concession between side-roads 10 and 15. Physiographically the majority of the block is till plain which is very rugged in parts. The lower southeast corner is composed of flatter outwash deposits. A complexity of land types converges on this block. Variation in surface topography may be used as an indicator of the three contrasting land types.

The first occurrence of a specialty sod operation was mapped here. This operation is confined to the flat soils of type III. Much of the block was mapped as woodland and natural pasture. This land is steeply sloping and correlates very closely with land type VI. The hobby farmer is a factor in this block and some of the wooded area is reforested land. Throughout the township all available forested land has been bought up by people who are not primarily interested in farming. Retirement and modest estate homes are confined to the more rugged areas which could not support a viable farm economy in any case. All suitable land throughout the township is still worked by people who are genuinely interested in farming. Most of the remaining land in the block belongs to land type IV. In the northeast part this land is cultivated. The cropping reflects a general farm economy. At the western end of the block where the property is owned by hobbyists the unforested land is rented to farmers who use it for pasture. Great variation is seen throughout and the mapped land use was found to relate strongly to the physical conditions.

Block four is found on the seventh concession toward the eastern margin of the township. The block is in an area of lacustrine soils. The Schomberg soils which dominate belong to land type II. The intensity of use in this block forms a contrast with block two which had similar soils. Although streams are still to be found in this block, dissection is not as severe and is not a limiting factor to cultivation. The percentage of woodland is insignificant. Production of small grains dominates. The amount of land which has been freshly ploughed may be used as an indicator of the amount of fall

wheat grown. The amount of land devoted to hay and rotation pasture is small. The block is further distinguished by the presence of orchards, one of which is very large. Production of small fruits is generally lacking throughout the township. This block, which is situated on the principal paved east-west route through the township near a major north-south highway is highly cultivated and provides a good base for a prosperous general farming economy.

The land of block five exhibits a striking physical similarity to block four. Along the northern margin of this block the poorly drained area of the Bailey Creek basin becomes a factor. This area is under forest cover. The remainder is highly suitable for agriculture. Orchard land and a large area of sod were mapped. Two contrasts with the cropping procedure found in block four are apparent. A relative decline in the area of small grains at the expense of increased acreage in hay and rotation pasture is evident. Little land is devoted to wheat. The second contrast is the increase in corn acreages. That two areas which exhibit a close physical similarity can differ in cropping procedure points to the importance of the human element of choice in the operations of a mixed farm economy.

Block six is located in the 'Beeton flats' on the bed of former Lake Algonquin. The soils which are found within the block fall into two different land types but are unified on the basis of their common imperfect drainage. However the mapped use would indicate that the land is capable of supporting a prosperous agriculture. A great deal of the land is devoted to the specialties of potatoes and sod.

The area of forest and natural pasture is almost entirely confined to the well entrenched stream valley which winds across the northwest quarter of the block. Land use also indicates a certain amount of mixed farming. Among the grains a general lack of wheat was in evidence and only one field in the block had been prepared for fall seeding. The possibilities of planting fall grains are determined by the drainage conditions of the immediate locale. In many instances the drainage conditions as they relate to spring runoff make the planting of fall grain risky. However the land does become workable at almost as early a date as the more rolling land in the township. The flat terrain is ideal for the production of specialties which require the use of large machinery.

Block seven is on the 13th concession between the 15th and 20th sideroads. Two contrasting physiographic and land types area are represented in this block. The boundary between these two distinct physical areas is marked by the railway track which passes diagonally through the block. The area to the south of the tracks is part of the Beeton flats. Within this area drainage improves from the southern boundary, which is closest to the main area of muck deposit in the lowland, toward the north as the general elevation increases. North of the railway is a zone of till plain which comprises land type four. This area is elevated above the level of the flats and has a more rolling topographic appearance.

North of the railway a great deal more of the land is in pasture. The railroad follows along the bottom of the slope rising up to the till plain and nearly all of this slope is pasture. A

considerable acreage back from the brow is also pasture. The practice of renting land to be used as common pasture is a factor here. Proportionally less land is devoted to hay on the lowland than on the upland. This may be in part attributable to the fact that the moister lowland is capable of producing a better hay crop and therefore a smaller acreage is found to be sufficient.

Small orchards were mapped on the well drained Bond Head soils, whereas sod was restricted to the flat, more poorly drained areas. The only woodland appeared on the upland although a small area of natural pasture was mapped near the railroad right-of-way. Small grains are important to both areas. The contrast in the physical conditions within the block are apparent especially in the field. Practices of land use on lowland and upland reflect a recognition of the differing physical suitabilities of the land.

An analysis of these seven sample blocks has revealed differences in land use throughout that part of the township which is primarily engaged in mixed farming. Variation in physiography and land types to be found in connection with the various blocks was found to be of paramount importance. However this is not the whole story. Blocks in which the physical environment is similar were found to exhibit different land use emphases. These differences were found to relate to factors such as amount of stream dissection and depth of stream entrenchment. These factors are of local importance and need be related to the precise location in which they are found. Factors of human geography also played a part. The proximity to the long established transportation routes was found to have a bearing. In a

Table 4A

Assessed Values for Mapped Land Use

Block #	1	2	3	4	5	6	7
<u>Assessment</u>							
1. Land	19,215	24,175	18,610 L	30,360 A	24,055	33,610 H	30,640H
2. Buildings	18,760 L	19,155	20,940	30,490	32,840 H	23,010	27,360
3. Total	37,975	43,330	39,550	60,850	56,895	56,620	58,000
4. \$/A of Land	\$20.12	\$27.55	\$18.63 L	\$30.06 H	\$24.08	\$33.88 H	\$30.76H

Table 4B

Size of Holding in Sample Blocks

1. No. of owners holding property	9	11	9	12	9	8	11
2. No. of acres held beyond block	100	300	100	250	200	612	417
3. Average sized holding	118A	109A	122A	103.5 A	133 A	200.5 A	128 A

mixed farming economy the element of human tradition and choice is always a factor which must be given attention.

In order to carry the study of these seven blocks beyond pure land use two elements of the economics of the agriculture were studied. The assessed values of agricultural land and buildings within each block were compiled. For this purpose all holdings of ten acres or larger were considered to be agricultural land. The results are shown in table 4A. Three aspects which are revealed by the figures deserve special attention. First there is a correlation between the assessed value of the land and the physical qualities of the land for agricultural purposes. Land in block six is seen to have the highest value in dollars per acre. However this block because of the high percentage of area devoted to specialty crops does not provide a good comparison. Block four and seven both of which are general farming areas have equally high land values of about \$30.00 per acre. These blocks comprise different physiographic and land type categories which are well suited to general agriculture. The lowest value is found in block three. This is an area poorly suited the agriculture in which the hobby farmers have gained a foothold. Much of the land is rugged and forested. The land of block one, much of which is in pasture farm, is valued only slightly higher.

Differences in the assessed values of land of similar physical characteristics is a second feature. The land values of block two, four and five vary from \$24.00 to \$30.00 per acre. The amount of stream dissected land in block two which makes it unsuited to cultivation has already been discussed. In block five a limited

amount of land along the northern margin is physically inferior to the rest of the block. However the great majority of the land in these three blocks is of one type and the variation in value is mainly attributable to human factors. Location with respect to good roads and more important today, the use to which the land is being put must be considered.

A third aspect of interest is the variation in the assessed values of buildings found throughout the seven blocks. The buildings in block five have the highest value. The quality structures on two dairy specialty farms found in the block have raised the value of buildings here over those found in block four. At the other extreme are the buildings on block one. Because of the amount of pasture farm few specialized farm structures are needed. The rise in value of buildings in block three relative to the low land value is attributable to the attention that the hobby farmers have devoted to the upkeep and beautifying of their homes. There is no apparent correlation between the assessed value of land and the assessed value of the buildings found on that land. Highly assessed land does not necessarily have buildings on it which are of a relatively high value in an area of mixed farming. The number and quality of buildings depends on such factors as land use, size of holdings and building maintenance on the farm.

Study of land values in conjunction with land use mapping has demonstrated there is some correlation between the physical characteristics of the land and its assessed value. However the most important determinant of land value may well prove to be the use to which the land is put. This is, so far as the physical conditions permit, determined by the individual farmer and by demand for certain

products. The importance of use in determining value is reflected in the high value put upon the land in block six.

Another important aspect of a mixed farming economy is the size of the farm unit. In addition to the general information on size of farms in the township as a whole the seven blocks have been studied in more detail. The number of owners holding agricultural land within each block was determined. The number of acres held by these owners within the township outside the block was also compiled. With this information the average size of holding for each of the seven blocks could be computed. This information is compiled in table 4B. The most apparent shortcoming of this method is that statistics were limited to the one township. Any holdings outside of Tecumseth went unnoticed. A marked degree of fragmentation of holdings was discovered. For instance in block four holdings of 25 and especially 50 acres were common. The practice of holding small unconsolidated parcels of land sometimes separated by great distances is becoming commonplace. Farmers wishing to enlarge their holdings are forced to purchase land where it becomes available. The trend toward enlarged holdings in modern agricultural practices will augment this phenomena. This practice is most clearly evident in block seven. Eleven owners hold land within this block. However the average farm size is kept up by the acreage held beyond the block. Again it must be emphasized that land held beyond the township boundaries was not considered.

The largest holdings were registered by the owners having land in block six. Eight owners held all the land in the block. In

addition 612 acres were held beyond the block. Again this block more truly represents the economy of a specialty farming area. Large acreage and high capital investment to enable an individual to compete are two primary prerequisites.

The trend toward a larger farm unit has increased with the modernization of agriculture. In this general plan of enlargement fragmentation of holdings is an important factor. The modern farmer is extremely mobile and the factor of fragmentation seems to present no great problem to him.

Study of a mixed farming area of limited extent would not be expected to reveal radically different agricultural practices. However as has been noted differences in emphases were found. It would be incorrect to generalize to any great extent on the basis of the information collected and the differences revealed. The study must be taken in its true perspective - that of a single township of 110 square miles. Within this area the physical environment was found to have a bearing on agricultural development. This factor must always be balanced against factors of human geography and individual choice which is often given direction by tradition.



The southwest is the poorest area for agriculture in Tecumseh. Physical conditions are the main limitations. A typical farmstead on the rolling terrain is viewed here.

Land pictured here east of the 5th sideroad just north of Tottenham suffers from dissection. It is used here for pasturing dairy cattle.





Much of the land in the southwest suffers from erosion. Reforestration needs to be undertaken. The long Slender mulleins are indicators of poor soil conditions. On one farm in this area only 50% of the land was cultivable.

Brush and scrub woodland marks the course of a former glacial spillway in the southwest near highway nine. This channel dates from the time of the Schomberg ponding.





The flat bed of Lake Algonquin in the northeast is an area of mixed farming. A prosperous farm is pictured here. The buildings are new. Large acreages of ensilage corn are grown.

The raising of beef cattle is one of the main activities of the region. Water conditions are sufficient to maintain large herds of cattle.





Land use is highly dependent upon drainage conditions. This rough bottomland which floods annually is never cropped but provides good grazing.

Feed crops are grown on the better drained areas. Roads through the flats are elevated and broad ditches are found at the margins of fields.





Many fine farms are found in the southeast mixed farming region. The Schomberg and Bondhead soils are well suited to a mixed economy.

The boundary between the rolling terrain of the Schomberg ponding and flat sandy bed of former Lake Algonquin is pictured here. The Algonquin shoreline which rises in the background extends through the 8th concession just east of Beeton.





Much prime agricultural land is found in the south-east. This gently sloping land on the Botham farm has been classified as 1st class.

In contrast land classes are less uniform in the southwest. This picture is taken on the Matson Farm from 2nd class land toward the steeply sloping 4th class land. Towards the back of the farm this poor land remains under forest cover



Agricultural Specialties

A variety of types of specialty farms are found in Tecumseth which form an important part of the agricultural community. Tobacco, potato, sod, vegetable, grain, alfalfa, beef and dairy enterprises are all present. The presence and extent of development of these widely varying agricultural specialisms is indicative of a progressive agriculture. The success of many of these operations demands both extensive knowledge in a particular field and the availability of a large supply of working capital.

I. Tobacco

Tobacco is one of the more important local specialisms. The distribution of tobacco farms may be seen in figure 25. Its importance in absolute terms and relative to all of Simcoe County is seen in table 4.

Table 4C Tobacco Production in Tecumseth Township in Simcoe County

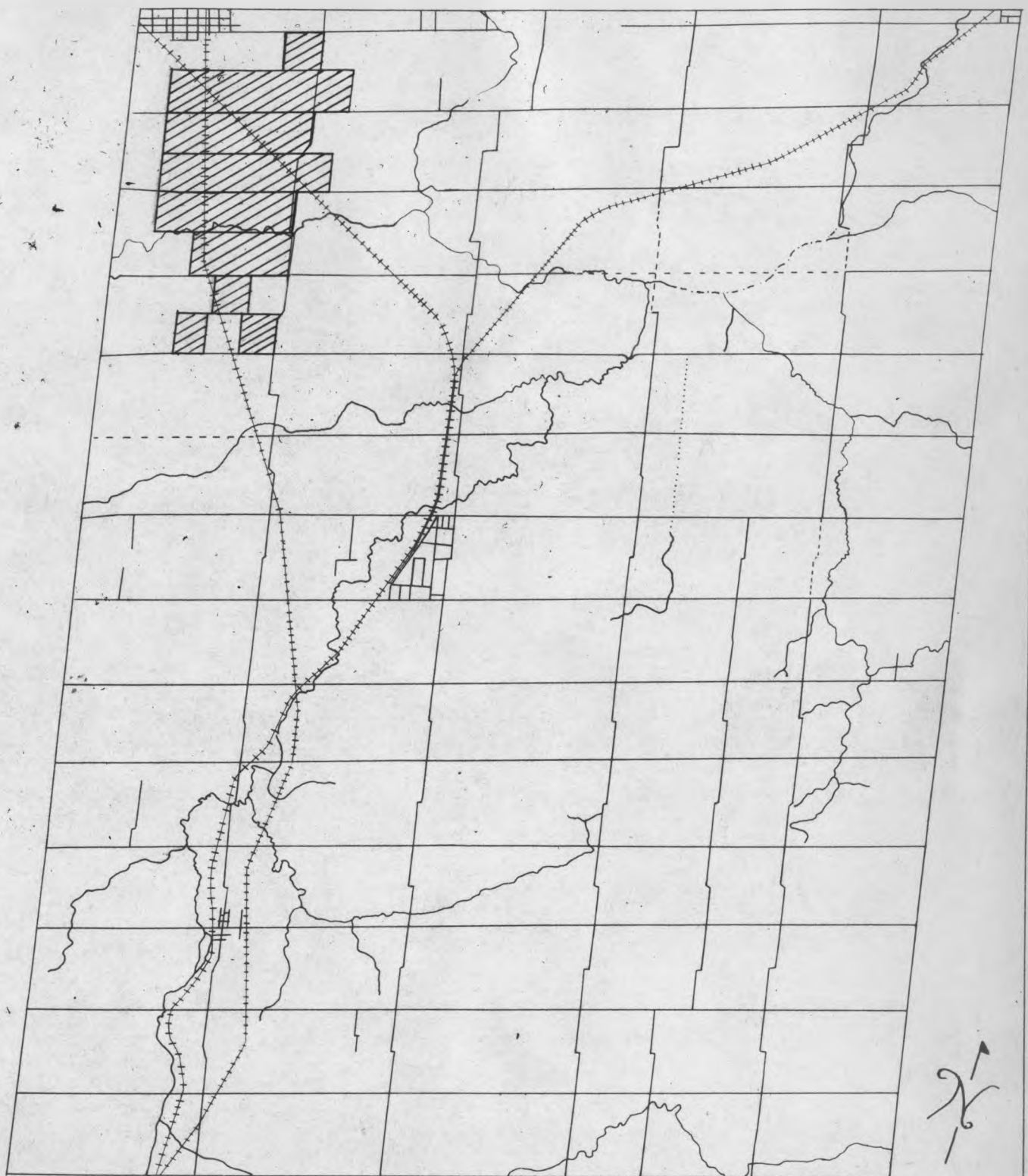
	Farms Units	Total Production (lb).	Value in \$	Aver/ 100 lb.	base acre- age	planted acreage	Yield/ acre (lb)	Return acre (\$)
Simcoe County	104	4,363,278	2,284,894.	\$52.60	4339	2893	1462	\$765.00
Tecum- seth	19	1,127,906	593,689.	52.00	934	725	1557	825.00

The well drained fine sandy loams of the northwestern area of the township which have only a fair capability rating for purposes of general agriculture are well suited to tobacco farming. The Tioga soils are the most important for tobacco production.

Tobacco was not grown in the Alliston area until the 1930's. Once the tobacco soils of Norfolk County had been fully occupied prospective new growers turned their attention to other areas. The sandy

TOWNSHIP OF TECUMSETH

Scale in Miles



Distribution of Tobacco Farms



land of the Alliston area which was relatively inexpensive could be purchased by those migrating from the Delhi area. The tobacco crop faces a greater frost hazard in the Alliston area than it does in the heart of the tobacco belt. However it is not necessary to fertilize as heavily since the land has not been worked as long.

Two types of growers were present in the early years. These included young people moving out of the Delhi area in order to establish their own farms and a few natives of the area who had no experience in tobacco but brought in experienced growers as sharecroppers. Sharecroppers are still found in the area today.

The operation of a tobacco farm is a high cost endeavour. The following figures, representing a block of land in tobacco on concession 13, provide a basis for comparing the cost structure of tobacco farming with that of mixed farming as it was discussed above.

Total acreage	986
Assessed value of land	\$46,735.00
Assessed value of buildings	<u>60,630.00</u>
Total assessed value	107,365.00
Value of land per acre	\$61.49

It becomes apparent that it is the use to which the land is put and not the physical qualities of the land itself which determine its assessed value.

The amount of land on which tobacco is grown is regulated annually by the Tobacco Board. All tobacco farms are given a basic tobacco right which usually amounts to 45% of the total cultivable land. Each year the Board establishes an allotment quota. This is applied to all farms as a percentage of the basic acreage. On the farm inspection insures that the established quota is not exceeded.

The remainder of the cultivable land is kept under a cover crop, usually rye to maintain the desired level of organic content in the soil, although in recent years decreasing tobacco quotas have prompted some farmers to put some of their land into potatoes.

Because of the cost of raising the crop and the thoroughness of Board inspections it is essential that the quota be adhered to strictly. It is estimated that the cost of raising one acre of tobacco from seeding to market is between \$500.00 and \$600.00. Storm or frost damage can be disastrous in a tobacco area. Drought is another serious danger and an adequate irrigation system is a major expense incurred on most farms. The soil moisture relationships of tobacco have been determined at the Dominion Experimental Substation at Delhi. It has been found that 8.5 inches of rain is sufficient if it is properly distributed through the growing season. In order to maintain the desired level of soil moisture an irrigation schedule has been worked out which takes into consideration available soil moisture, temperature, soil type, and stage of development of the plant. Buildings are the other major fixed capital expense of a tobacco operation. These include greenhouses, in which seedlings are grown before being set into the fields and kilns, where the tobacco after being hung on sticks is brought by the curing process from a moist greenish condition to a dry yellowish state. It may then be marketed. The amount of capital tied up in machinery is relatively small.

Labour consumes the major proportion of production costs. In the spring the young plant must be transplanted from greenhouse

to field. Cultivation and hoeing is carried on through until harvest. The major demand for labour is at harvest. The average farm having a 36 to 40 acre allotment would require 12 hired labourers. These comprise both local help which are used near the kilns and transient labour which form the field gang. With all these high costs it comes as no surprise to find that a tobacco farm with 40 acres of rights, depending upon the state of the buildings on the land, should sell for between \$100,000.00 and \$120,000.00.

Tobacco production is a highly organized business. Marketing is conducted by the Ontario Flue-Cured Tobacco Marketing Board who maintain warehouses at Tillsonburg, Delhi and Aylmer. The Alliston area growers pay a penalty, comparative to the Norfolk growers in transportation costs of getting their product to market. However they are assured of an equal opportunity of selling their crop and a fair competitive price. All grower members pay one cent per pound of tobacco sold for this marketing service and only members are offered marketing privileges.

II. Potatoes

Potatoes are a second major specialty crop found in Tecumseth. Although a traditional area of Ontario potato production an unprecedented rate of growth has been seen in the last ten years. Acreages increased from 495 in 1951 to 3106 in 1961. The building of the Salada Foods plant in Alliston was a major factor. The overall demand for Ontario potatoes has increased in recent years.

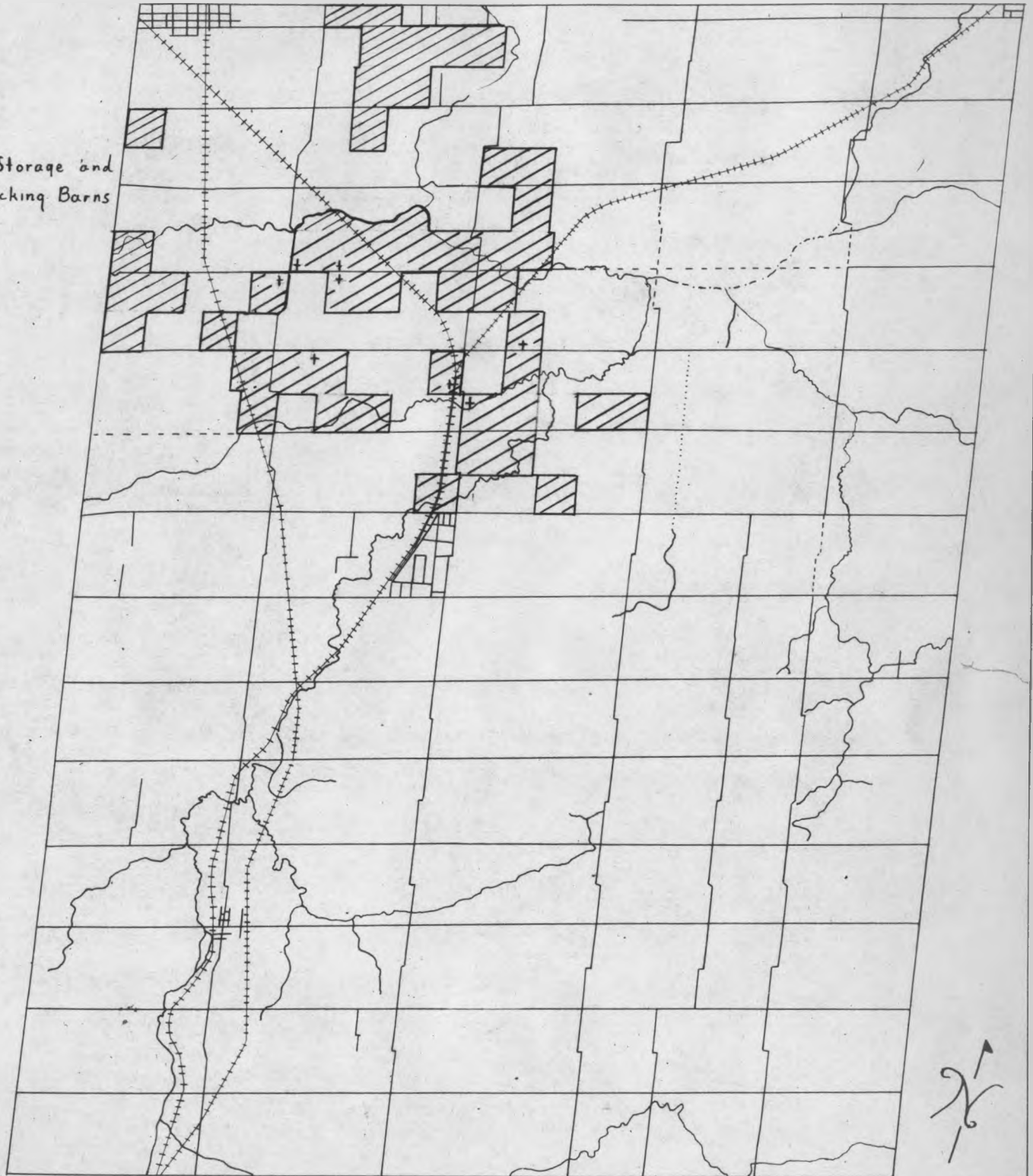
The distribution of potato farms and storage barns are seen in figure 26. These operations are located marginal to the tobacco

TOWNSHIP OF TECUMSETH

Scale in Miles



+ Storage and
Packing Barns



Distribution of Potato Farms

fig 26

land. The potato too is well suited to the well drained stonefree sandy loams. The industry is a slightly lower cost endeavour than tobacco as is illustrated by figures compiled for comparative purposes from an area of potato farms.

Total acreage	985
Assessed value of land	\$32,435.00
Assessed value of buildings	45,675.00
Total assessed value	<u>78,105.00</u>
Value of land per acre	\$46.16

It would seem as if the less competitive of the two crops had been pushed to the periphery of the most suitable area.

Ontario grown potatoes have in the past been unable to compete with Maritime potatoes on the local market. It has required a full scale drive by Ontario growers to achieve even the limited access to the market which they now enjoy. The progressive attitude and willingness to take risks is beginning to pay off. A notable change in the economics of potato growing has been the increase in size of operation. Whereas many farms formerly grew a few acres and 100 acres was an extremely large farm now an operation of less than 100 acres is uneconomical and some growers are planting up to 500 acres. To gain and hold a place on the Ontario market it is necessary to assure a year-round continuity of supply to compete with Eastern potatoes. This has resulted in increased crop specialization on larger holdings and necessitated the development of grading, packing and storage barns. The problem of educating the consumer to buy Ontario potatoes has represented a major obstacle. Although the potato growers do not have their own independent marketing board they have become members of the Fruit Growers Association. Ontario potatoes

are gradually proving themselves on the market and the maintenance of rigid standards of quality will assure further expansion in the future.

The increased use of large scale machinery has also permitted potato production to expand. Machines which distribute seed over a breadth of several furrows on one run across the field permit two men to plant 50 acres in an average day. Similarly at harvest time the potato is scooped mechanically from the ground and conveyed along a belt directly into a truck travelling along beside the harvester. The need for modern equipment and buildings thrust this type of farming into a high capital category. Although desirable to plant fall rye to help replenish the soil if the crop matures at an early enough date, this procedure is not always possible. Heavy demands made upon the soil on the large commercial operations are compensated for by a heavy fertilization program. Importance of the nutrient level of the soil is second only to texture and up to 140 lb. of nitrogen are applied per acre. A year of cover crop for every three years of crop is thought to be best although many plant potatoes four years in a row. The estimated costs of production from seed to market is approximately \$200.00 per acre. However the rewards are great and yields which now average 400 bushels per acre produce a profit in the neighbourhood of \$100.00 per acre.

The Salada plant proved to be a definite stimulus. Salada have their own farms operated by a manager and contract an additional supply of potatoes for use in the Alliston plant. Since the beginning of their operation five years ago they have increased their ~~acreage~~ acreage from 550 to 1100. Similar expansion of production and development of

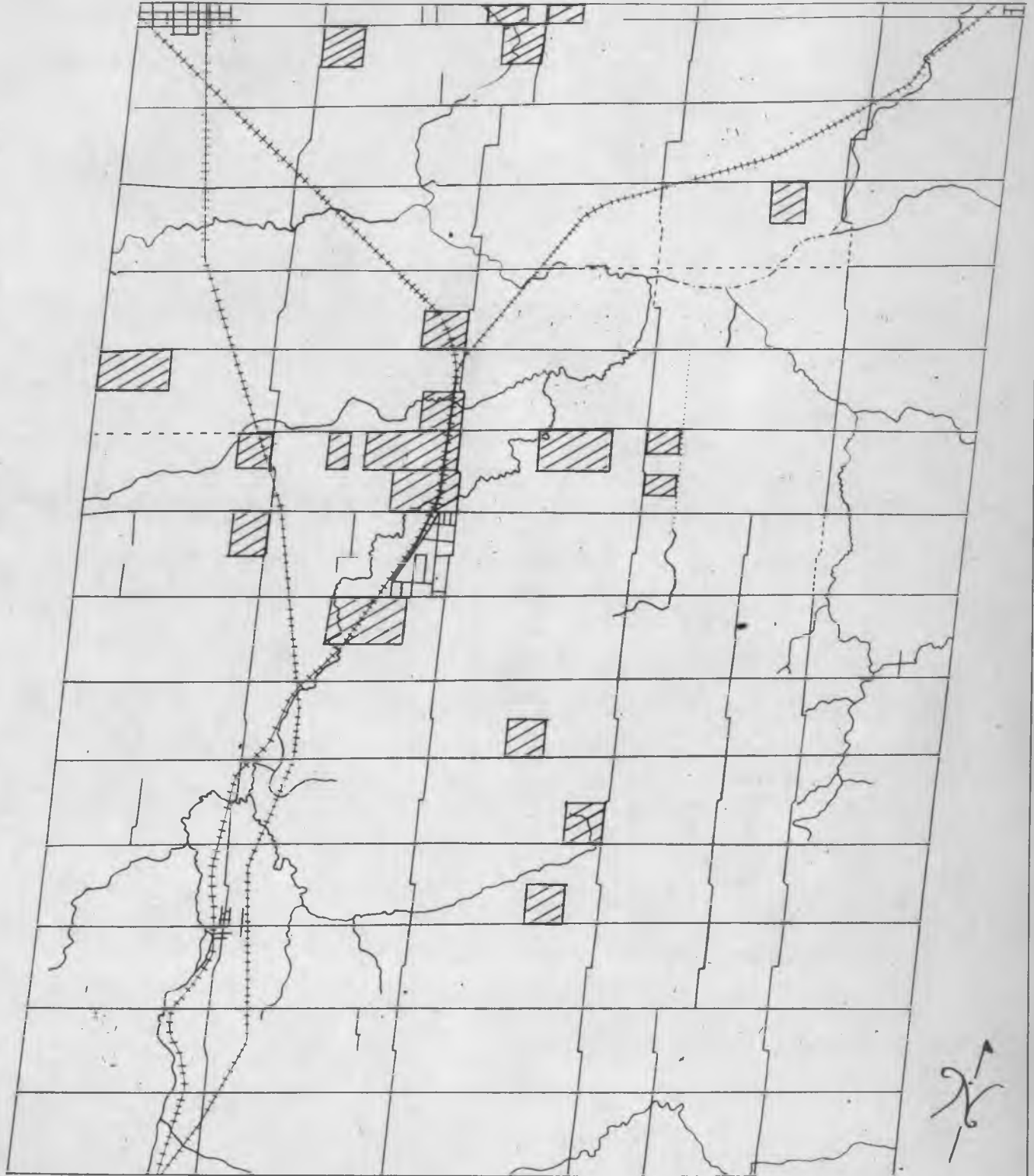
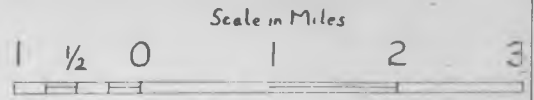
the market situation for fresh potatoes has been characteristic of other operations in the area.

III. Sod

The importance of sod farming in the area is attributable to the human factor. In 1950 William Ruthven of Alliston saw a group of labourers cutting field sod and arduously loading it onto trucks. In the active building boom of Southern Ontario Ruthven saw a waiting market for good quality sod for landscaping. A technique which would facilitate the preparation and rapid movement of large quantities of sod was all that was lacking. Sod farming was being pioneered in the United States. Mr. Ruthven visited a government experimental farm at Michigan State University and saw authorities in Detroit and Chicago. In the fall of 1951 as far as may be ascertained, he acquired the first sod cutting machine in Ontario. This machine was able to do the work of five men. Working along the margin of a field of sod it would cut off strips measuring 16" by 81" or one square yard. Labourers could follow behind the cutter rolling these strips and loading them onto a truck. In 1951 Mr. Ruthven was the only individual shipping rolled sod to the Toronto market.

From the original 200 acres of field sod that Ruthven had available in 1951 the industry has grown to become important in the township and surrounding area. The present distribution of farms exclusively in sod is shown in figure 27. In addition to these, small acreages of sod are found on many farms in the low lying north eastern part of the township. It is virtually impossible to find a good area of field sod in Tecumseth anymore. It has long since been

TOWNSHIP OF TECUMSETH



Distribution of Sod Farms

removed and cultivated nursery sod is grown. It is proving to exhibit superior qualities. Stringent building regulations now require a high quality of sod for landscape work on new construction. Sod is also becoming increasingly used on golf courses, recreational park areas and sports fields.

The largest sod operation in Tecumseth today is the Beder Sod Company of Beeton. Of the 650 acres held by the company 450 are in turf. No one particular soil condition is sought out. From a practical standpoint a sandy loam is best because it dries out quite rapidly. Large trucks must be able to drive onto the land to load the sod cut. Therefore terrain must also be reasonably flat.

The cost of bringing a field of sod to maturity, which takes two years, is high. A 100 pound bag of high quality grass seed may cost up to \$600.00 and it is necessary to use 60 pounds of seed per acre. Because of the removal of topsoil when a field of sod is harvested heavy fertilization is required. Up to 500 pounds are used per acre planted. Capital investment is relatively high. The assets of the Bederholdings in equipment run between \$60,000 and \$70,000. Labour costs are significant. There is a distinct seasonal aspect which cannot be offset. At the peak seasons, spring and fall, the Beder Company employs 33 labourers to cut sod, load the waiting trucks and prepare new land.

Costs to the consumer take three forms. The sod itself can be a relatively large expense. Two varieties, Merion and Kentucky both cool season grasses, are preferred in the Southern Ontario climate. Merion sells for \$0.25/ square yard and Kentucky sells for

\$0.17/square yard. Bent grass which is especially grown for use on the greens of golf courses sells for \$0.85/square yard. The consumer is also required to bear the costs of hauling the sod and of landscaping once it has arrived at its final destination.

Within the so-called Golden Horshoe of Southern Ontario it is estimated that a total of 27 to 30 million square yards of sod are sold annually. Nursery sod comprises only about one quarter of this total. Sod farming has been restricted to the Lake Ontario - Lake Simcoe district thus providing a wide market for the product. This industry, begun here on the initiative of one individual provides but another example of a specialized, high capital type of agriculture.

IV. Dairy

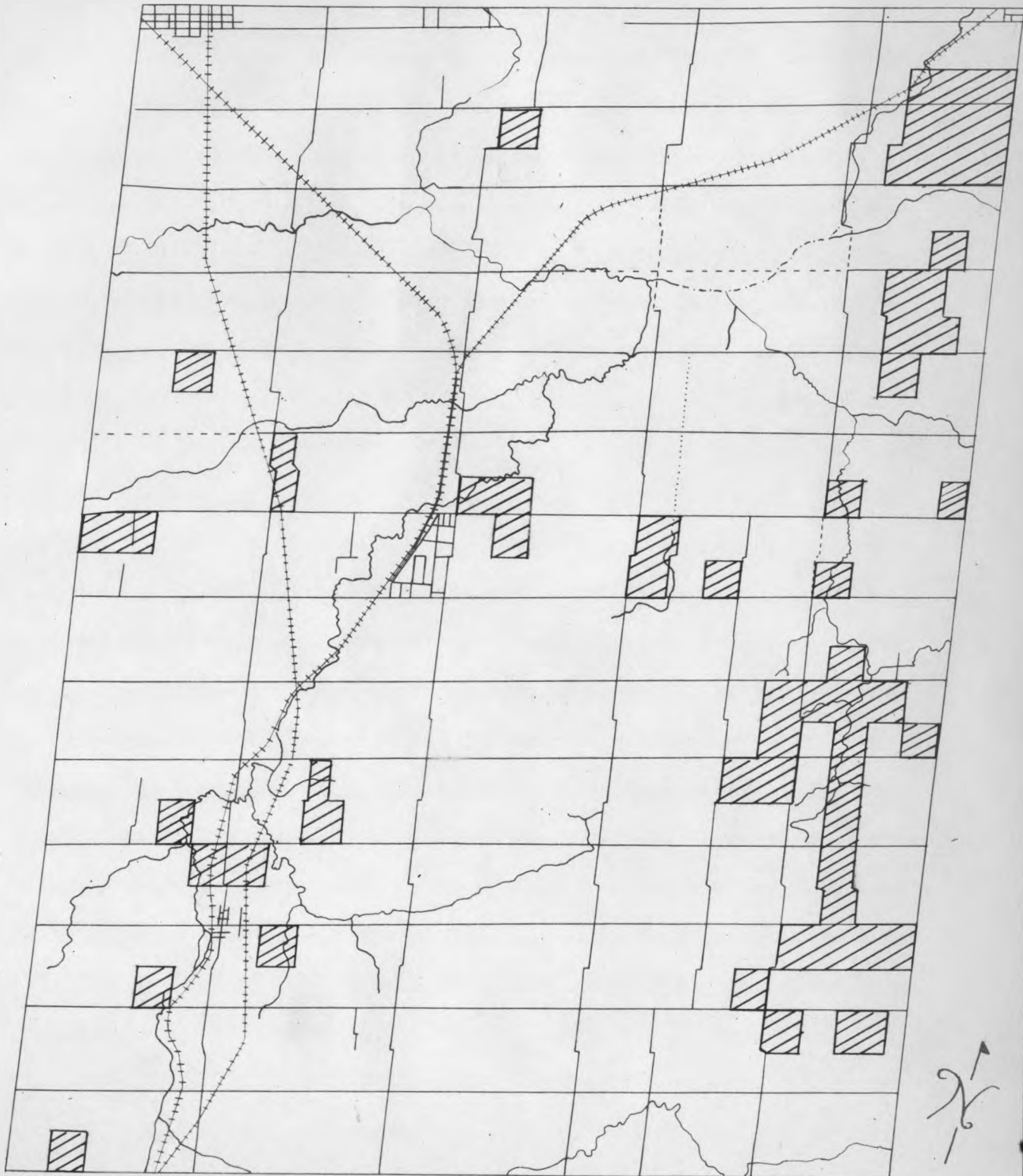
Development of the dairy specialty here is closely associated with the growth of urbanism and the demand for fluid milk. The trend toward a dairy economy first became evident in Tecumseth in the early 1930's but the changeover to the high cost bulk pickup system began in the late 1950's. The present distribution of fluid milk shippers in Tecumseth is seen in figure 28. Good hay and fodder crops are produced throughout most of the area and a dairy economy is found in association with various well drained soil groups. The principal location factor in the early years was the availability of good roads. This pattern still persists. The eastern margin of the township close to highway 27 and an east-west axis along the paved County road through Beeton are the main areas of dairy concentration. A few dairy farms are also found near Tottenham.

Over 40 specialized dairy holdings were mapped in Tecumseth.

TOWNSHIP OF TECUMSETH

Scale in Miles

1 1/2 0 1 2 3



Distribution of Fluid Milk Bulk Shippers

About one half of these were larger than 100 acres. The largest of the local dairymen is Mr. C. Cerswell who operates 500 acres just west of Bondhead. On these farms fluid milk shipments which are registered in record quantities are no more important than breeding for which the Cerswell Holsteins are internationally famous. The United States is the chief market for these. Increasing numbers are being shipped to Japan and Italy and this breed seems to be capable of adjusting to different climatic conditions.

Intensive specialization has resulted from the growth of the fluid milk market in urban centres in recent decades. The industry today is organized around bulk shipping which entails considerable capital investment on the part of the producer, and milk contracts between producer and dairy to ensure both a regularity of supply and a steady market. Stringent regulations concerning buildings on the farm, health precautions, and quality standards must be maintained. Bulk pick-up trucks from dairies in Toronto, Aurora and Barrie enter Tecumseth. An independent operator must be able to supply 700 pounds of fluid milk for pick-up every other day to be capable of making a success of a bulk contract. On the Cerswell farms 40 pounds of milk per cow per day is taken as average production, but this is well above average. Most dairymen are concerned with breeding as well as production of fluid milk. A successfully modern dairy farm is an efficient operation which demands the full time attention of the dairyman.

V. Beef

Tecumseth was historically an important beef area. Today in the overall picture the raising of beef cattle is still important



A sod operation on the 10th
sideroad in the north. Sod
is being produced on the
flat land back to the margin
of the till soils which rise
above the low lying sand
plain.

Part of the Beder operation
on the 9th concession. Al-
though drainage on flat
land may not be as good it
is preferred because trucks
can load where the sod is
being cut. In this picture
the lighter tone on the
steeper slopes is not in sod.





Potato farming is located on the light sandy loams in the northwest. The bed of former Lake Algonquin provides ideal conditions.

Potato harvest. Capital investment in potato production is high. Large acreages are necessary if an operation is to be successful.





Tobacco farms are located on the flat sandy soils in the specialty area of the northwest. Tobacco acreage allotments restrict planting and strip cropping is practiced.

Buildings are a major fixed capital expense on a tobacco farm. A row of tobacco kilns stand out against the skyline on the flat sand plain.



but it usually is part of a mixed farming economy. Only one operation which is shown in figure 29 may be truly considered a beef specialty farm. This land has long been owned by the same family, but has only been turned over solely to beef in the last year. The operation is that of a mechanized commercial feed lot. The farming operation is relatively simple. Cattle weighing 800 to 900 pounds are bought and quickly brought to a finish at which time they are resold for slaughter. During the period of finishing the cattle are force fed and never turned to pasture.

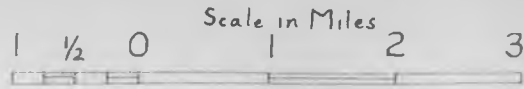
The initial capital outlay is large. Mr. Glassford, the owner, has installed four automatic feed lots which are in buildings capable of handling 400 head of cattle. The feed lots are controlled from a huge silo of 1500 ton capacity. One hundred and fifty of his 200 acres are used for producing ensilage corn.

Because of the limited importance of this type of operation to the area as a whole time cannot be taken to go into the elaborate economics of this system. It must suffice to say that the feed lot operator is waging a constant struggle which he measures in dollars, between pounds of gain registered by the cattle and volume of feed consumed. The necessity of a rapid turnover is ever present. The feed lot operator is a speculator in beef cattle whose success depends upon his knowledge of, and proximity to the market so that he may quickly take advantage of changing conditions.

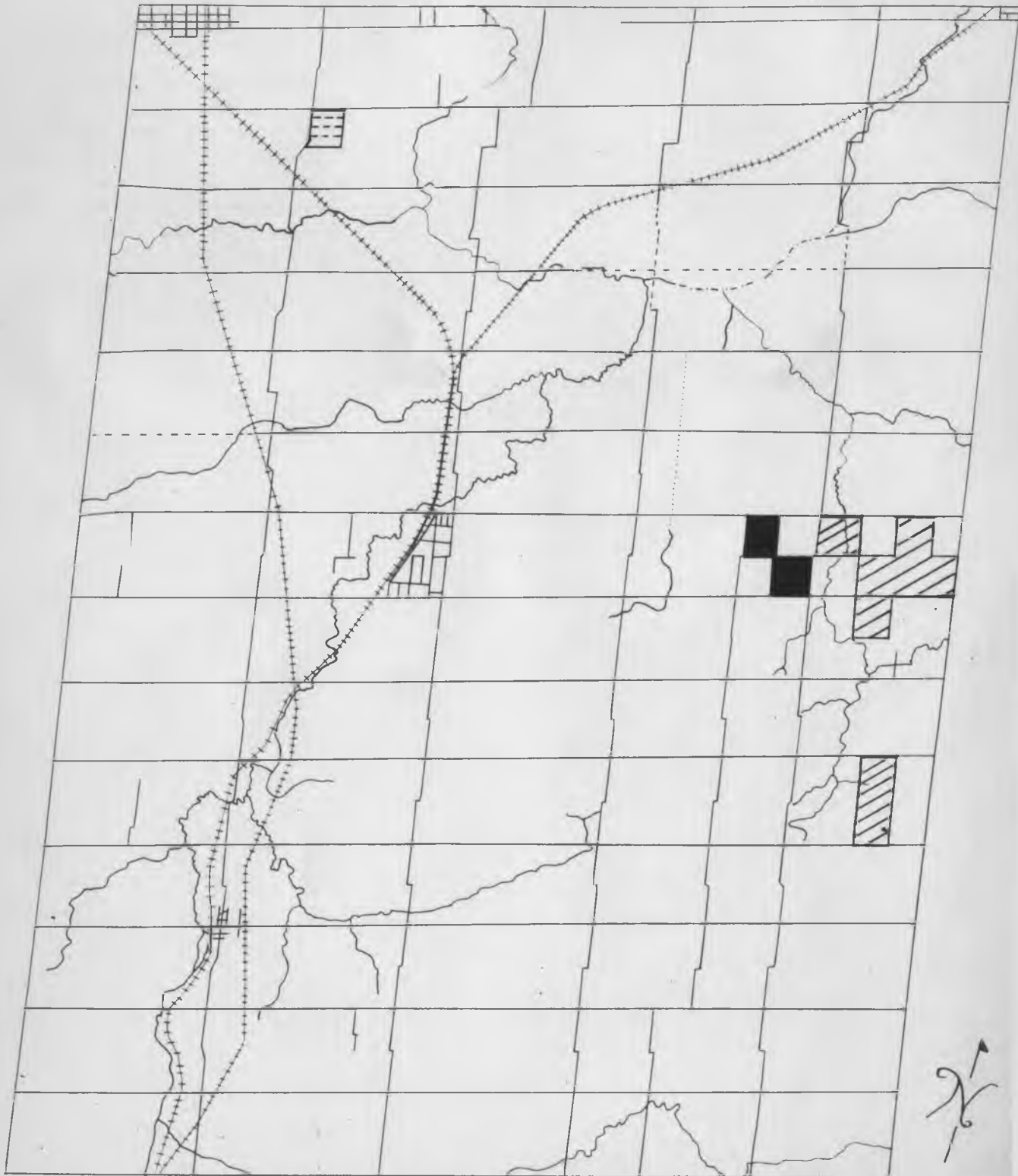
VI. Alfalfa

The growing of alfalfa is a specialty of limited significance in the southeast corner of the township (figure 30). Better than 600

TOWNSHIP OF



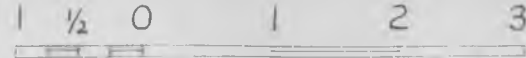
TECUMSETH



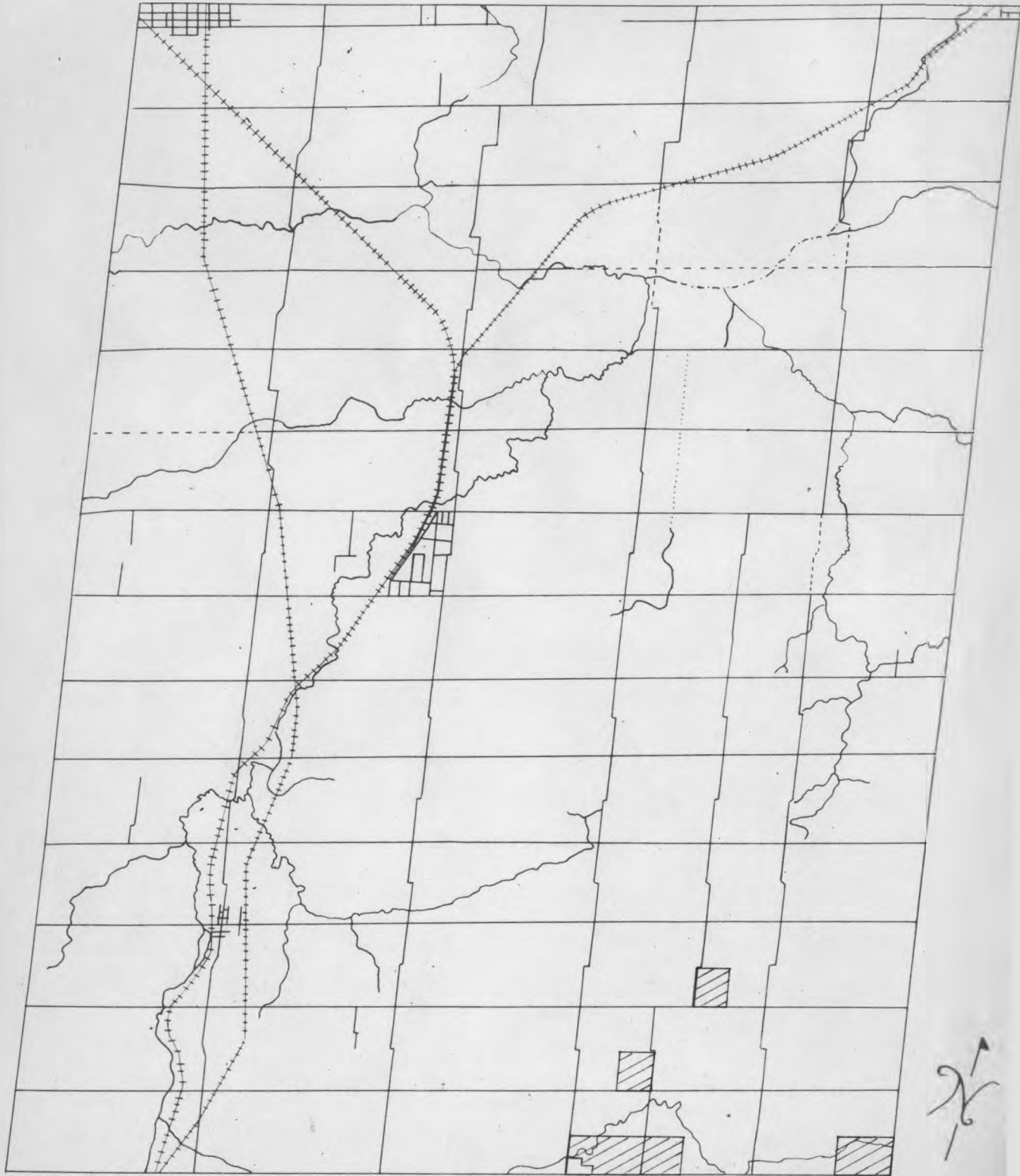
Beef Feed Lot Grain for Seed Vegetables fig 2c

TOWNSHIP OF

Scale in Miles



TECUMSETH



Alfalfa Specialty Farms

acres are grown in Tecumseth annually to supply Maynards alfalfa dehydration plant in Schomberg. This represents about ½ of the total acreage raised locally by Maynards. The importance of this crop is determined solely by the location of the processing facilities in Schomberg. The cut alfalfa is prepared for storage by a dehydration process. A storage capacity of 3000 tons is available at Schomberg. The product, which forms a supplement to livestock feed, is shipped throughout the year largely to an Ontario market. There are some exports to the United States. A limited number of similar plants are found throughout the province at centres such as Wallaceburg, Woodstock and Brantford as well as in the Ottawa Valley region. This process is more commonplace in areas where there is a scarcity of hay land and a concentration of cattle on a limited area.

VII. Seed Grain

Figure 29 shows the location of farms primarily involved in producing grain for seed. The small grain crops are harvested and some cleaning of seed is done on the farms. The seed is sold to private farmers and to seed companies.

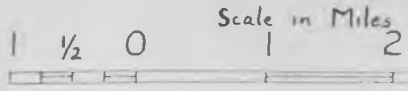
These operations are being conducted on excellent soils of the Bondhead and Schomberg series. The southeastern area of Tecumseth has a history of importance in grain production. The Schomberg area has traditionally been one of the most important wheat producing areas in the province. On the more northerly of the two operations, of 500 acres which are cultivated annually about 300 are devoted to producing seed grain. Oats, wheat, barley and grain corn are grown in descending order of importance.

VIII. Vegetables

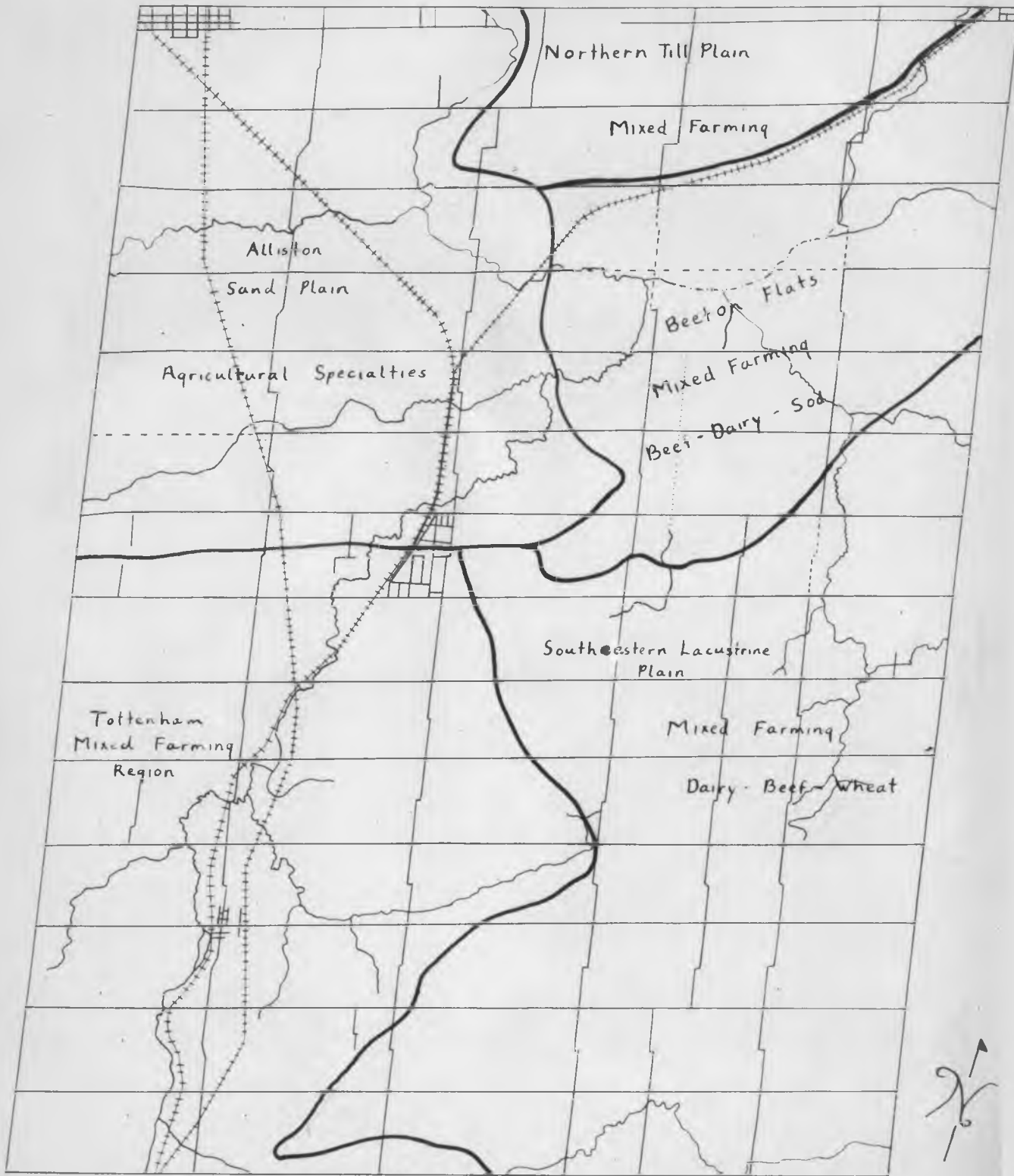
A final specialty which, because of the geographical limits imposed by the township boundary, will receive only passing notice, is the recent development of vegetable gardening with a concentration on carrots and onions on the black muck deposits of the Bailey Creek. The same individuals who pioneered the Holland Marsh project are behind this operation. The only land in production to date is to the west across the townline. Removal of swamp forest cover and construction of necessary drainage facilities have begun. This project involves full scale land reclamation and the costs are high. Beyond this area only one vegetable specialty farm was found. A farm specializing in asparagus (figure 29.) was found in the midst of the potato and tobacco area. This product was oriented completely to the Toronto market.

Agriculture in Tecumseth involves an intermingling of old and new practices. The 100 acre family farm is still found although it is becoming less and less a factor. The majority of the farm population are still involved in a mixed farming economy. However the size of holding is increasing. The individual operator who wishes to expand is often unable to acquire land adjacent to his present holdings. Therefore fragmentation is a feature of many larger mixed farms. The most recent trend is one towards extreme specialization in one aspect of farming. A willingness to try new methods and substantial capital requirements are implicit in any such radical departure from old established farming procedures. Agriculture today is a business. Those who have a progressive outlook and are willing to embrace new methods and techniques are clearly outdistancing their more conservative neighbours.

TOWNSHIP OF



TECUMSETH



Agricultural Regions





Vegetables are just beginning on the marshy land along the western margin of Tecumseth. A 2nd Holland Marsh is being created. Development involves large scale clearing and land reclamation.

Chapter IV

Footnotes

1. J. Cole. Centennial History of Beeton Fair and the Pioneers.
Beeton: Beeton World Press, 1956. p. 1.
2. Tecumseth Township Official Plan. Submitted
to Dept. of Municipal Affairs, July 28, 1960.
3. Land Capability Classification. Guelph:
O.A.C. Dept. of Soil Science.
4. op cit. Official Plan

Chapter V

Summary & Conclusions

The present-day land use in Tecumseth has been the theme of this thesis. In order to fully appreciate the present geography it has been necessary to refer to the past. The historic approach to the evolution of the physical landscape and the established cultural pattern was essential. An understanding of Pleistocene glaciation is fundamental since the surface materials and forms are, except for two areas of recent deposition, entirely glacial. Bedrock which is overlain by several hundred feet of glacial material is not important in the present day geography.

Physiography reveals the importance of the glacial past. The history of the glacial process is recorded in the present landforms. Two extensive areas were formed by the process of deposition in relatively still water. The rolling area in the central part of the township which was inundated by the Schonberg ponding and the flat sand plain of the northwest are both areas of lacustrine deposition. Differences in texture of the two areas of lacustrine deposition are related to the respective depositional environments. Some deposits were also water worked. These deposits were dumped from the retreating ice lobe. Areas of till and drumlinoid features generally stood above the zone of water action. Evidence of water action is apparent lower down on the slopes of some till features.

Tecumseth is located in an area of Koppen Dfb climate. The inland location is reflected by the slightly more continental conditions than exist in areas nearer the Great Lakes which lie to the

north and south. However conditions of temperature and precipitation are adequate for the agriculture which is practiced.

The stress upon the glacial past is seen once again in the treatment of soils. Soils have been grouped into six land types. The groupings are dependent upon the physical similarity of soils. The category of origin of soil materials as determined by the soil scientist is an important criteria. A marked correlation between the boundaries of land types and physiographic regions is found. The underlying unity is a reflection of the importance of past glaciation.

The original forest cover has been removed except in undesirable areas. Conservation of existing resources and reforestation especially upon the rolling sandy soils of the southwest are vital to a proper land use plan. Rebuilding the forest reserve is an unattractive proposition to the private farmer. Since he is inclined to feel that it is uneconomic for him to take steps in this direction this sort of development must be furthered by public and government agencies.

Tecumseth except for the southeast corner is drained by the Nottawasaga watershed. Bailey Creek on the west townline and the Innisfill depression in the northeast are areas of inadequate drainage. Throughout the rest of this watershed and the Schomberg watershed which drains the southeast the rivers are sufficiently numerous and well entrenched to cope with water run-off at peak seasons.

The pattern of settlement is the most important feature of the historical geography. Many factors influenced the early distribution. By 1820 the frontier of settlement had penetrated north from

York to Holland Landing and Lake Simcoe. The occupation of Tecumseth by the first wave of settlers began. Settlement was almost exclusively by people from the British Isles. Physical conditions influenced the pattern of settlement. The land in the south besides being closest to the frontier of settlement could be more easily cleared and brought into production.

The administration of land grants proved to be a difficult problem and land speculation which could not be eliminated increased the costs of settlement. The conflict over claims for control of land was basically a struggle between a privileged aristocratic minority and the increasingly numerous new settlers. The conflict became especially acute in the years 1836-37. The hamlet of Bond Head was an organizational point for the loyal Tory forces which suppressed the ill-fated Upper Canada rebellion.

Numerous small hamlets sprang up in the early years to service the rural countryside. Dunkerron, Penville, the early township capital, Bond Head and Newton Robinson were established along the eastern axis of settlement. Tuam, Tottenham and Colgan were focal points of settlement in the south of the township toward the west. Many of these settlements were distinguished by a clustering of people of a common origin or racial background. Dunkerron for instance was first settled by Quakers of Irish extraction whereas Colgan was a settlement of Irish Roman Catholics.

Beeton was established on the margin between the early settled land of the south and the flat imperfectly drained area of north-central Tecumseth which was not effectively settled until after 1837. Cooks-

town at the northeast corner of the township was the earliest northern settlement. Thompsonville and Alliston were the other early service centres in the north.

The sequence of development was largely dependent upon the development of transportation. In 1820 there were no roads into the area. Early roads were confined to the south and east of Tecumseth. A route was opened along the eastern boundary but was prevented from extending the entire length of the township by a swampy section south of Cookstown. A second route linked the southern part of Tecumseth with Etobicoke township. Thirdly a route from Bradford was extended to Bond Head. Development of communications before 1841 was difficult because funds had to come from the provincial legislature. After 1850 the job of road construction and maintenance passed to the individual township.

The advent of railways caused a shift in the importance of the small villages. Those centres which were bypassed by the railway declined. The completion of the Hamilton and Northwestern in 1873 gave Tottenham, Beeton, Cookstown and Alliston a new prominence. However the expectations for development were not realized. The increasing importance of the larger urban centres was accentuated through the first half of the 20th century. Within Tecumseth, Alliston alone remains the only urban place with a significant regional function.

The importance of Alliston was determined by a study of its present day form and function. Areas representative of all major land use categories were mapped. Residential areas comprise the largest proportion of land use. Development has spread from the

central core of old homes which date from the late 19th century in all directions. The most extensive areas of recent development have been to the north and east. Homes both old and new are generally well built and well kept.

Commercial development centres on the main intersection of Church and Victoria Streets. The commercial area extends in a strip along Victoria. Within the C.B.D. a significant number of functions indicative of a town of minor regional importance were noted.

The rapid growth in the last decade has been related to the establishment of two large industries, Baxter Laboratories and Salada Foods. The older industries are carrying on much as they did before and create no stimulus for additional growth. Much of the industry in Alliston is dependent upon the products of farm and forest. The Salada Foods potato processing plant, the most important of the new industries, located in Alliston primarily because of the availability of good potato land. The presence of a large supply of high quality water has also been a factor in attracting industry.

Alliston is an hours travelling time by road or rail from the main centres of population of Southern Ontario. The location of certain institutional landmarks, the district high school and hospital indicate its regional importance. Land has been developed for recreational use and the South Simcoe County museum is situated in a local park. In order to ensure the orderly and balance growth of the community a land use plan for future development has been legislated. This will build upon the presently existing community.

Alliston performs many of the central place functions for

the nearby rural area. All but the southeast corner of Tecumseth was found to lie within Alliston's hinterland. Alliston was found to be an important rural service centre in the geography of South Simcoe County. Its service function is augmented by the proximity of Camp Borden a large military base.

The incorporated villages of Beeton and Tottenham although comparable in many aspects exhibit a basic dissimilarity. A comparative study of the two villages and their hinterlands does provide some reasons why Beeton is able to create a more favourable impression upon the writer as a place in which to reside. A more prosperous agricultural hinterland and the internal spaciousness resulting from the partially developed town plan in Beeton are the two major contributing factors which may be measured. Many intangible factors which were present during the development of the two centres were noted. Beeton is a more rural oriented village with a more overt community spirit. These factors contribute to making it a more pleasant place in which to reside.

The agriculture of the township is diversified and generally prospering. Although difficult to delimit agricultural regions within an area of 100 square miles varying emphases are found. The township may be discussed in terms of five regions. In the southwest the poorest mixed farming carried on in the township is found. The northwest is a zone of specialty crops and very highly developed commercial agriculture. The northern till plain is an area of general farming with no distinct emphasis. However the quality of operation is somewhat better than in the southwest. The Lake Algonquin flats of the

northeast is a zone of general farming with a beef, dairy, sod emphasis. The remaining area of rolling lacustrine plain in the southeast is a mixed region with a dairy, beef, grain emphasis. Amplification of this agricultural regionalism becomes apparent by the analysis of land use maps.

Study of the assessed values of land and buildings on the seven blocks mapped revealed three facts. In areas of mixed farming the physical quality of the land has a bearing upon the assessed value. Secondly the use to which land is put can be the most significant factor in determining land value. For instance, the tobacco land which is poorly suited to the development of mixed farming is assessed highly because of the value of the crop being produced. Thirdly there is no correlation between land value and the assessed value of buildings.

Farm size is also studied. The average size of farm in all blocks is in excess of 100 acres. Fragmentation of holdings is a common phenomena in the expansion programs of individual farmers. With the exception of tobacco, specialty operations tended to have a larger average size than general farms.

Agricultural specialties occupy an important place in the farm economy. Tobacco, potatoes, sod and dairy operations were the most important. The trend to specialty agriculture is the most recent aspect of the continuing agricultural revolution. Tecumseth today with its solid mixed farming operations and numerous specialisms is a prosperous agricultural area.

The historic approach to this study is important because

of the features of the past which are significant today. An understanding of glacial geology is essential to the present physical geography. The distribution of early service centres was originally established by the pattern of settlement. This was modified with advances in transportation and communication. Alliston has become the pre-eminent urban centre during the 20th century. Beeton and Tottenham form an interesting comparison, the former more strongly oriented toward the days of the agrarian society, the latter looking hopefully ahead to a more urban and industrial future.

The lands of the northwest were the last settled not only because they were the farthest from the settlement frontier but also because they offered an poor physical base for agricultural operations. However the physical conditions have proved to be of value for tobacco and potato specialty operations and these have displaced the original mixed farming. The agricultural landscape comprises a complex ranging from the traditional family farm holding to modern mechanized specialty operations. These contrasting attitudes are represented by the farmers themselves. Mr. Botham whose farm was discussed, described himself as 'a relic of the past'. He has no desire to farm on a large scale but is driven to a certain degree of modernization if he is to compete successfully. On the other hand farms such as the Glassford's in beef and the Crang operations are indicative of the ultra-modern high capitalized type of farming.

Land use has altered more radically during the last decade than throughout the entire history of the township. During this period the first large scale industry has been introduced and the agricult-

ural revolution has been rapid. Although the economy is quite different from the traditional agrarian society Tecumseth still retains its rural composure. Despite revolutionary new introductions the township will remain primarily a producer of agricultural commodities for the nearby centres of population.

Appendix I

Temperature

	Barrie	Lake Simcoe Kawartha Lakes	Niagara Fruit Belt	Lake Erie Counties	Lake Ontario Shore	Lake Huron Georgian Bay
Mean Annual Temperature	43°	43°	47°	46°	44°	44°
Mean Winter Temperature	19°	18°	25°	23°	21°	22°
Mean Spring Temperature	39°	40°	44°	43°	41°	40°
Average Date of Last Frost	May 24	May 19	May 8	May 10	May 15	May 15
Beginning of Growing Season	-	Apr 18	Apr 11	Apr 15	Apr 16	Apr 19

Precipitation

	Barrie	Camp Borden	Lake Simcoe Kawartha Lakes	Western Uplands	Lake Huron Georgian Bay	Lake Ontario	Lake Erie Counties
Average Annual Precipitation	32.20	27.68	30.4	36.0	32.3	33.0	33.8
Average Summer Precipitation	8.33	7.59	8.2	9.1	7.7	8.0	8.8



Appendix IIHistoric Population Changes

<u>Year</u>	1829	1836	1842	1850	1871	1881	1891	1901	1911	1921	1931	1941	1951	1956	1961
Tecumseh	546	1410	2491	3612	4728	5325	3863	3440	3099	2942	2838	2569	2566	2911	3209
Alliston						1099	1371	1256	1279	1376	1355	1733	1987	2426	2884
Boston							771	634	564	582	563	594	613	675	810
Tottenham							586	611	517	494	566	561	591	702	778

Appendix III

Tecumseth Township - Origin of Population

	English	Irish	Scottish	Other British Isles	French	Austrian	Belgian	Czech & Slovak	Dutch	Finnish	German	Hebrew	Hungarian	Italian	Polish	Romanian	Russian	Scandinavian	Ukrainian	Other	Asiatic	Indian Belimo	Swiss	Negro		
<u>Tecumseth</u>																										
1851	185	1396	67	Natives of Canada - not of French origin - 2248										18												
1861	257	1189	85	- not of French origin - 2934																						
1871	945	3277	328	47	17				14	91			1							8						
1881	1325	3504	379		8					87			4				6			12				1		
1891				French and other																						
1901	1091	2048	247	4	1				10	29			4							6						
1911	1124	1501	280	8	5				21	7							1			151						
1921	1450	1125	245	2	38				15	14	18		7	1		22	3			3						
1931	1170	1238	251	26	15				14	15			10	26		7	1	64	5							
1941	1187	1028	223	14	4	17			14	10	2			37			6	25	2							
<u>Alliston</u>																										
1881	297	547	210	7	13				5	9							1			10						
1901	354	708	152	9	4				1	20	6									2						
1911	265	849	114		1				3	21	13		1							11				1		
1921	469	688	160	6	6				20	4	2		7							10				4		
1931	392	734	175	1	5				9	5	6		15													
1941	666	678	263	11	27	9	5		14	1	18	7	15	4		1	3			8				3		

Appendix IV

Tecumseh Township - Leading Professed Religious Affiliations

	<u>Religion</u>												
	Anglican	Baptist	Greek Orth.	Jews	Lutheran	Mormons	Pentacostal	Presbyterian	Roman Catholic	United	Quakers (Friends)	Methodists	Congregation- alists
<u>Tecumseh</u>													
1851	1707	2						678	728		137	627	12
1861	1585	5			2			752	796		83	1165	7
1871	1389	2	1		1				630				9
1881	1460	12			2			915	696		51	2127	3
1891	1068	8						687	496		46	1556	
1901	960	7						633	365		17	1433	
1911	808	13			1	5		613	351		5	1279	2
1921	734	15	10	18	1	24		582	311			1214	
1931	672	9			1	15	9	317	371				
1941	589	16	2	2	5			248	334				
1951	527	29	12	7	6			238	385				
<u>Alliston</u>													
1881	171	12						263	174			450	5
1891	238	3						319	351				3
1901	216	12		6				357	234			422	
1911	202	3		13				353	225			452	
1921	286	1		2				416	166			501	
1931	273	3		6				199	163				
1941	382	22		7	3	12		262	207				
1951	480	31	2	2	2			309	244				

Appendix 5A

Selected Field Crops

Year	Wheat A's	Mixed Grain A's	Barley	Rye	Oats	Corn	Potatoes	Hay	
1851	5049		A 19 B 508	A 3 B 60	2206 77288	5 137	A 413 B 31340	A's - T's 2229	
1861	8919		A 89 B 3245	- -	2864 93515	3 111	482 61658	2296	
1871	9731		A - B 63290	- 680	- 95003	- 376	545 56254	4574 5964	
1881	14286		A - B 53660	- 3496	- 155522	- 348	637 70508	3417 6366	
1891	11814		A 5340 B 132385	- 2045	8147 213650	- 171	678 77981	4268 6471	
1901	N.A.		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
1911	10009		A 6727 B -	590 -	10289 -	<u>Ensilage</u> A's 113	<u>Grain</u> -	388 -	5454 -
1921	7308	2072	A 6549 B -	1171 -	12086 -	382 3	853 -	6082 -	
1931	8967	3955	A 3538 B -	270 -	9764 -	- -	853 -	6082 -	
1941	8498	5128	A 1951 B -	657 -	9374 -	- -	897 -	10816 -	
1951	10242	5855	A 1310 -	986 -	6741 -	- -	495 -	9579 -	
1961	6475	3986	A 521 -	699 -	7823 -	760 149	3106 -	11973 -	

Appendix 5B

Size of Farm in Acres

Year	Total	Occupied ≤ 10 A	11A - 50A	51A - 100A	100A - 200A	201A - 299A	300A - 400A	400A - 639A				
1851	380	39	99	173	64	5	-	-				
1861	487	7	111	272	86	11	-	-				
1871	554	90	107	255	119	33	-	-				
1881	746	174	105	294	142	31	-	-				
1891				N.A.								
1901				N.A.								
1911	665	96	76	293	165	25	-	-				
1921	573	22	58	299	174	14	6	-				
1931				N.A.								
1941	553	16	44	283	184	18	6	2				
			11A - 69A	70A - 129	130A - 179	180A - 239	240A - 399	400A - 559	560A - 759	760A - 1119	1120 - 1599	1600
1951	496	15	48	240	85	69	33	4	2	0	0	0
1961	434	13	52	171	86	59	41	8	2	1	1	0

Appendix 5COccupiers of Land

	Total Population	Total Occupiers	Owners	Tenants	Employees	Managers
1851	N.A.					
1861	N.A.					
1871	4728	604	484	117	3	
1881	6424	746	564	177	5	
1891	N.A.					
1901	N.A.				owners & tenants	
1911		655	449	143	43	
1921		573	472	74	27	
1931		579	473	75	31	
1941	N.A.					
1951	2173	496	381	55	44	16
1961	2044	434	361	19	51	3

Appendix 50Livestock

Year	Cattle		Horses	Sheep	Pigs
	Milk Cows	Other Cattle			
1851	1286	2153	1308	4939	5572
1861	1788	2109	1808	4187	5120
1871	-	-	-	-	-
1881	-	-	-	-	-
1891	2417	-	3313	3734	5346
1901	-	-	-	-	-
1911	-	-	-	-	-
1921	-	-	-	-	-
1931	3228	4629	2766	5445	5117
1941	4285	3180	2289	2779	12047
1951	4377	4222	826	1852	10788
1961	3352	8261	215	2395	8268

Appendix 5B

Area and State of Land

Year	Total Occupied A's	Improved	Field Crop	Fallow	Gardens & Orchards	Pasture	Unimproved	Woodland	Natural Pasture	Marsh & Waste
1851	43631	21900	16238	-	148	5514	21731			
1861	48129	26635	20907	-	275	5453	21494			
1871	58808	38643	32303	-	680	5660	20165			
1881	66581	48985	42020	-	948	6017	17596			
1891				N.A.						
1901				N.A.						
1911	65199	54300	38901	5977	938	10899	4840			3422
1921	63929	52779	38573	5781	450	6838	11150	4827	564	702
1931	64872	51552	39533	5065	-	6378	13320	5228	7414	678
1941	65784	52482	38261	5379	44	6872	13302	5505	7249	548
1951	64946	49539	36733	5136	-	5846	15407	4799	-	500
1961	63233	52566	36792	3068	-	10060	10667	4420	5835	412

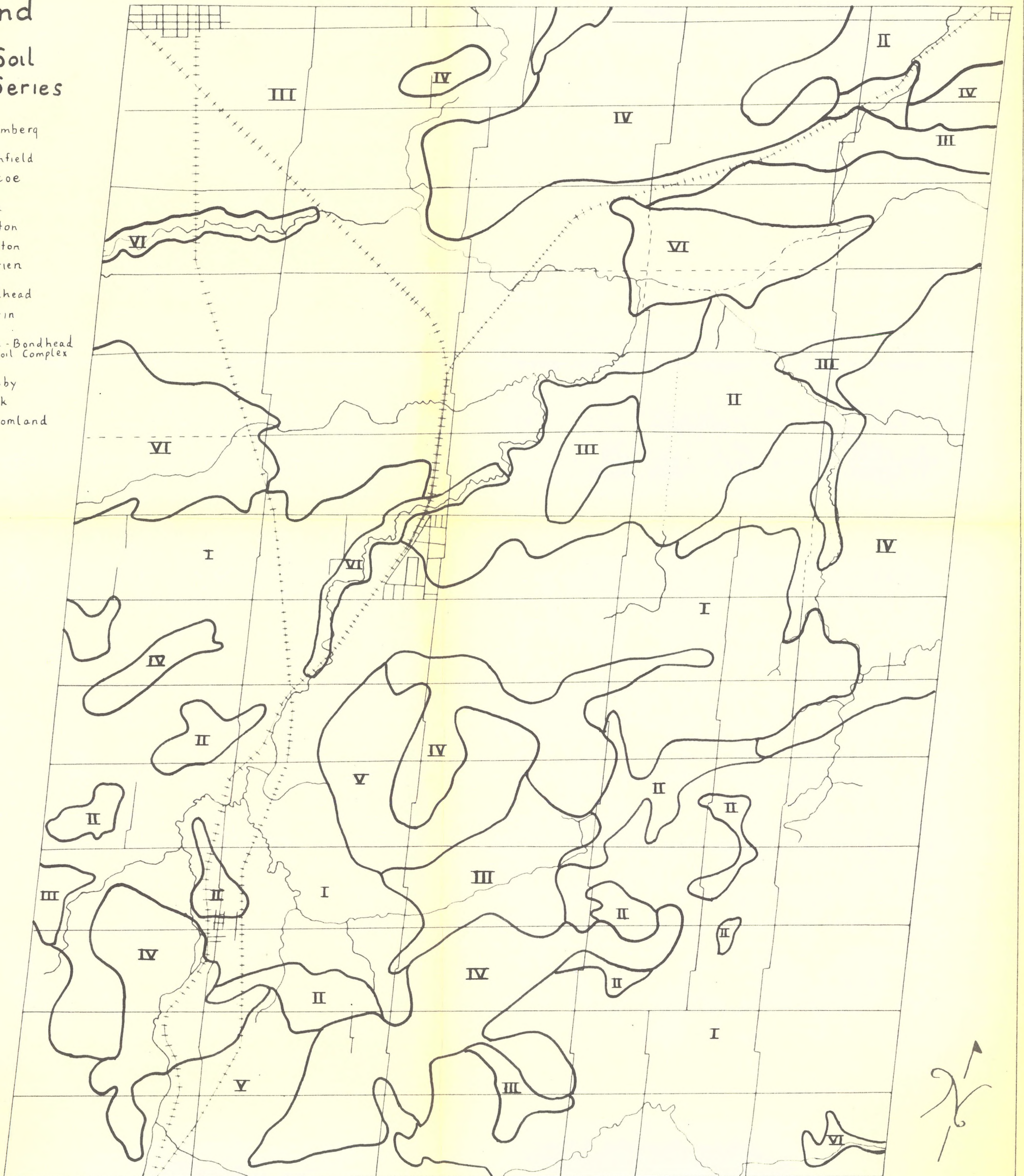
TOWNSHIP OF TECUMSETH

Scale in Miles



Legend

Land Type	Soil Series
I	Schomberg
II	Smithfield Simcoe
III	Tioqa Alliston Bookton Berrien
IV	Bondhead Guerin
V	Tioqa-Bondhead Soil Complex
VI	Granby Muck Bottomland



Land Types

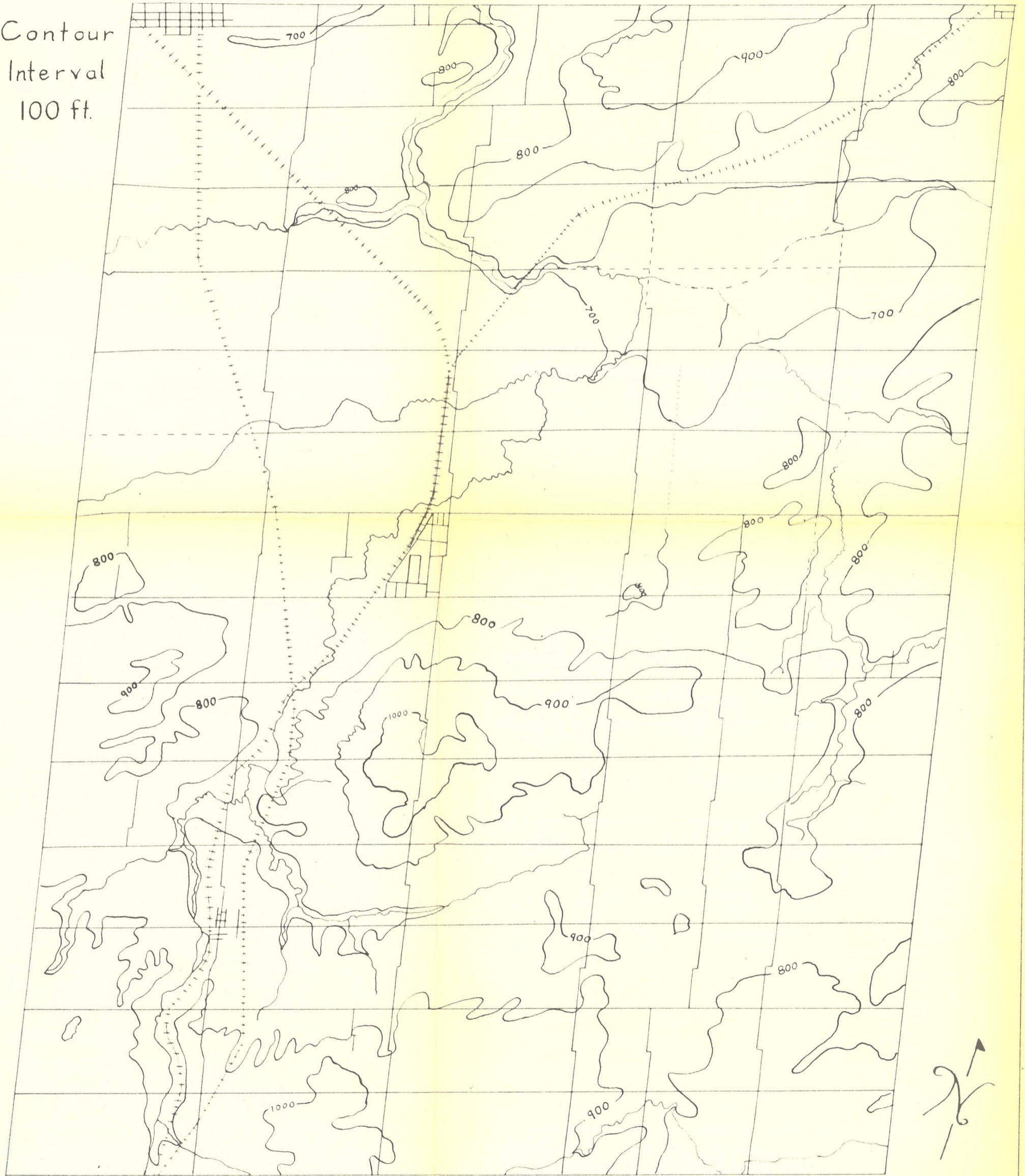
Fig 5

TOWNSHIP OF TECUMSETH

Scale in Miles

1 1/2 0 1 2 3

Contour
Interval
100 ft.

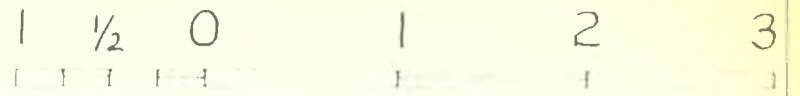







Contour Map

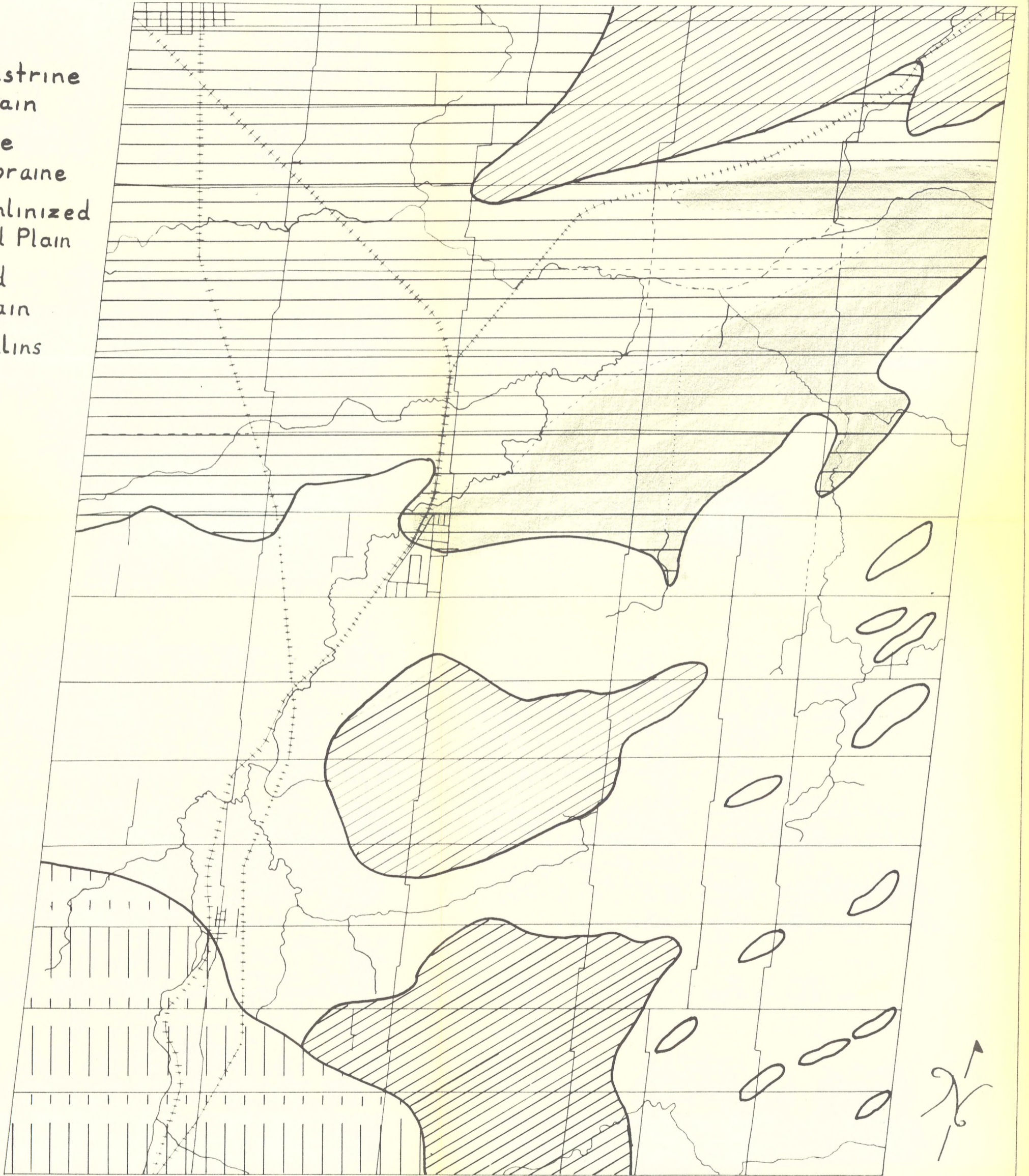
fig 2

TOWNSHIP OF TECUMSETH

Scale in Miles



-  Lacustrine Plain
-  Kame Moraine
-  Drumlinized Till Plain
-  Sand Plain
-  Drumlins



Physiography

fig 4