

UNIVERSITY OF MANITOBA

"An Investigation into the reasons for,  
and characteristics of, population change  
in the area south of Riding Mountain  
between 1941 - 1961."

A THESIS SUBMITTED IN PARTIAL FULFILMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF ARTS

by

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July 1968.

c Michael F. Hopkinson 1968.

## ABSTRACT

This study seeks to investigate the characteristics of population change in the Riding Mountain Area and to discover some of the underlying causes of these changes in the period between 1941 and 1961. The study area is located on the western edge of Manitoba, close to the North-West Escarpment and in an area of rather marginal arable farming.

After a description of the geographical background of the area, which is some 3,000 square miles in extent, chapters deal systematically with population change, agricultural and urban sectors of the area, and projected future population. Correlations between population increase or decrease and place of residence, ethnic groups, employment, period of settlement, urban centres, size of farms and soil type are pointed out in an attempt to indicate the factors affecting changes in population numbers.

The author projects continuing decline in numbers for this area, and predicts a gradual slowing off in population movement with the achievement of a man-resource balance based on mechanized arable farming. In his conclusions he stresses the many small scale factors which contribute to the general trend of population change, and the complex nature of the general pattern of rural population decline. The study provides factual backing, from statistics and interviews, for the processes of population change which have operated in the area since 1941;

the majority of the results are represented as maps at township level.

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M. F. Hopkinson.

August, 1968.

## CONTENTS

	Page
List of Maps .. .. .	I
List of Figures .. .. .	II
List of Photographs .. .. .	III
List of Tables .. .. .	IV
Acknowledgements .. .. .	V-VI
 Introduction .. .. .	 1
Chapter 1. Geographical Background ..	9
2. Population Change to 1951 ..	20
3. Population Change after 1951 ..	30
4. Agriculture .. .. .	45
5. Urban Centres .. .. .	64
6. Projection and Conclusion ..	85
Supplement: Government Development Projects	95
 Appendix .. .. .	 i-xi
Bibliography .. .. .	xii-xiii.

# LIST OF MAPS

Map		Page
1	Physical - Relief & Drainage	9
2	Boundaries, Areas & Divisions	10
3	Generalized Soil Map	11
4	Population Change 1901 - 1911	22
5	" " 1911 - 1921	22
6	" " 1921 - 1931	23
7	" " 1931 - 1941	23
8	" " 1941 - 1946	24
9	" " 1946 - 1951	24
10	" " 1951 - 1956	26
11	" " 1956 - 1961	26
12	Total Population Change 1941-1961	30
13	Total Population Change Percentages	31
14	Date of Maximum Population - Townships	31
15A	Date of Maximum Population - Municipalities	31
15B	Population Change 1951-61-66	31
16	Ethnic Groups, 1941	34
17	Ethnic Groups, 1961	34
18	Improved Land Area in Townships	57
18B	Generalized Land Classification	57
19	Elevator Points, Railways, and Settlements	63
20	Urban Hinterlands	68
21	Onanole	82
22	Wilson Creek Experimental Watershed	94

# LIST OF FIGURES

Fig.	1	Location of Study Area	Page	3
	2	Age-Sex Pyramid of Riding Mountain Area		36
	3	" " " " Shellmouth	}	36
	4	" " " " Boulton		
	5	" " " " Russell		
	6	" " " " Silver Creek		
	7	" " " " Ellice		
	8	" " " " Birtle		
	9	" " " " Shoal Lake		
	10	" " " " Stratholair		
	11	" " " " Rossburn		
	12	" " " " Harrison		
	13	" " " " Clan-William		
	14	" " " " Minto		
	15	" " " " Rosedale		

LIST OF PHOTOGRAPHS

Plate		Page
1	Shopping Frontages, Large Centres.	} 84.
2	Shopping Frontages, Small Centres.	
3	Hospitals	
4	Schools	
5	Elevator Points	
6	Resorts	
7	Miscellaneous.	

# LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Temperature .. .. .	16
2	Census Returns for townships with declines 1901-11 .. .. .	23
3	Townships with increasing numbers 1941-46	26
4	Incorporated places by size groups 1951-66	40-41
5	Municipality Population Changes to 1966 ..	42
6	Percentage Farm Land by Municipalities ..	49
7	1951 Average Farm Size for Municipalities	50
8	Percentage Children and Old People in central villages .. .. .	53
9	Percentage changes in large and small farm size .. .. .	57
10	Population Projection 1971 & 1976 for Municipalities .. .. .	88

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Whilst much of the credit for this work is due to the above-mentioned people, any errors and misjudgements present in the text are the author's own work.

Michael F. Hopkinson.

Nelson, England.  
August, 1968.

## INTRODUCTION

### Objectives

This work is an attempt to examine the demographic change of part of western Manitoba in detail. It is a geographic study of the population rather than a purely statistical one, and hence includes chapters on the changes in, and influence of, the agricultural and urban environment as well as analysis of the demographic trends evinced in the Census returns. Our plan has been to formulate general hypotheses about the nature of, and reasons for, population change in a specific area and time; to test these by applying them to selected localities typical of the whole area, and thence to propose some general trends and causes from these findings. The hope is, that as a result, we may have a better understanding of the pattern of population change in depth for a small region which will help us to see the mechanics of such change in the Riding Mountain area, and even throughout the whole Prairie region.

### Perspective

Before passing to a study of the area, it may be advisable to consider briefly the historical perspective of population growth in the Province as a whole. The author makes no apology for inserting the following statement by Sharp and Kristjanson, as it seems to sum up the situation succinctly.

'Although agricultural settlements have existed in Manitoba for more than 150 years, population growth prior to 1870 was both slow and sporadic. Entry into Confederation in 1870, the enactment of a homestead law in 1872, and the establishment of rail connections to the east and south in 1878, combined to set the stage for a period of rapid settlement and agricultural development of the vast acreages of vacant lands in the province.

'The initial census of the province in 1871 recorded a population 25,228. In ten years, this had increased by nearly two and one half times and by 1891 had grown to more than 152,000 - an increase of nearly 600% in a 20 year period. Although growth, as measured by percentages declined sharply during the next twenty years, growth as measured by actual numbers continued to increase. More than 100,000 persons were added to the population during the 1891 - 1901 decade and well over 200,000 were added between 1901 and 1911.

'The extremely rapid growth provided by the surge of settlers into the province could not continue indefinitely. Both farm and non farm development continued at a rapid pace between 1911 and 1921 and the population of the province could not continue indefinitely. The peak of the rapid growth period had been passed however with the settlement of most of the more desirable land. Some areas actually lost population during the decade, although such areas as the Interlake, Dauphin and Swan River regions were still experiencing rapid development.

'By 1921 the great surge had ended. Growth during the 1921 - 31 decade fell to less than 15% with more people leaving than there were entering the province during this period. The growth rate fell to an all time low of 4.2% during the depression decade. Many factors, including drought, grasshoppers, depression and war may be used to explain the slow growth of this period. Many farms were found to be sub-marginal and were abandoned. Also, changing farm technology was decreasing manpower needs and increasing the size of farm units.

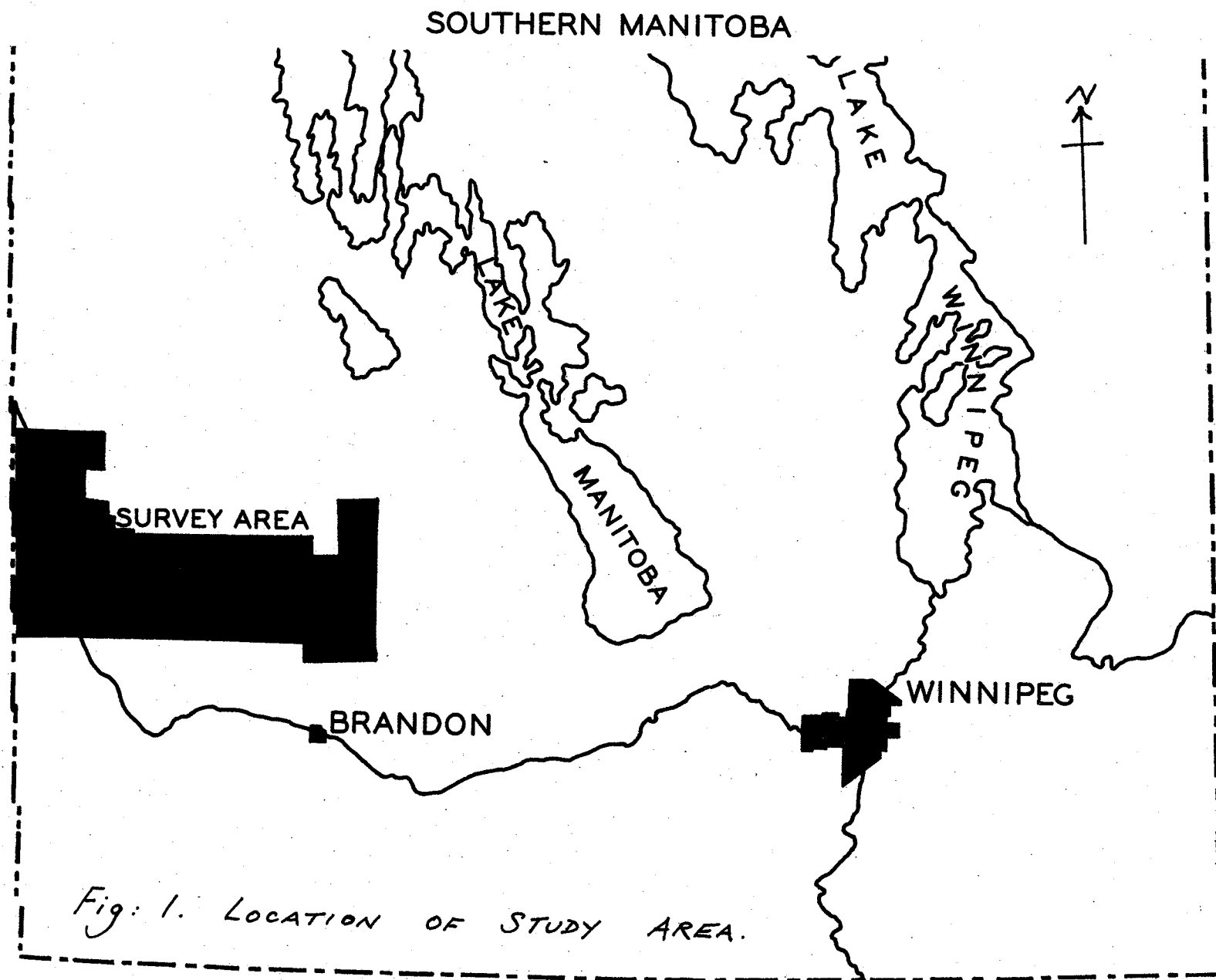
'The 1951 - 61 period saw considerable recovery in growth rate with a total growth equal to 18.7% of the 1951 population.

'Since 1921, population growth rates for Manitoba have not been equal to the rates of natural increase, i.e. the province has lost population as a result of migration for each decade since 1921. The fact that growth is observed only for the urban population suggests that future growth potential may be realized only through continuing urban and industrial expansion.' (1)

This then is the outline of population change for the province. Our aim has been to investigate the trends in a part of western Manitoba; to see how these reflect, or correlate with the geography of the area; and to discover the underlying reasons for them. Further we have attempted to project, on the basis of present findings the likely population for our study area up to 1975. Most similar studies of Manitoba seem to have a degree of bias towards agricultural considerations. This work is perhaps no exception, because of the importance of the agricultural sector of the local economy. However we hope to have avoided bias by placing stress also on the urban aspects of the areas population growth.

#### The Area

The subject area lies south of the Riding Mountain National Park, stretching from Neepawa and Minnedosa in the east to the Saskatchewan border in the west. Almost all the ninety-five townships are contained within the main elbow of the Assiniboine River. The boundaries of the area (see Map 1) are demarcated artificially along the township lines, to give easy use of statistical data. However the area is not entirely arbitrary as the National Park to the north, the economic effects of the political boundary to the west and the location of the two towns to the south east; to which our region is tributary; give some degree of unity to the study area. Moreover such physical factors as the



types and orientation of soils, and such cultural factors as the marked ethnic groupings of the inhabitants give our area further credibility.

#### Time period studied

The period 1941 - 1961 was chosen as the base for analysis for several reasons. Firstly it was advisable to have a long enough period in population movements discernible. However it was felt that too many intercensal time divisions would result in unwieldy statistics and also render the census data incompatible, because of changes in census questions and technique over long periods. The present twenty year period includes five intercensal periods. The 1966 figures were not available from the Dominion Bureau of Statistics in sufficient detail to enable the review to be carried to more recent date at the time of writing. However the final chapter, which deals with population projection can be criticized in the light of these statistics as they become available. Two points of significance should be mentioned.

- (i) The effect of the Second World War on the demographic statistics has to some extent been ameliorated by the consideration and mapping of gross population change from 1901 onwards in Chapter 2.
- (ii) More detailed figures, e.g. for ethnic origins of residents have only been taken back to 1941, partly because of changes in methods of listing categories in

the census volumes.

We feel that two decades is an adequate time over which to examine the trends of population growth for this area.

### Layout and Method

The first chapter of the study is concerned with a description of the geographical background of the Riding Mountain area, its location, relief, geology, climate and soils. Chapters 2 and 3 provide an analysis of the changes in population numbers and distribution during the period under review, the former up to 1951 and the latter since that date. Chapter 4 is concerned with the agricultural sector of the area's economy and its effect on population location and movement. The following chapter is a study of the hierarchy of urban centres in the Riding Mountain area and their relation to population. The final chapter contains the results of the population projection which the author and a colleague constructed for the area, and the conclusions which he draws from the study of population change over the two decades since 1941.

### Presentation

It was felt that presenting statistical evidence and the work of other writers separately from the author's own field work, interviews and judgements would be an artificial demarcation; and that it would be better for orderly

progression to write on the various aspects of the area in turn. Footnotes are given for evidence which was not first hand discovery.

Short tables of statistics have been included in the text, and where possible maps have been drawn to illustrate more lengthy or complex data. Longer tables, cited in the text, have been added as appendices at the end of the work. Photographs were inserted throughout the text when it was felt that illustrations were needed; and this applies particularly in the discussion of settlements. The large air photographs of settlements are appended in a pocket at the end of the study, so as to be accessible for consultation with the relevant portions of the text.

#### Summary of field work methods

Prior to visiting the study area, the writer sent some twenty letters to the Secretary-Treasurers of all the towns and rural municipalities in the area, explaining the nature of the study and requesting assistance. Whilst in no case were replies received; in every instance help was given when follow-up calls were made. Two excursions into the area were made. The first was along the route of Provincial Trunk Highway 4 from Neepawa, via Minnedosa and Russell, returning along the other east-west road; P.T.H. 45 and 10 to Minnedosa. The second excursion was from Minnedosa north via Erickson across the National Park to Dauphin and thence east to Ste. Rose due Lac and south via McCreary to Neepawa.

Because of transport difficulties Roblin and St. Lazarre were not reached; these were the only incorporated places unvisited and longer stays were made at Neepawa, Minnedosa, Shoal Lake, Birtle and Russell, as well as stops at Onanole, Wasagaming, Dauphin and many smaller settlements. Town and municipality officials, local traders, manufacturers and school teachers were among those visited and questioned. The writer had had experience of using formal questionnaires previously in a farm study in Great Britain (2), and considered that informal interviews would be of greater value in the present instance, as no statistical work could be done, nor sampling methods employed given the time available and the size of the area under review.

In the following pages it may be seen that in many cases the study area follows the main trends in the demographic history of the whole province, but there are many variations in intensity of movement, and on a local level of direction also. This indicates the importance of attempting to establish a causal pattern of underlying small scale tendencies in order satisfactorily to interpret the broad surface generalization of population change.

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#### References

- (1) Emmitt F. Sharp and G. Albert Kristjanson.  
"The People of Manitoba". Department of Agriculture  
and Conservation. (A.R.D.A. report).  
Chapter 1. p.p. 1 & 2. Chapter 7. p. 52.

- (2) M. F. Hopkinson. "Skipton-in-Craven; a study in change and influence." B.A. Dissertation, University of Durham. 1966. Chapter 3. Agriculture.

## CHAPTER I

### GEOGRAPHIC DESCRIPTION OF THE STUDY AREA.

#### Location and Extent.

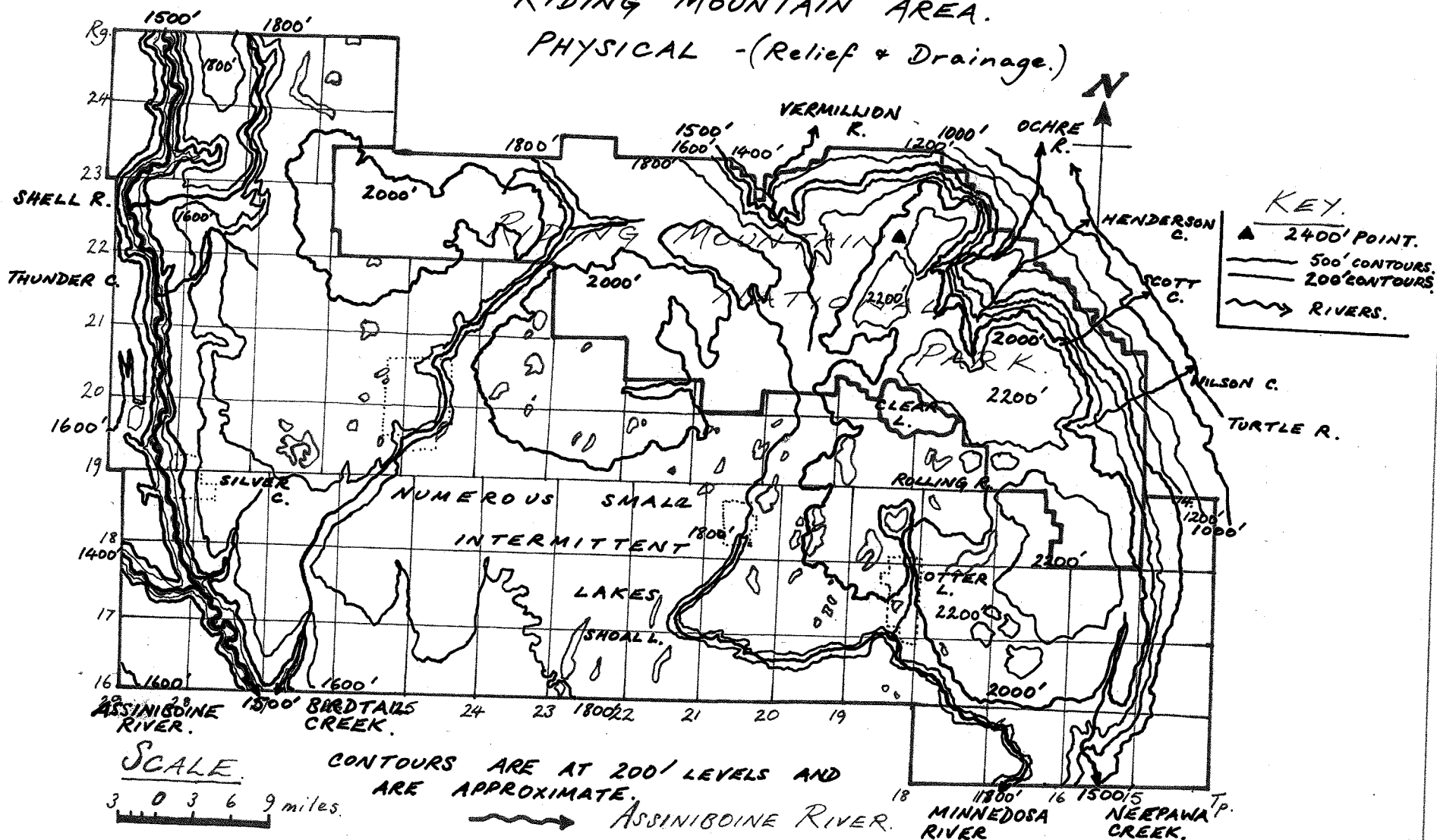
The area under review in this work is, as previously indicated, composed of the rural municipalities of Shellmouth, Boulton, Russell, Silver Creek, Rossburn, Ellice, Birtle, Shoal Lake, Strathclair, Harrison, Clanwilliam, Minto and Rosedale and part of the Local Government District of Park; comprising in total some 3042 sq. miles to the south and west of Riding Mountain National Park in Western Manitoba. This area, and the adjacent region, is divided into two broad physiographic divisions by the glacial Manitoba Escarpment. Above the escarpment, in the western and central part of the region, the topography is irregular, gently to steeply sloping with good drainage. Below the scarp the topography is nearly level with imperfectly drained soils. In the area south of the Park, the Assiniboine River Valley in the west and the great number of small, often intermittent lakes in the centre and east are also important physical features. (see map 1)

#### Relief and Drainage.

The study area is largely situated above the Manitoba Escarpment, on the Western Uplands of Manitoba, the edge of the Second Prairie Steppe of the Great Plains Region: and lies within the watershed of the Assiniboine River system. This river system includes a drainage area of some 62,000 sq. miles extending over most of South east Saskatchewan and

Map: 1.

# RIDING MOUNTAIN AREA. PHYSICAL - (Relief & Drainage.)



M.F.H.  
1/10

South West Manitoba, and is tributary to the Red River.

The terrain of the study area rises irregularly from the proglacial Lake Souris basin, located to the south of Virden, and reaches a peak of 2300 ft. in the Riding Mountain.

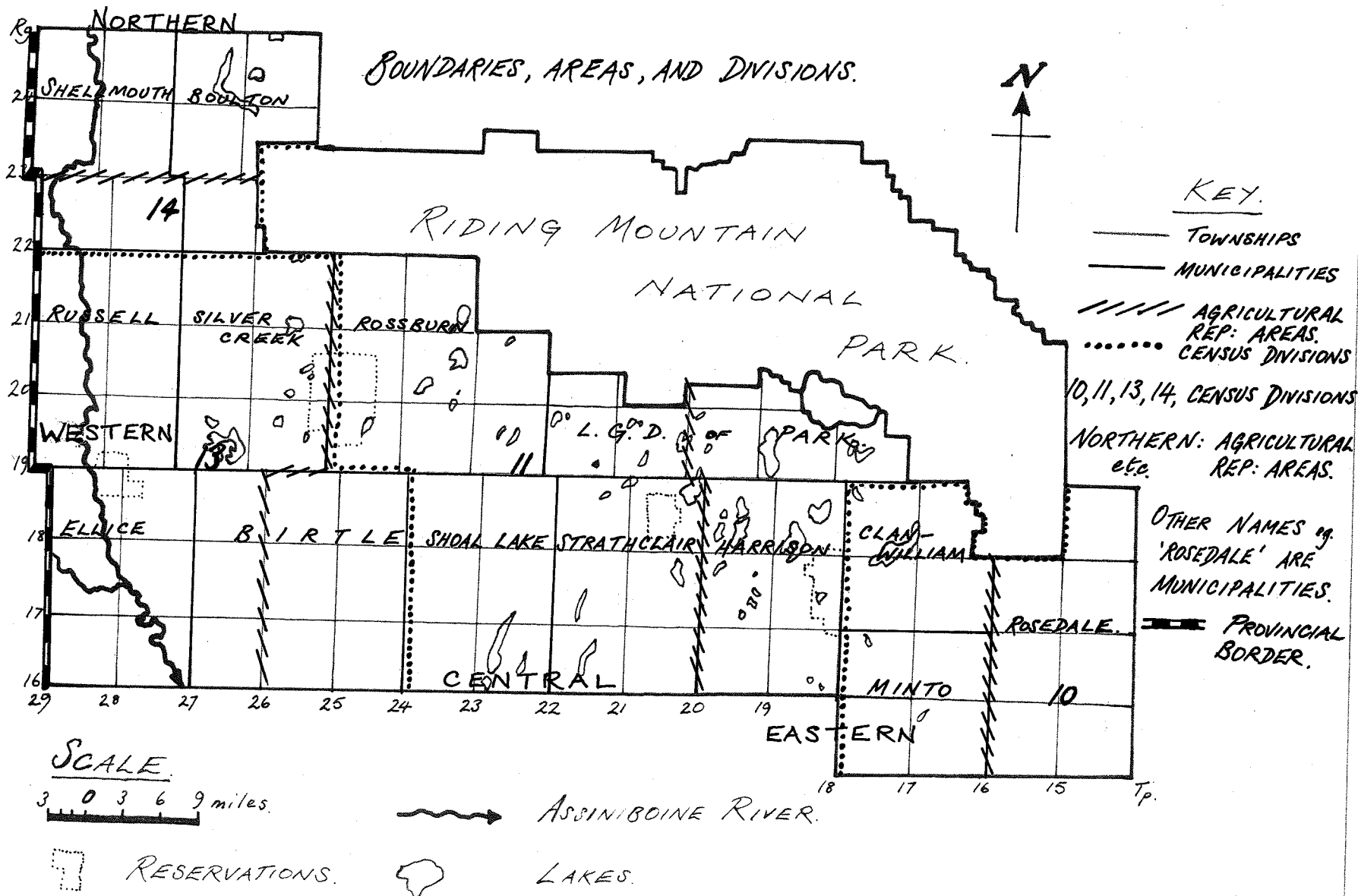
Drainage of this part of the province is by a network of streams tributary to the Assiniboine River, which enters the area in the extreme north west corner (Township 24, Range 29) and flows in a south-south-easterly direction leaving the area in the south west corner (Township 16, Range 28) before it turns eastward to flow towards Winnipeg. The river flows in a "U shaped" ice scoured valley, some 200 feet in depth and is joined by several smaller rivers and creeks including the Shell River, Silver Creek and Birdtail Creek. The Minnedosa River which drains the easterly part of the area also joins the Assiniboine outside the boundaries of our study.

Though these watercourses carry much of the flow of water through the area, and facilitate the escape of runoff from the Riding Mountain during the spring thaws, much of the surface drainage on the undulating till plain is local. Runoff from the knolls and ridges accumulates in the intervening depressions to form sloughs and marshes and collects in larger basins to form intermittent or permanent lakes. The removal of water from these local catchments is largely through evaporation and seepage.

#### Geology of the Underlying Rocks.

This region is underlain by the Cretaceous shales of

Map: 2.



M.F.H.  
'68.

the Riding Mountain formation. However, due to transportation of powdered rock and rock fragments by the continental ice sheets which completely covered Manitoba in recent geological times, the surface deposits of this area contain material from many of the rock formations which underlie the Riding Mountain Shale and which are at the surface to the east and north of our area. These formations include other shales of the Cretaceous period; sandstones, shales and evaporites of the Jurassic period; limestones and dolostones of the Devonian, Silurian and Ordovician periods and acidic intrusive Pre Cambrian rocks. (See map 3x)

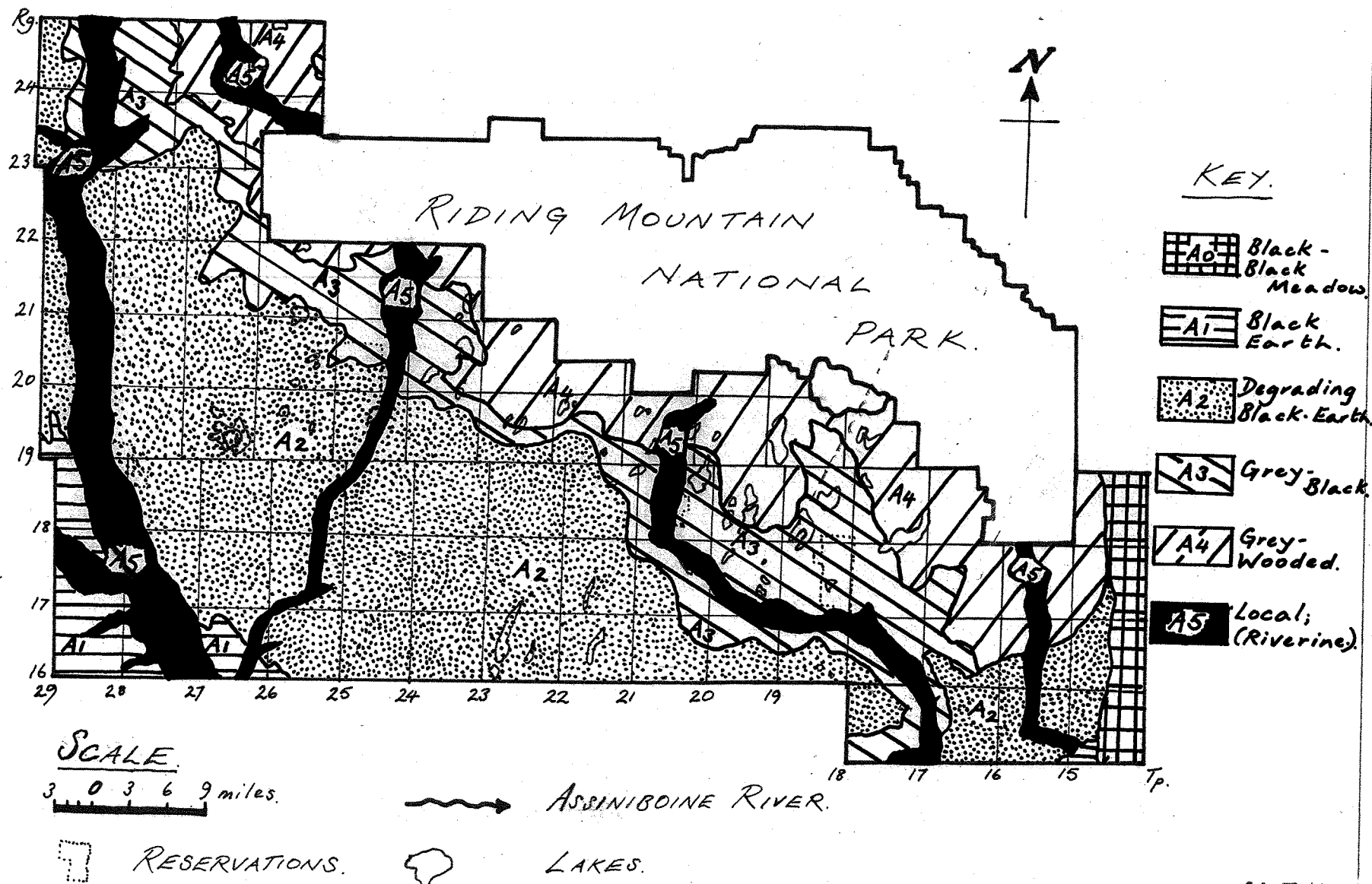
#### Surface Deposits.

The surface deposits of the Riding Mountain Area are chiefly of glacial origin and these deposits form the parent material from which the soils have developed, exercising a strong influence upon their natural fertility, and on local variations in texture, relief and soil drainage. The main types of these surface deposits are described below, and their distribution is shown in map 3x.

Glacial Till. In the Riding Mountain area till material occurs extensively as surface deposits in many areas to the north and west of Lake Souris basin, and as underlying deposits below the lacustrine and alluvial materials of the various basins and depressions. Such till consists of a heterogenous mixture of boulders, stones, gravel, sand, silt and clay. In the study area these materials have given rise to loam-to-

Map: 3.

# GENERALISED SOIL MAP.



M.F.H.  
'68.

clay-loam soils, with varying degrees of stoniness and topographic irregularity.

Ground moraine, which is the most extensive glacial till deposit in this area is characterized by low knolls and numerous sloughs. End moraine, however, is generally rough, normally comprising a narrow range of hills that were deposited at the terminus of the glacier when its 'retreat' began. Within our immediate area an example occurs along the southern slopes of the Riding Mountain from Hilltop (Township 17 Range 17) through Erickson, Rackham and northwest to Glen Elmo. It is followed by the Canadian National Line, and in places by the road. Drumlin swarms occur west of Foxwarren and along the southern Mountain slope westward from Erickson. In most cases, local drumlins have a shale core on the northern side and a thick glacial debris on the southern side.

The soils developed on glacial till deposits are of varying agricultural value, depending upon their topography. The best soils are found on the smoother topography, in areas without marked salinity and on long gentle slopes; and they are thicker, more homogenous in texture, and less susceptible to water erosion than those in the strongly undulating areas, or where end morrains and drumlins disrupt the landscape.

Fluvio-Glacial. These deposits are represented by coarse material sorted from the till by rapid post glacial streams, which have eroded most of the silt and clay and left behind sand gravel and stone. When laid down in running water, these materials form outwash plains, alluvial terraces, kames,

eskers and eroded till.

Outwash plains and alluvial terraces are gravelly areas whose level surface is often broken by deep enclosed basins (ice block holes) with steep sides. Such deposits are common to the valley borders of the Assiniboine and its tributaries; the Shell, Minnedosa, Qu'Appelle and Birdtail rivers as well as to the lower reaches of the streams flowing down the southern slopes of the Mountain. Kames are also found in the rough gravel areas of the end moraine along the southern slopes of Riding Mountain. Stream eroded till deposits are found along many stream channels in the area. They are coarse materials of all sizes, underlain with unstratified till at depths of 6 inches to 2 ft. or more. Where these widespread glacio-fluvial deposits occur, they form the parent material of droughty soils, having low agricultural value.

Lacustrine. Lake deposits in this area are found in the sites of several minor glacial lakes. They generally present smooth gently sloping surfaces, except for some dissection by streams and wind-duning. An exception is found near Rackham where the rough terrain is accounted for by a thin lacustrine mantle which overlies morrainic glacial till in a short-lived lake site. These materials vary in texture; predominantly sandy in the vicinity of Proven Lake, fine soils along the southern Mountain slopes and clayey in the Souris basin, outside of the study area.

The Lacustrine deposits are normally stone-free, especially in the thicker concentrations, and those of a fine

texture are usually agriculturally valuable because of the high mineral fertility and drainage qualities. The ones formed on sandy materials are less fertile, with lower water holding capacity, and are more susceptible to wind erosion than the former.

Aeolian. With the exception of the sand dunes, which form poor agricultural land, on the eastern and southern periphery of our area, there is little windblown glacial material here.

Recent Alluvial. Such deposits occur adjacent to streams which periodically overflow their banks. The soils formed here depend upon the periodicity of the floods, being well developed and highly valued where flooding is infrequent.

#### Climate.

The climate of the area is sub-humid and has a definite summer maximum of precipitation. Frost is a hazard to grain production in the area, as is the occasional occurrence of summer drought. In the following section, because the period over which records at different stations <sup>(1)</sup> is not uniform, monthly rainfall and temperature figures are given for the Riding Mountain Area as a whole.

Precipitation. Annual figures since 1881 indicate that the annual precipitation averages 17.5 inches, though yearly fluctuations range from 10 to 26 inches. From the experience of eighty years it seems that, as a whole, the area may expect precipitation of the order of 16 to 20 inches in four years

out of seven; 10 to 15 inches in two years out of seven; and over 20 inches one year in seven. Rainfall is highest in the south east and decreases slightly to the north and west, viz:

Average Annual Precipitation

Brandon (outside the area)	17.86 inches
Minnedosa	17.91 inches
Birtle	16.71 inches
Russell	16.71 inches

These stations are all located in the prairie and aspen grove regions; precipitation figures for the forested areas of the Park being more recent and for the summer only. It seems that the forested area has slightly higher precipitation.

South Gate-Park	12.48 inches (summer)
Minnedosa	11.43 inches (summer)

Precipitation falling during April to July in most years is not sufficient to produce high yields of grain unless supplemented by a moisture reservoir from the previous fall and winter. With such a reservoir high yields are practicable and frequent, as severe droughts are relatively rare. However conservation practices in this regard are necessary, especially on the coarser textured soils of the area.

Temperature. Records are available since the summer of 1881. The mean monthly temperatures are as follows:

Table 1. Temperature.

<u>Month</u>	<u>Mean Average Temperature °F.</u>
January	-2.8 (min: 19.0, 1959)
February	1.2
March	15.5
April	37.0
May	50.6
June	59.6
July	64.8 (max: 72.7, 1936)
August	61.9
September	51.9
October	39.6
November	20.7
December	5.8

The figures cited above indicate that the mean temperatures during the months of April to October inclusive are above freezing. From November to March they are below freezing and this is when frozen ground is likely. As with precipitation it seems there is a slight tendency for temperature decrease from south east to north west as is evinced below.

Average Annual Temperature °F.

Brandon (outside the area)	34.09
Minnedosa	33.95
Birtle	33.93
Russell	32.40

The meteorological data may be summarized by saying that although the average precipitation during the open or growing

season is slightly lower than in the southern and eastern portions of Manitoba, this is offset by somewhat lower summer temperatures and thus greater precipitation efficiency. However, droughts are not unknown.

Climatic Indicators. (a) Soils and Vegetation. The average general climatic conditions outlined by station data above, are rather unsatisfactorily broadly defined because of the lack of sufficient accurate mathematical data.

Local variations in climate may be better comprehended through the observation of the native vegetation and the morphological characteristics of the regional soils which reflect prevailing conditions. (see map 3).

Within the south-eastern portion of the Newdale Till plain, black-earth soils have developed on the well drained sites under tall prairie grasses and herbs. Native trees and shrubs such as poplar and willow are limited because of inadequate local groundwater. Toward the north west of the till plain, the soil conditions are more humid and aspen becomes increasingly apparent. On the southern slope of the Riding Mountain the vegetation gives way to mixed deciduous and coniferous forest and the soils exhibit Grey Black and Grey Wooded profiles. This transition from grass to woodland, from Black earth to Grey Wooded soils, is indicative of an increasing moisture efficiency either through greater precipitation or lower temperatures.

Vegetation also varies with latitude and altitude ranging from aspen oak in the south to mixed woods in the north below

the escarpment. A similar transition may be seen with altitude above the escarpment.

(b) Native Vegetation. Opinions differ somewhat as to classification of the area of the southern slopes of the Riding Mountain. Halliday classes the area with the rest of the region in the Boreal forest group, but Ellis considered it to be an area of prairie invaded by woodland and designates it as grassland. (2)

The Mountain slopes, above the 2000 ft. contour, bear a native vegetation of mixed woods. The characteristic types are aspen, balm of Gilead, white spruce and paper birch. Some black spruce and tamarack sphagnum bogs occur in moister areas and there are a few occurrences of white elm, ash, maple and bur oak.

In the remainder of the area, the vegetation varies with soil parent material, topography and local climate as has been indicated. On the boulder till and lacustrine plains, prairie grass has given way to park-like country with mixed trees, with aspen groves predominant. On locally damp sites, such as the north east exposure of hills and river banks some stands of black poplar and aspen occur. In arid areas, on steep slopes or thin gravelly soils, bur oak and aspen scrubs are found. Willow also grows in damp areas.

A discussion of the human element and its effect on the landscape will be found in the following chapter. (3)

## References

- (1) Including: Minnedosa, Birtle, Russell, Strathclair and Shoal Lake, have been averaged to give data for the Riding.
- (2) W.E.D. Halliday: "A Forest Classification for Canada". Forest Series, Bulletin No.89, Ottawa 1937.  
J.H. Ellis: "The Soils of Manitoba" Project 14 Economic Survey Board. 1938.
- (3) In addition to field notes collected by the author much detail in this chapter is drawn from the Reconnaissance Soil Surveys of Rossburn, Grandview and West Lake Areas produced by Manitoba Soil Survey for the Manitoba Department of Agriculture. (1956-59).

## CHAPTER 2

### FACTORS INFLUENCING POPULATION GROWTH

The two main components of changes in size of population are natural increase and net migration. These may be either positive or negative, and are both the result of two previous determinents.

Natural increase is the product of the difference between the number of births and deaths in a population over a given period. Net migration is the total obtained by subtracting the number of out-migrants from the number of in-migrants. In the cases where migrants cross no national or state boundaries, it is difficult to determine what proportion of population change in an area is due to migration. If we know the fertility and mortality rates for our population the best we can do is to determine the effect of net migration. Unless there are border checks at the boundaries of our area we cannot determine the total in and out movement, which may be much greater flows than the final net figures would suggest.

#### The Provincial Situation.

As was indicated in the Introduction (p.2) the great surge of settlers into Manitoba, which followed the building of the railways and the homesteading laws, was declining by 1921, and population increase in the province fell to 4.2% during the depression decade. Since 1951 there has been a considerable growth in numbers, although this has been largely

in terms of urban dwellers.

The components of growth have also changed in Manitoba, as Sharp and Kristjanson indicate.

"Although data for periods prior to 1911 are inadequate to permit calculation of the separate influences of natural increase and net migration, it is apparent that a major share of the growth during the preceding forty years came as a direct result of the migration of settlers to the province. By 1911 net migration was giving way to natural increase as the major source of population growth. Of the total increase in population between 1911 and 1921 more than two thirds came as a result of the excess of births over deaths.

"It is worth noting that the 1911-21 decade is the last one in which net migration made a positive contribution to population growth in the province." (1)

In the twenties over 112,000 people left Manitoba - either pressing further west in the hope of better opportunities in Alberta and British Columbia, or returning to the cities of the east. By the last decade, increased prosperity in the Prairies had almost stopped the outflow completely.

Simultaneously, however, the rate of natural increase, produced by the high birth rates of rural semi-pioneer communities has also declined. The large proportion of young adults in the settling population was reflected by relatively high fertility and low mortality rates. In the 1911-21 period natural increase stood at 22.6%; by 1931-41 the rate was down to 11% although the post war "boom" has resulted in a natural increase of 19% in the last decade.

#### The Riding Mountain Area.

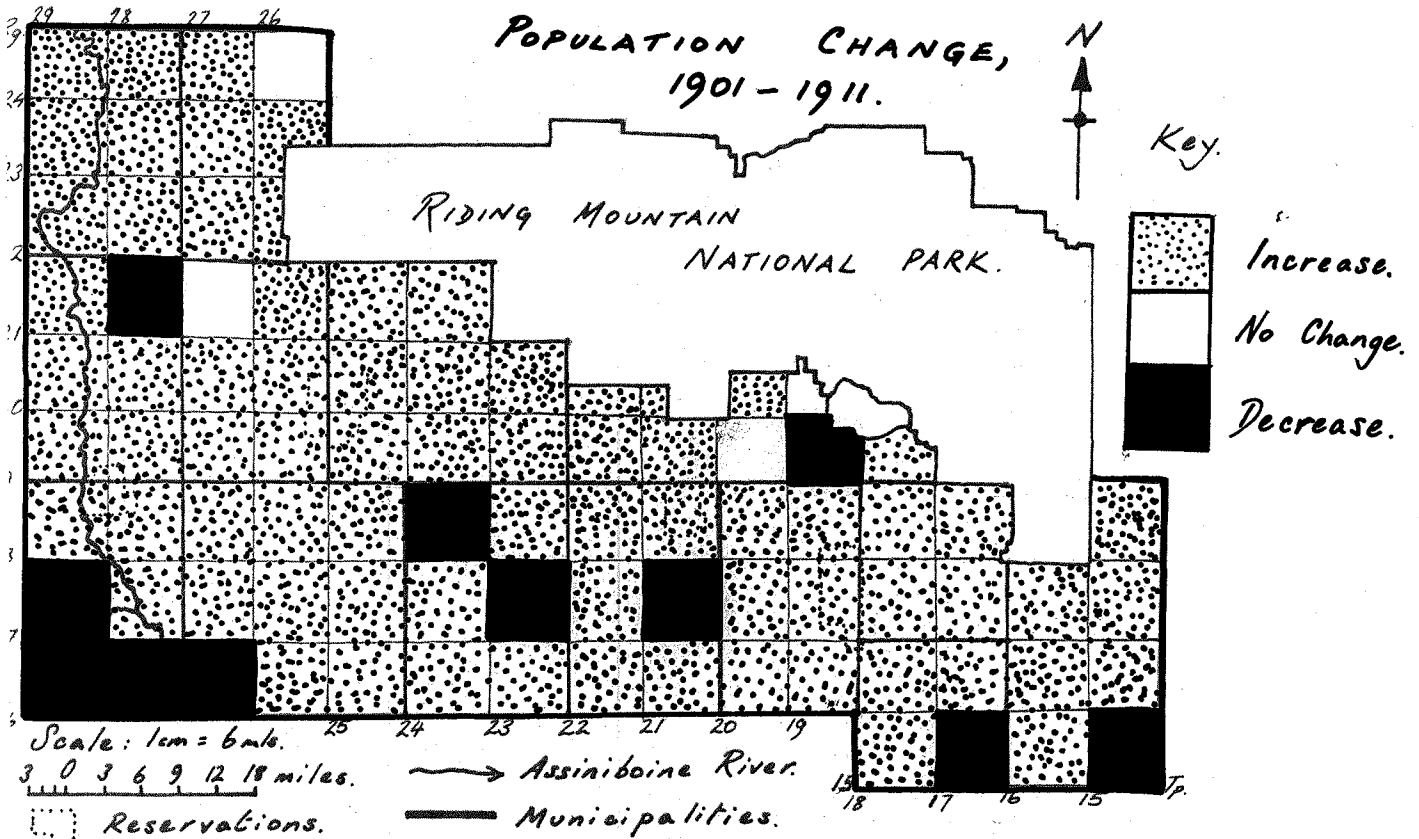
The picture for the province as a whole, therefore,

has been of a declining rate of growth since the high peak in the first two decades of this century, and an increasingly urban population. In the study area however, the situation has been markedly different, and growth rates have been actually negative over several recent decades.

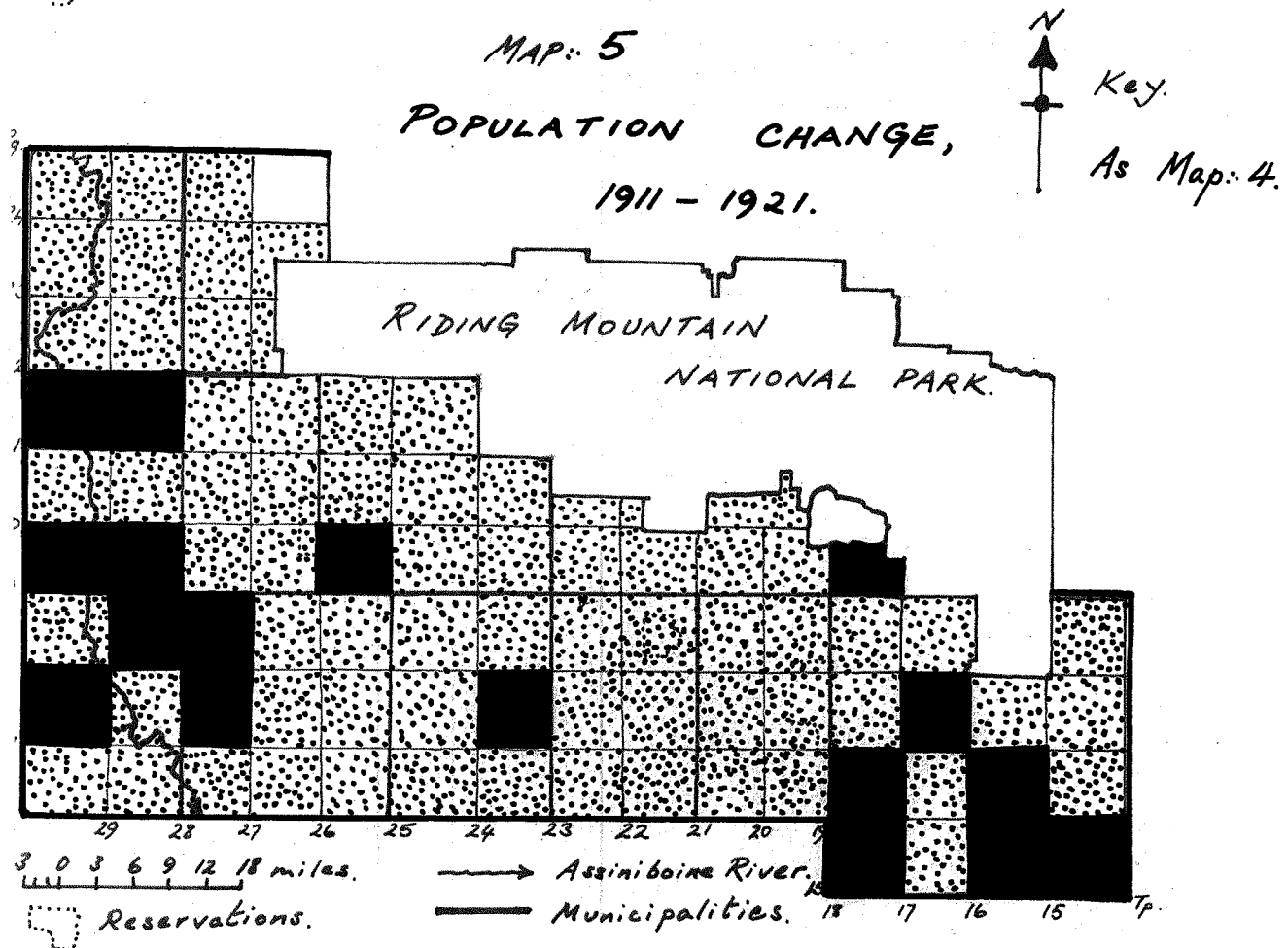
The period from 1901-41. Reference to the maps of total population by townships give us an indication of the trends in population distribution and numbers since the turn of the century. The date 1901, rather than 1871, has been chosen partly because this is the earliest for which the census gives data for all the townships in our area, and partly because we are most concerned with recent, rather than early trends. Maps (Nos. 4 - 14) show the totals for each decade up to 1941, and for each five year censal period thereafter.

As the 1901-11 map indicates, the great majority of townships experienced increases in total numbers during this period. Of the 11 townships that experienced decreases, only three - Tp 15, R.15 (Neepawa), To 21, R.28 (Russell) and Tp 17, R.23 (Shoal Lake) - experienced large decreases. These are the only three townships where the 1901 population is shown as being higher than for any later period. This is presumably due to the incorporation of the three towns in these townships during the decade and the consequent deletion of their populations from the township figures, which do not include the incorporated centres in the Census. Except in Chapter 6, all figures quoted for townships in this work

MAP: 4  
POPULATION CHANGE,  
1901 - 1911.



MAP: 5  
POPULATION CHANGE,  
1911 - 1921.



exclude incorporated settlements.

The other townships which declined experienced slight losses, and their later history is often characterized by fluctuating small totals.

Table 2

Census Returns for Townships with  
Declines in Population 1901-1911

<u>Tp</u>	<u>Rg</u>	<u>1901</u>	<u>1911</u>	<u>1921</u>	<u>1931</u>	<u>1941</u>	<u>Max.</u>
15	15	841 <sup>a</sup>	371	300	272	284	1901
15	17	364	347	442	485	427	1931
16	27	152	145	172	200	149	1931
16	28	100	66	92	129	105	1931
16	29	59	54	66	105	69	1931
17	21	172 <sup>b</sup>	164	293	279	221	1921
17	23	553	226	192	292	228	1901
17	29	94	87	81	121	137	1961
18	24	193	183	271	253	224	1921
19	19	6	-	23	284	296	1951
21	28	684 <sup>c</sup>	208 <sup>d</sup>	155	249	190	1901
18	27	229	421 <sup>e</sup>	237	255	235	1911
19	28	352	514 <sup>e</sup>	208	220	216	1911

a. Neepawa.

d. Foxwarren.

b. Shoal Lake.

e. Brinscarth.

c. Russell.

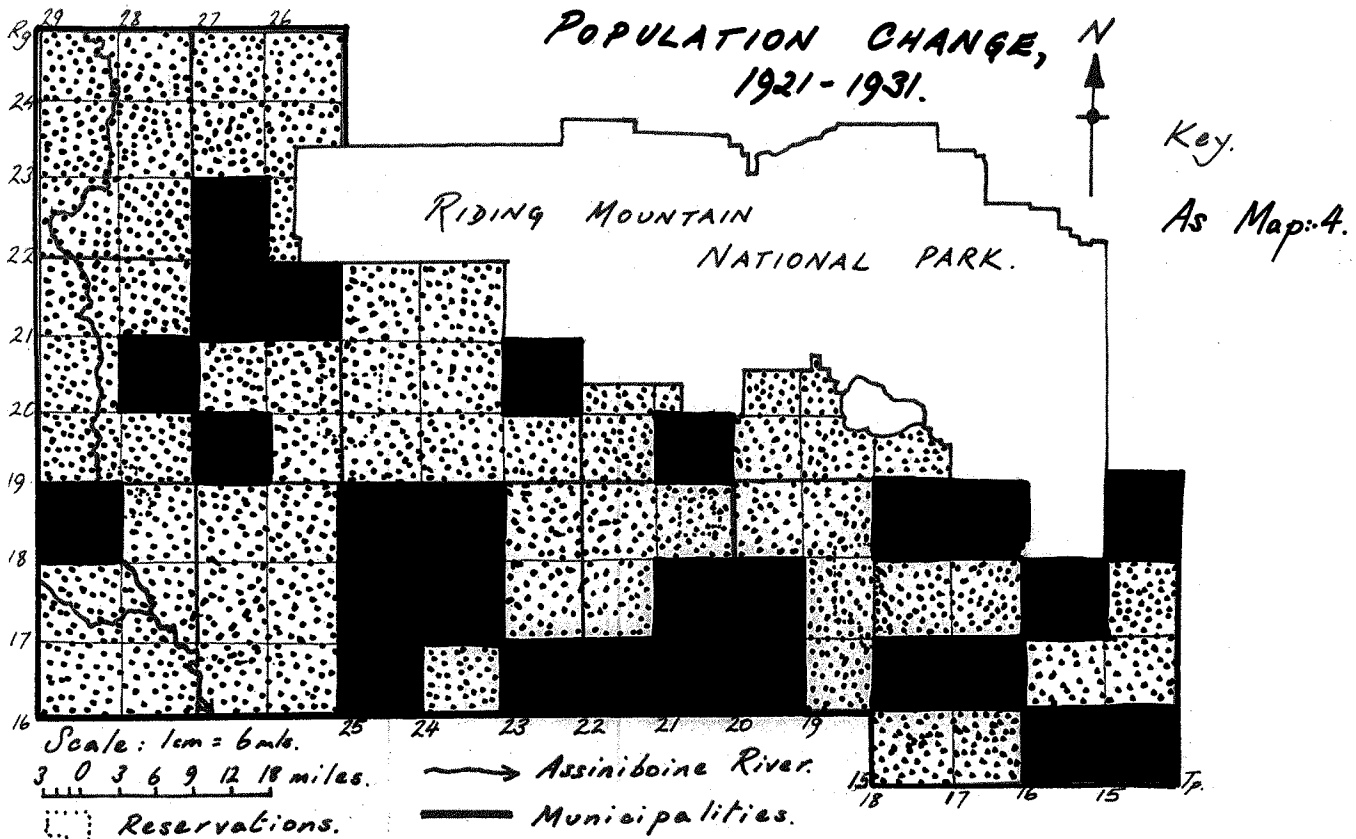
incorporated.

It is noteworthy that with the exception of Russell, every municipality increased its population over the years 1901-1911 and the total population for the study area rose from 13,404 to 20,342 over the decade.

During the second decade of this century, the increase in population continued in the majority of townships and in all municipalities except Russell. By 1921 the population for the region stood at 25,529. However 17 of the 89 townships in the area showed declines, and these were quite widely scattered across the whole region ( see map 5. ).

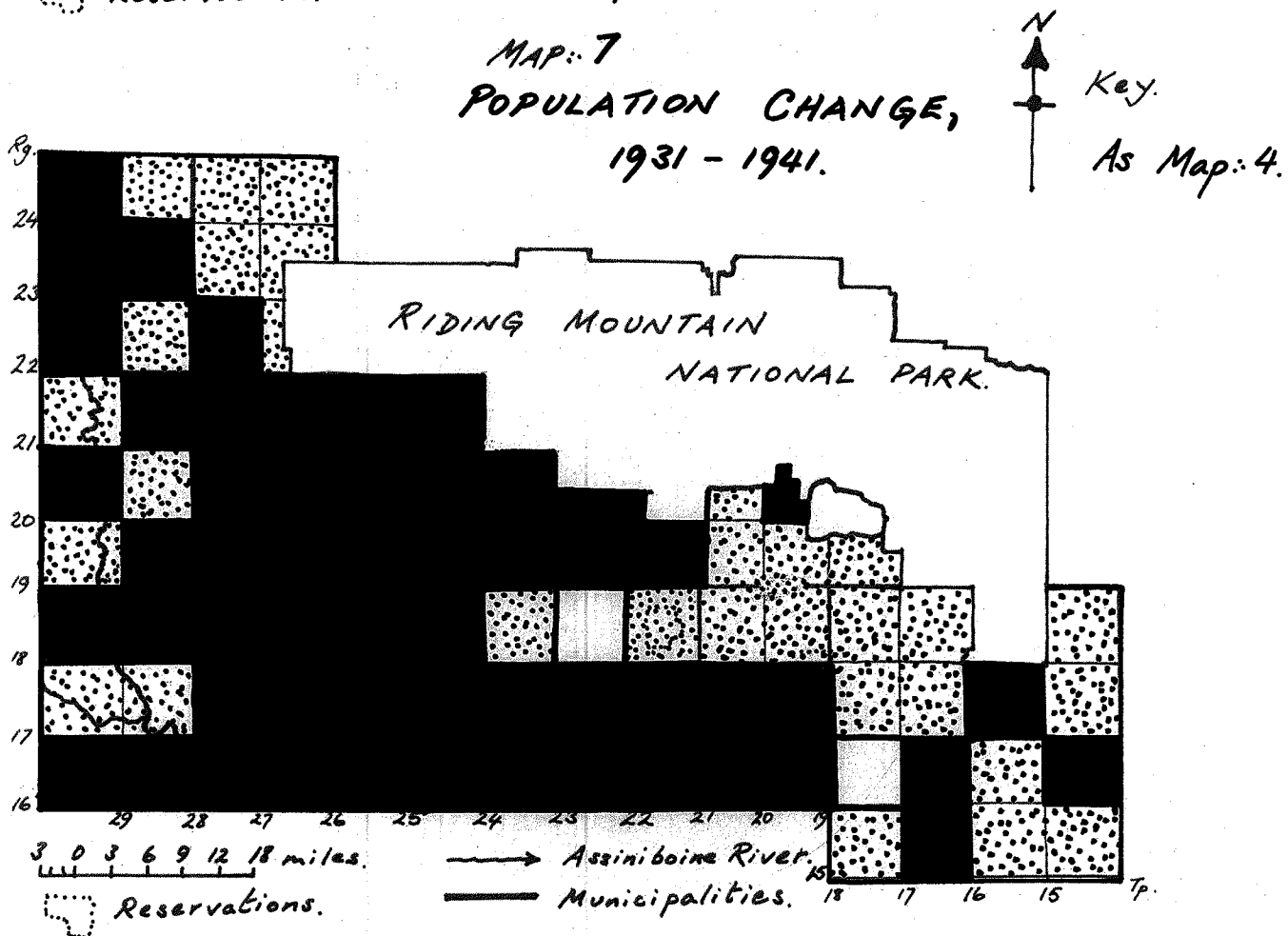
MAP: 6

POPULATION CHANGE,  
1921-1931.



MAP: 7

POPULATION CHANGE,  
1931-1941.



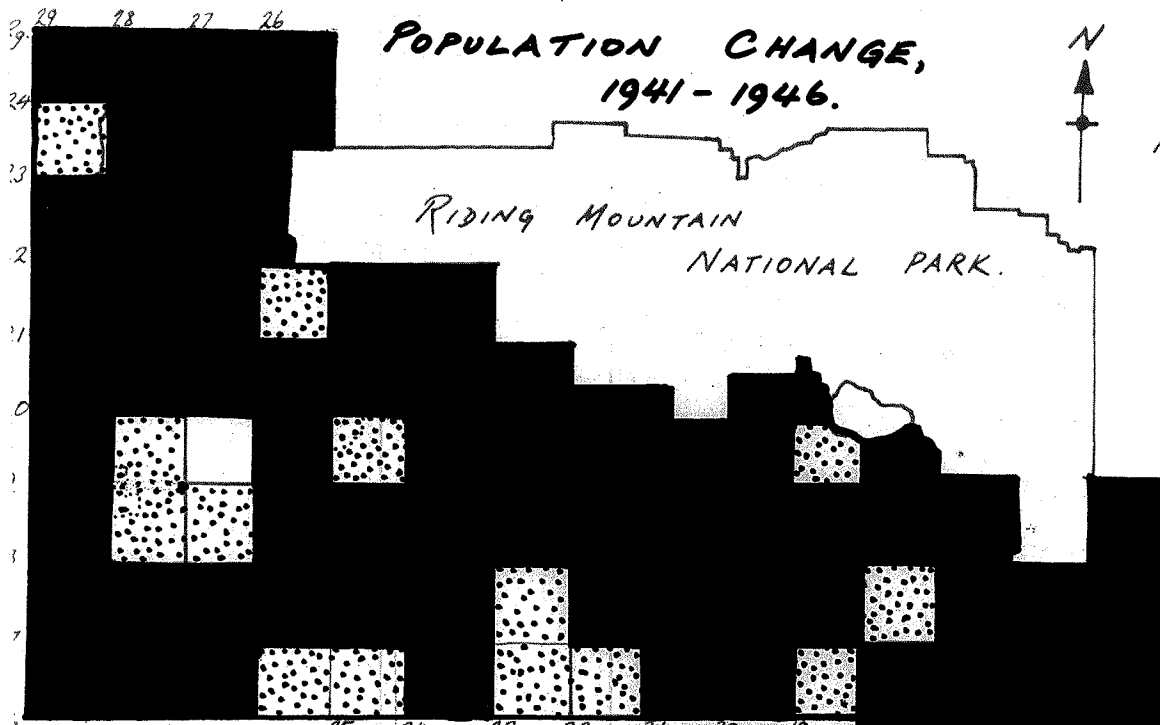
Although 7 of the townships which had lost population in the first decade did not lose total numbers in the second decade, 4 of the previous 11 did so.

By 1931 however the situation in the study area was of a considerable slackening off in numerical increase. Not only did 27 townships show a loss of net population over the preceding ten years, but Minto municipality as a unit had suffered a population loss. Ten years later it was evident that 1930 had represented the peak. In 1941 only 30 townships showed net increases in population, 57 townships indicated declined in numbers and in two the totals were static. By now it is evident, out-migration had reached such a level as to more than cancel out all natural increase in the area. The Municipalities of Minto, Harrison, Shoal Lake, Rossburn, Birtle, Ellice, Silver Creek, Russell and Shellmouth and the L.G.D. of Park had all declined, and the population for the 89 townships fell from 28,553 in 1931 to 27,977 by 1941. Obviously out-migration from the area must have commenced to dominate migration trends many years earlier to have grown to such a magnitude. Since 1941 net out-migration has consistently served to diminish the total numbers of the area up to the present time.

The period 1941-51. In 1941 only four municipalities,<sup>(2)</sup> Rosedale, Clanwilliam, Strathclair, and Boulton, showed numerical increases, amounting in total to some six hundred persons. Thereafter the population declined for our region as follows.

MAP: 8

POPULATION CHANGE,  
1941 - 1946.



Scale: 1cm = 6mils.

3 0 3 6 9 12 18 miles.

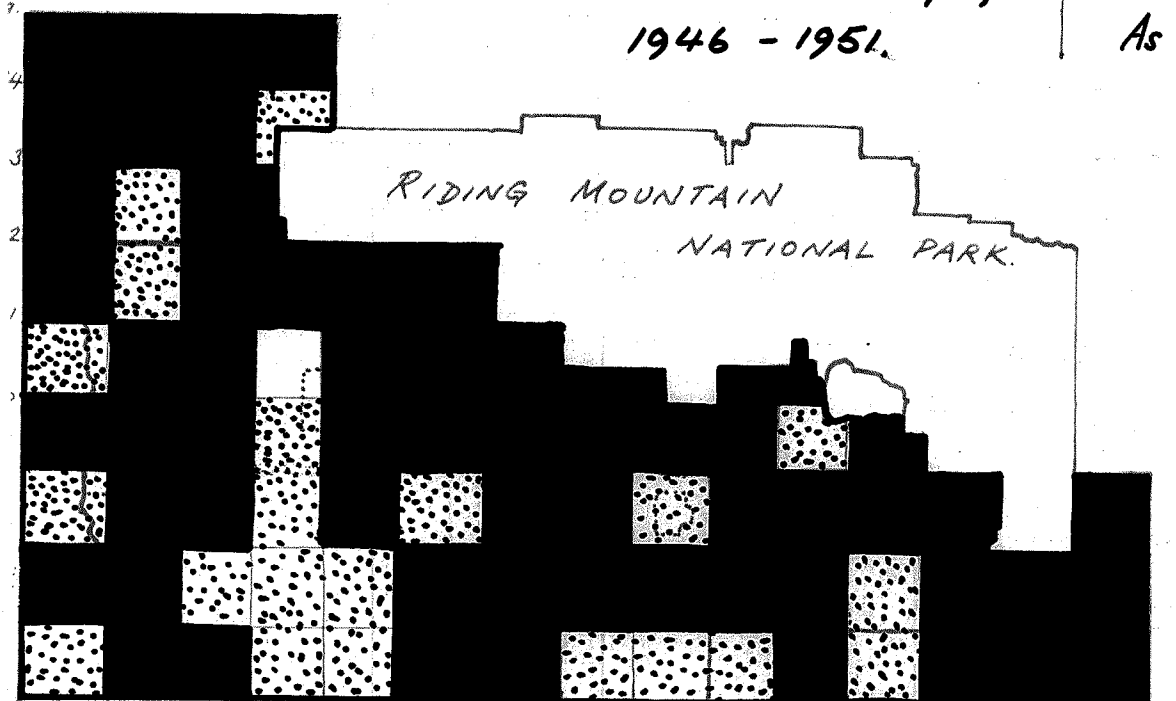
Reservations.

Assiniboine River.

Municipalities.

MAP: 9

POPULATION CHANGE,  
1946 - 1951.



3 0 3 6 9 12 18 miles.

Reservations.

Assiniboine River.

Municipalities.

<u>1931</u>	<u>1941</u>	<u>1951</u>	<u>1961</u>
28,553	27,977	23,074	19,094

Over the twenty years up to 1961, the total population fell by approximately 30%. It is noteworthy that in 1941 when our study of the trends of this area begins, the population had already been declining in numbers for at least a decade. It is now necessary to study this numerical decline in greater detail. Although eighty two of the townships in this area have declined numerically from 1941 to the present date, they have not all declined in each five year period. Hence the reduction in numbers in any one township has been a discontinuous process. Nor has any of the seven townships which had increased in numbers since 1941 done so steadily. Thus the overall trend for the region is only the product of many conflicting small scale trends, just as they themselves are the product of various conflicting components of births, deaths and cross migration. It is important to remember that any conclusions we draw will be generalizations for the area, rather than accurate statements of individual tendencies.

The period 1941-46. During this period the great majority of the townships again suffered a loss of numbers and only fourteen of the townships experienced growth. One township remained the same size.<sup>(3)</sup> Of the fifteen townships that did not lose population, one third had large proportions of their area under water as parts of lakes, three were partially given over to reservations, seven had

settlements within their boundaries, and only two were 'typically agricultural'. Hence many of the improving townships had incursions into their areas, which meant that population numbers were small and variations slight though positive, whilst others had settlements which acted as centres of some attraction to the surrounding area. They are listed below.

Table 3.

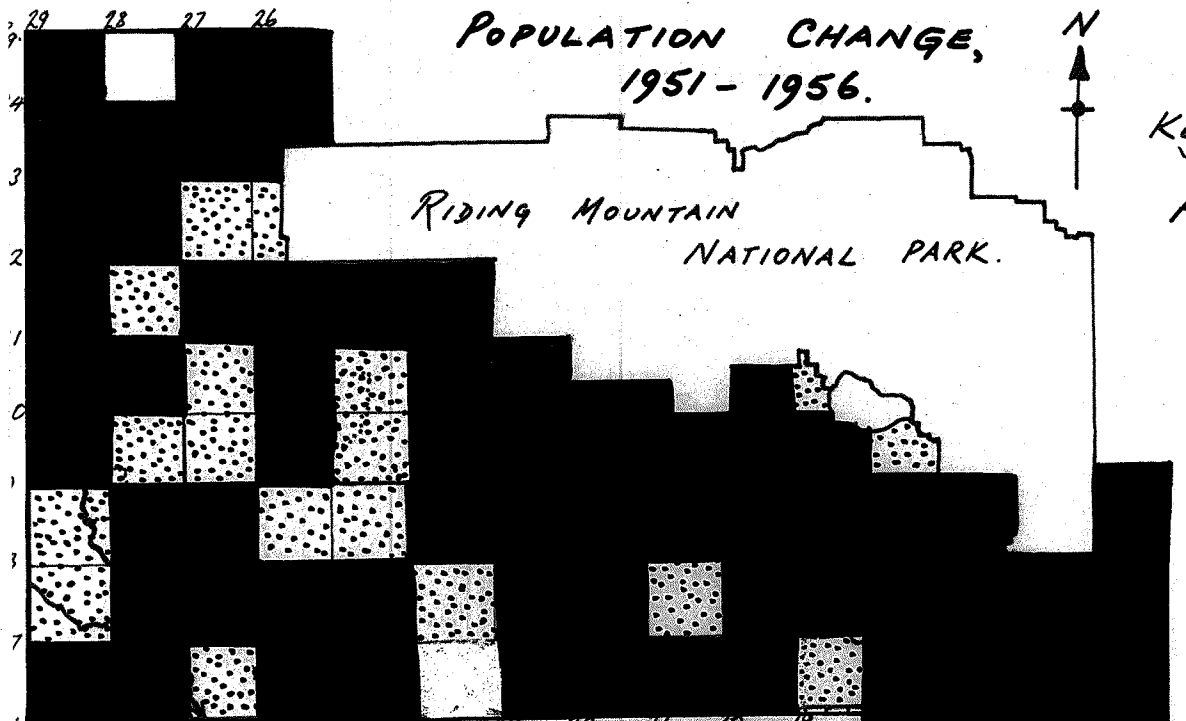
Townships with Increasing Numbers  
1941-46

	<u>Tp</u>	<u>Rg</u>	<u>1941</u>	<u>1946</u>	<u>1951</u>	<u>Type</u>
Around	(16	19	235	295	184	Small lakes
village	(16	22	565	617	692	Lake Settlement
of	(16	23	152	160	159	Lake Settlement
Shoal Lake	(17	23	228	252	232	Lake Settlement
Erickson	17	18	681	687	769	Lake Settlement
Onanole	19	19	296	371	532	Lake Settlement
Foxwarren	18	27	235	252	242	Settlement
Binscarth	19	28	216	235	206	Settlement
Silverton	21	27	208	220	189	Small Settlement
	23	29	162	188	158	Small Settlement
	18	28	213	238	228	Reservation
	19	25	122	149	135	Reservation
	16	25	146	165	175)	Agricultural
	16	28	167	174	184)	Rural
(Static)	19	27	149	149	116	Lake

In fairness however it should be noted that other townships with reservations, lakes and settlements all declined during these five years, and the possible attractiveness of the areas listed above should not be over-emphasised.

The period 1946-51. During the next five years the effect of net out-migration began to be abated, and was also affected by the rise in the number of births after the

MAP: 10  
POPULATION CHANGE,  
1951 - 1956.



Key.

As Map: 4.

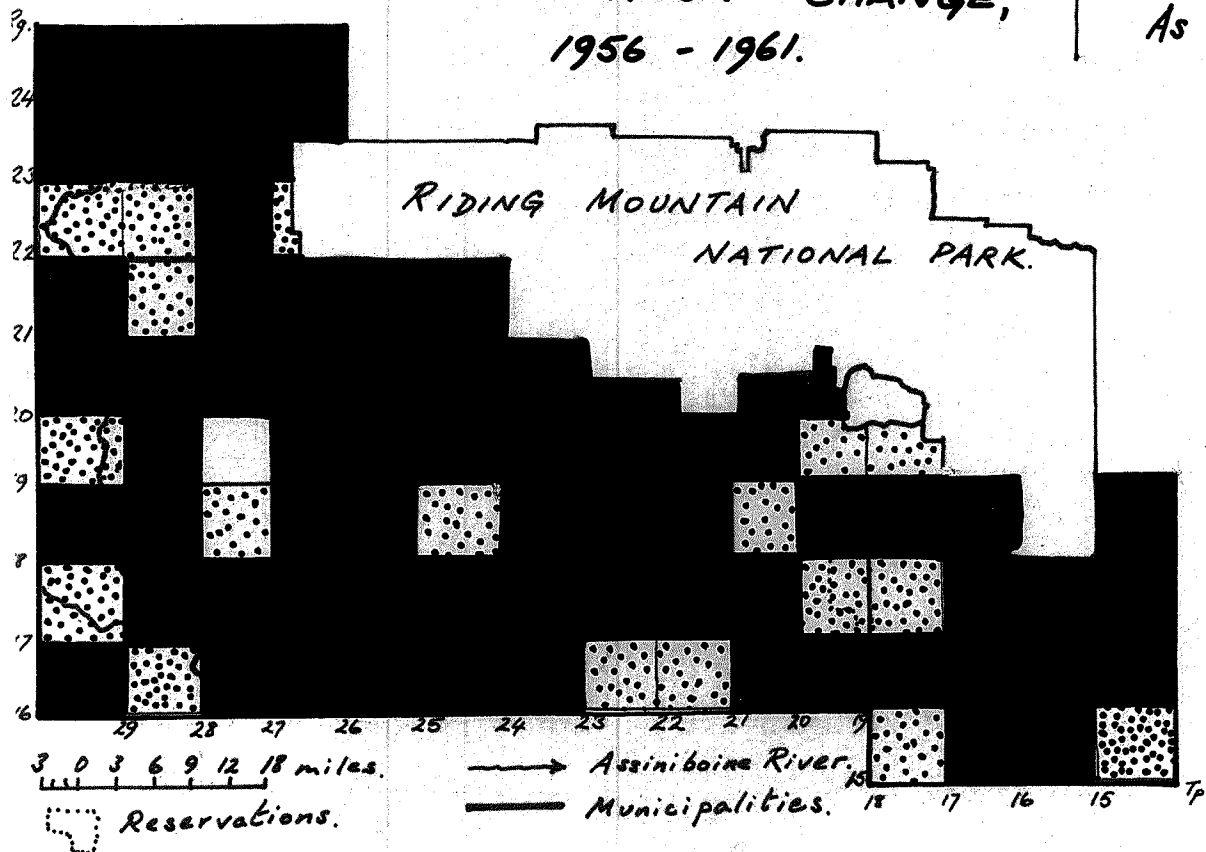
Scale: 1 cm = 6 miles.  
3 0 3 6 9 12 18 miles.

Reservations.

Assiniboine River.

Municipalities.

MAP: 11  
POPULATION CHANGE,  
1956 - 1961.



Key.

As Map: 4.

Scale: 1 cm = 6 miles.  
3 0 3 6 9 12 18 miles.

Reservations.

Assiniboine River.

Municipalities.

Second World War. Twenty-two townships showed numerical increases, and one other did not decline; but the rest of the townships continued to lose population. (See map 9.) The tendency was still for the townships along the Park edge to suffer most from de-population, whilst those further south saw greatest growth. Despite individual increases, no municipality showed a net gain in this decade to 1951, nor in the next ten years.

The decade to 1961. In the ten years which conclude the main period of our survey the Riding Mountain area lost another four thousand people. The upswing in the post war birth rate has not served to overcome the draining of migrants from the region. However, increasing prosperity has meant that pockets of net numerical increase have become more widespread, and may serve to indicate some stabilising of numbers.

The period 1951-56. Only eighteen townships showed positive changes in this period and two of them were very tiny units on the Park edge. However the location of these improvements was a little more widespread than heretofore. It is perhaps noteworthy that both in the extreme north and south of our area, townships continued to hold their numbers:-

<u>Tp</u>	<u>Rg</u>	<u>1951</u>	<u>1956</u>	<u>1961</u>
24	28	223	223	207
16	24	127	127	111

The period 1956-61. In the last censal period under discussion the overall decline persisted, alleviated by

growth in eighteen townships, only four of which were co-incidental with the preceding five years. This emphasises the fluctuations in the trends when they are considered locally.

It is necessary to exercise caution in any attempts at interpretation of the figures cited above or in the accompanying maps. The maps only show actual numerical trends, and mask both large and small differences over time and between townships. This is because it is difficult to graphically portray numerical changes without bias. If our maps or statistics showed degree of numerical change, then percentage changes (of great local importance) would be lost. If, however, we graded our maps according to percentage decline or increase, we would have no picture of whence the majority of the people moved. An example will demonstrate this.

The greatest percentage decrease in our area is a decline of 70.54% over the period 1941-61.

<u>Tp</u>	<u>Rg</u>	<u>1941</u>	<u>1946</u>	<u>1951</u>	<u>1956</u>	<u>1961</u>
20	23	526	417	295	222	155

The greatest percentage increase over the period is of 74.32%.

<u>Tp</u>	<u>Rg</u>	<u>1941</u>	<u>1946</u>	<u>1951</u>	<u>1956</u>	<u>1961</u>
19	19	296	371	532	493	516

However a 10% decline in one township may mean a loss of eighty people, eg:

<u>Tp</u>	<u>Rg</u>	<u>1941</u>	<u>1961</u>	<u>%</u>
18	23	650	580	-10.77

Or a loss of only about twenty, e.g:

<u>Tp</u>	<u>Rg</u>	<u>1941</u>	<u>1961</u>	<u>%</u>
18	28	213	196	-8

Hence in the following chapter average rates of decline rather than numerical or percentage losses have been used.

It is now necessary to put flesh on the bones of the situation we have indicated, and in the next chapter we will consider the implications of the trends whose numerical basis we have noted here.

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#### References.

- (1) Sharp and Kristjanson. opus cit p.2.
- (2) Ellice shows an increase of one person between 1931 and 1941 in the census figures but this is a sufficiently small increase to be disregarded. (1931 - 1,297; 1941 - 1,298.)
- (3) Townships classed on each map as having "no change" are ones with absolutely no change in numbers during the censal period. Their actual personnel may have fluctuated, but it was numerically similar at both ends of the period.

### CHAPTER 3

Two main aspects of population change emerged in our last chapter. The first is the overall trend of the area for a decline in total numbers, since 1941 at the latest, and in many areas for ten or twenty years previously. Secondly there are the internal trends, or differences in direction, rate and character of the changes in numbers. In the following pages, we will consider these differences in greater detail, with regard to differentials in ethnic origins, age-sex groups, farm - non-farm population, rates of municipality loss, growth of incorporated places, and net migration; as well as comparing these facts of demographic activity with the provincial situation. Thus we may better see how the overall pattern is composed of the blending of many diverse individual strands of action. In this interpretation, however, consideration will first be given to the overall tendency as previously defined.

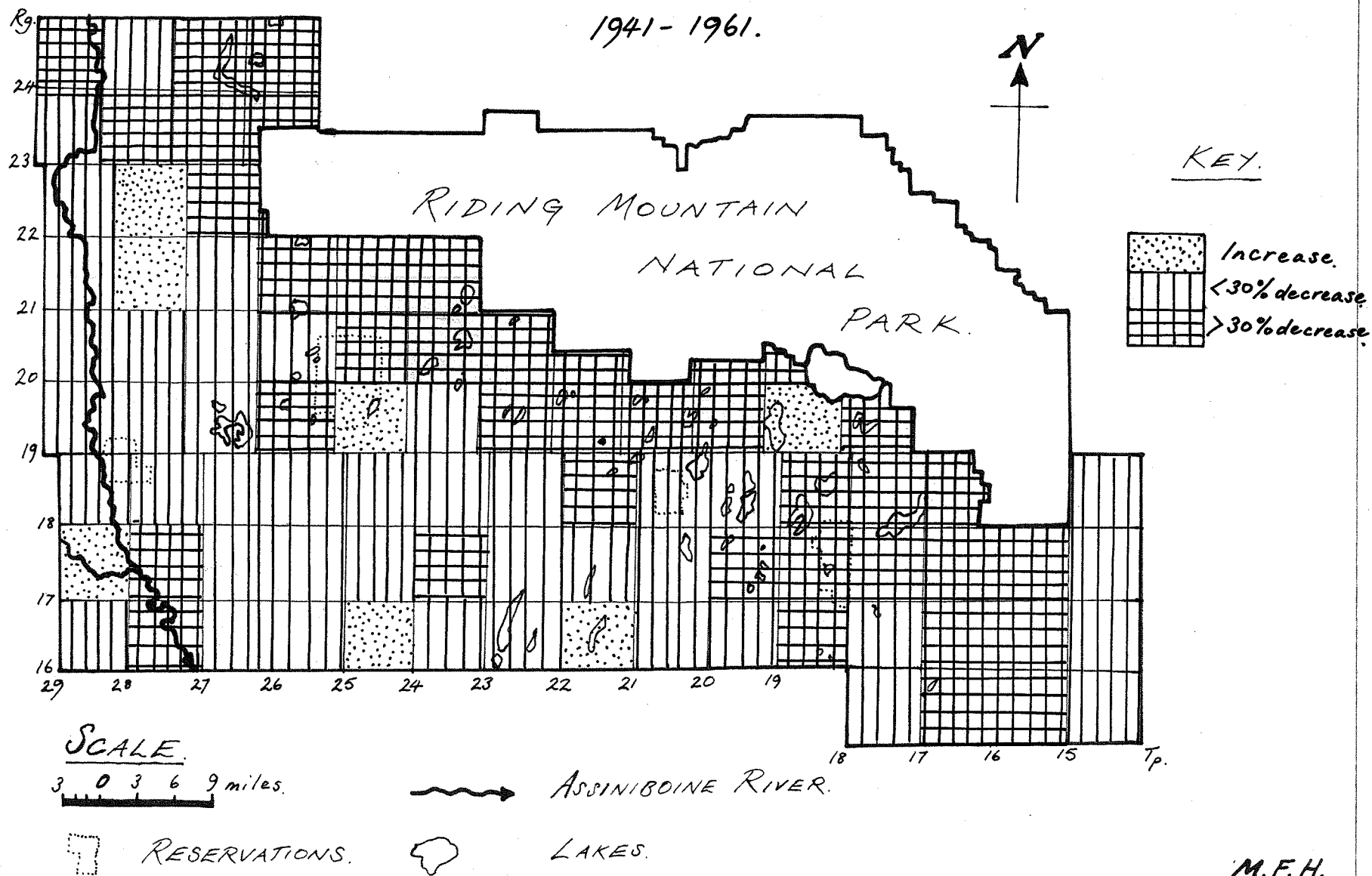
From the changes in totals (1941-1961) for the townships in the Riding Mountain area the accompanying map has been compiled. The average percentage change over the twenty years has been a 30% decline <sup>(1)</sup> for the study area. On this basis, the first map (Map 12) was drawn with a simple threefold division, i.e.:

1. Townships with above average decrease; Over - 30%
2. Townships with below average decrease; 0 to -29.9%
3. Townships with actual increase.

Map:  
12.

# TOTAL POPULATION CHANGE,

1941-1961.



M.F.H.  
'68.

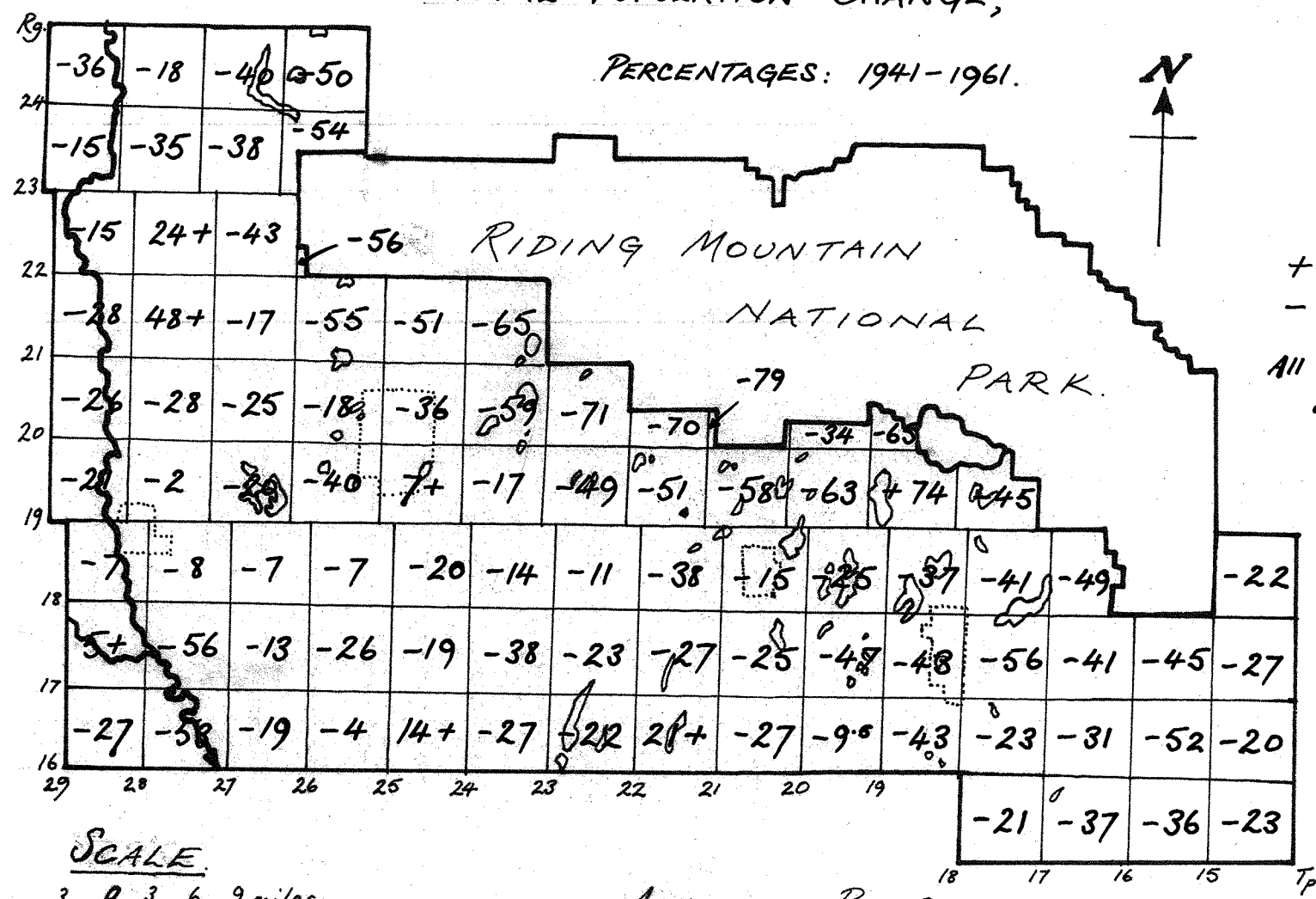
The actual percentage increases or decreases of each township are shown numerically on map 13. Whilst it should be borne in mind that percentage and numerical changes are not necessarily correlated, the map gives us basic information as to where greatest decrease has taken place. Before using such a map for correlation purposes however, it was necessary to ensure that it was not merely showing early and late, rather than heavy or light decline of population. It was possible that the settlements which had declined most were those that had reached their peak population earliest and hence had declined to a greater degree than the others at the time of measurement or vice versa. Therefore maps 14 and 15 were compiled indicating the date of maximum population for townships and municipalities. No clear correlation between early settlement and early decline of the more amenable southern part of the area arose, nor was there an obverse concurrence either.

However, as comparison of map 12, with the soil and relief maps will indicate, a strong correlation exists between heavy population decrease and the areas of poor soil type, sloping and comparatively inaccessible along the more elevated southern fringe of the Park. Hence the common idea of a relation between poor land and decreasing density of settlement seems basically valid. This common-sense belief in the effect of exposed, inhospitable tracts could be further substantiated by reference to farm assessments for the area. Detailed assessments are only made and published at long

Map:  
13.

# TOTAL POPULATION CHANGE,

PERCENTAGES: 1941-1961.



KEY.  
+ : Increase.  
- : Decrease.  
All figures are percentages.

SCALE.  
3 0 3 6 9 miles.

→ ASSINIBOINE RIVER.

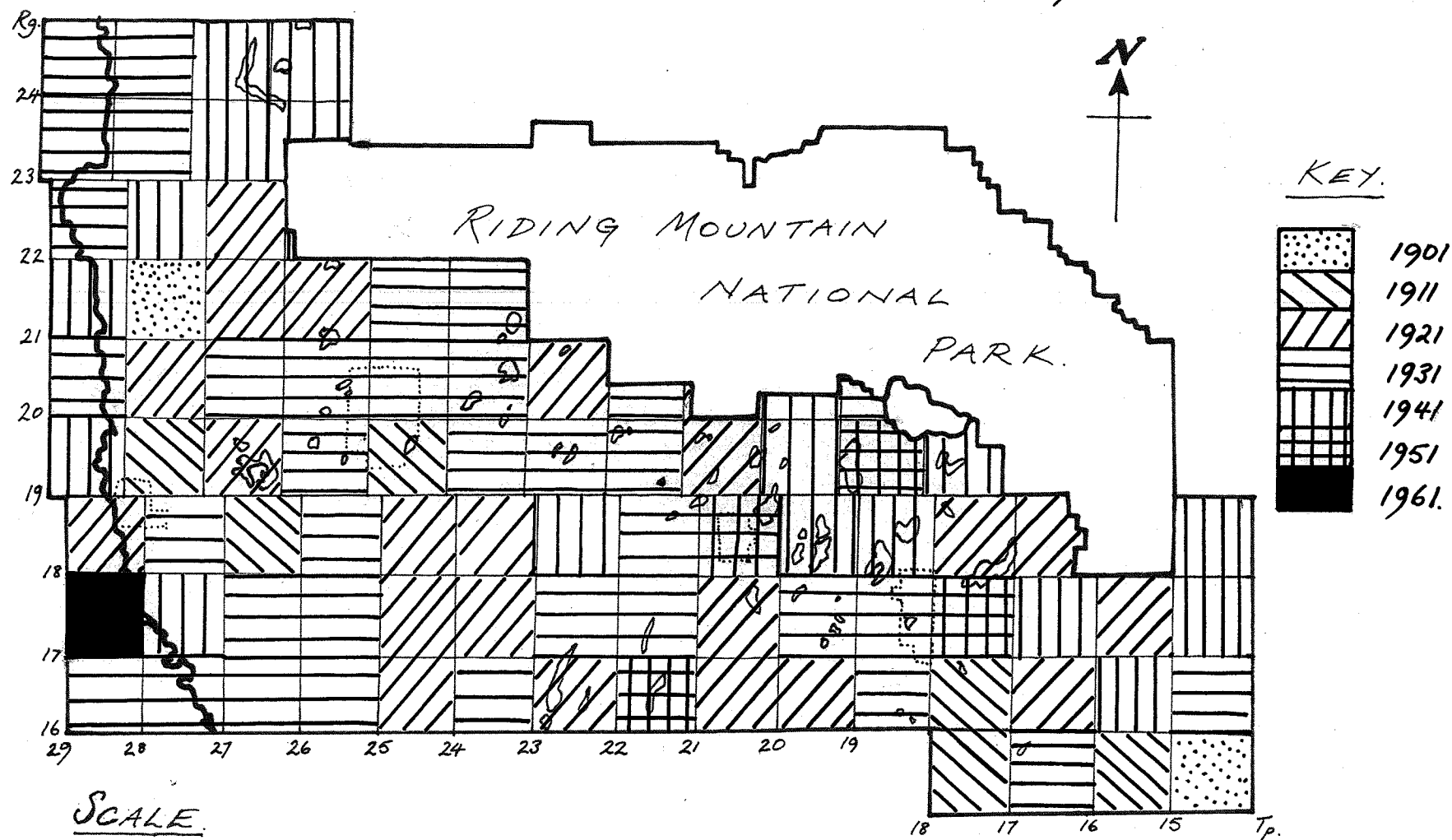
RESERVATIONS. LAKES.

M.F.H.  
'68.

Map:  
14.

# DATE OF MAXIMUM POPULATION.

~ TOWNSHIPS. AVERAGE FOR AREA : 1931.



SCALE

3 0 3 6 9 miles.

→ ASSINIBOINE RIVER.



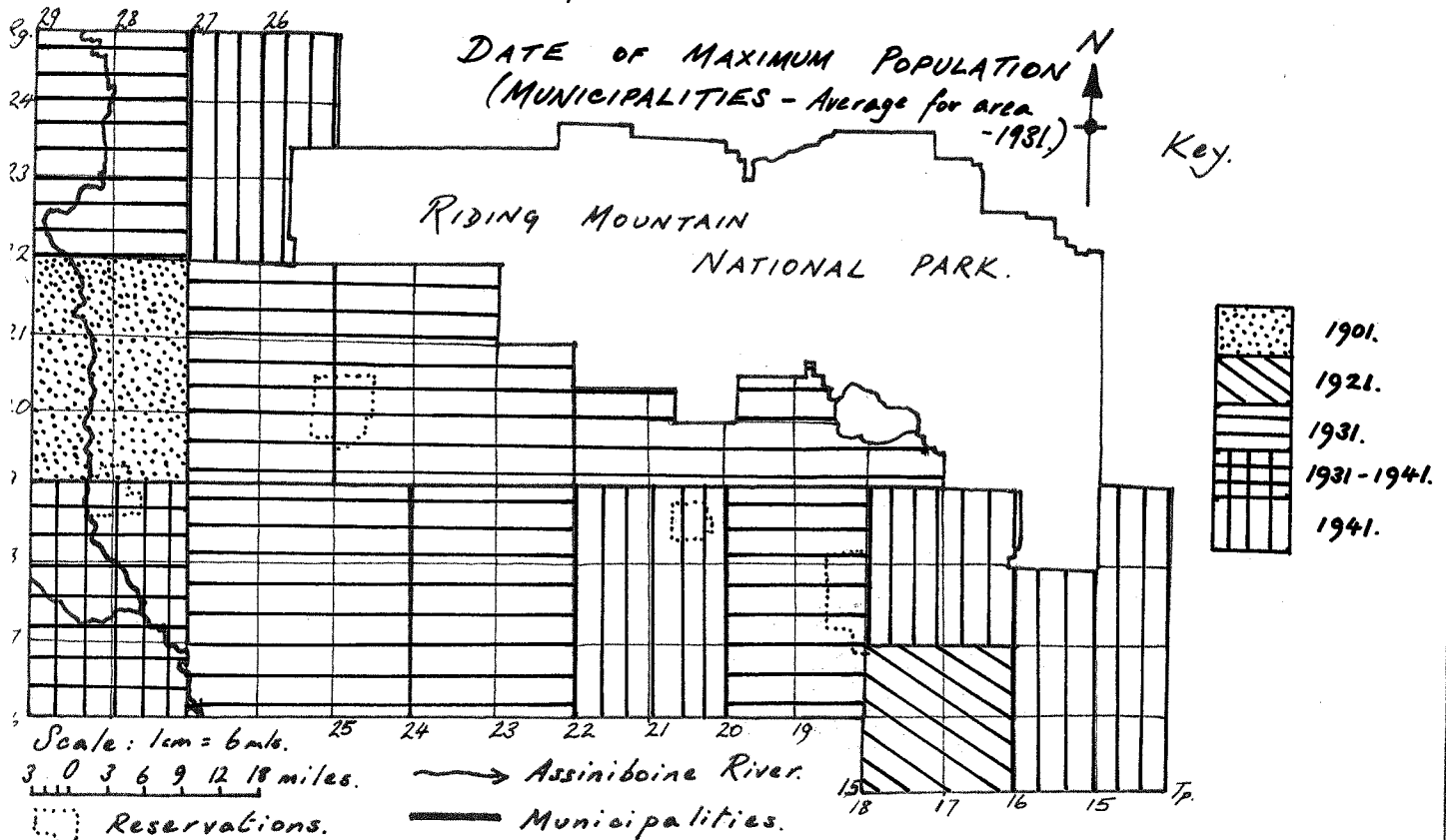
RESERVATIONS.



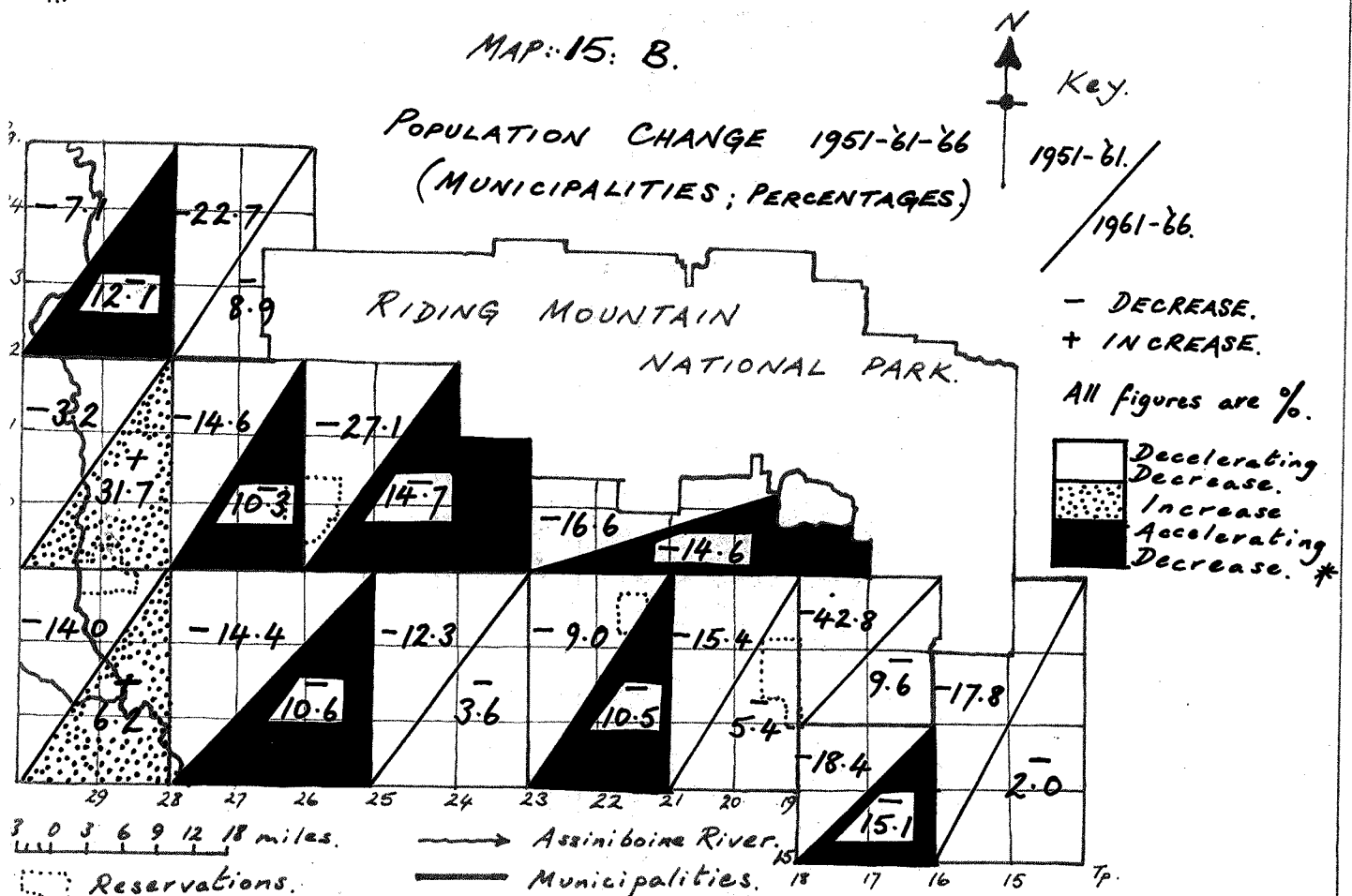
LAKES.

M.F.H.  
'68.

MAP: 15: A.



MAP: 15: B.



\* Where % decrease is more than half the 1951-'61 rate for the 1961-'66 period; decrease is said to be accelerating and vice-versa. M.F.H.

intervals, generally when re-assessment claims are due to be heard by the local court of adjustment. The author could only obtain copies of the original  $\frac{1}{4}$ -section farm assessment maps for seven of the fifteen municipalities in the area, and these were produced over a long time range:-

Land ( $\frac{1}{4}$ -section) assessment dates

Ellice	1914	Shellmouth	1938
Strathclair	1942	Birtle	1943
Boulton	1949	Minto	1953
L.G.D. of Park	1963.		

Hence values were not comparable. However the Park Administrator assured the author that the more southerly, densely peopled townships of the L.G.D. had higher agricultural assessments, and this was echoed for the whole area by the head of the Assessments Branch.

The basic correlation between accelerated population decline and impoverished sandy soils on the sloping edge of the till sheet is complicated by other factors. After noting the apparent correctness of our basic hypothesis, we should qualify this correlation. With Sharp and Kristjanson we may opine that:

'If past population trends are considered to have any application to the present situation, it follows that the most significant period of change is the most recent. It appears worthwhile, then, to attempt a more detailed analysis of changes occurring during the last intercensal period.' (2)

### Ethnic differences.

The term 'ethnic' is subject to much misuse outside its anthropological applications; and we will use it here to indicate groups of particular national origins, whose cultural identity is preserved, especially in linguistic form; and thus identified in the Census. (3)

The largest minority groups in Manitoba, the French and Mennonites, are not well represented in the study area, although there is a major concentration of French speaking persons in Ellice municipality, where more than half of the 1961 population reported French as their ethnic origin, French as their mother tongue and Roman Catholic as their religion. Doubtless in many other areas early French groups have been assimilated into the English-speaking majority. Substantial numbers of the third ethnic group - the Ukrainians - are found in Harrison, Rossburn, Silver Creek, and Shoal Lake and in the L.G.D. of Park. In these areas more than 40% of the population reported Ukrainian as their national origin. It will be noted that these areas of Ukrainian settlement have high rates of population loss which caused us to wonder if a connection existed. Hence it was necessary to examine the hypothesis that 'British' settlers might have a tendency to leave the farms and rural areas more readily than their East European counterparts because of the latter's history of farming difficult land under hard conditions, and their emigration to Canada for political as well as strictly economic reasons. The ethnic

groups table (on which map 16 is based) shows the percentage change in the ethnic composition of the study area 1941-61, and its numerical equivalent.<sup>(4)</sup>

Even allowing for possible differences in demographic rates of the ethnic groups, it is evident that the British proportion of the inhabitants of the whole area has declined markedly faster than the average for the region in almost every instance, (exceptions being Russell -28.5% and Strathclair -16.8% c.f. the regional average of -29.2%) and at a greater overall rate than any other ethnic group (-34.6%). In addition more British persons left the area than did members of all the other ethnic groups in the survey. Of the ethnic groups measured, the decline <sup>(5)</sup> in numbers over the two decades was as follows:

	<u>1941</u>	<u>1961</u>	<u>Loss</u>	<u>% Loss</u>
Total	25,700	18,200	7,500	29.6
British	11,022	7,205	3,817	34.6
Other groups *	14,688	10,995	3,683	25.1

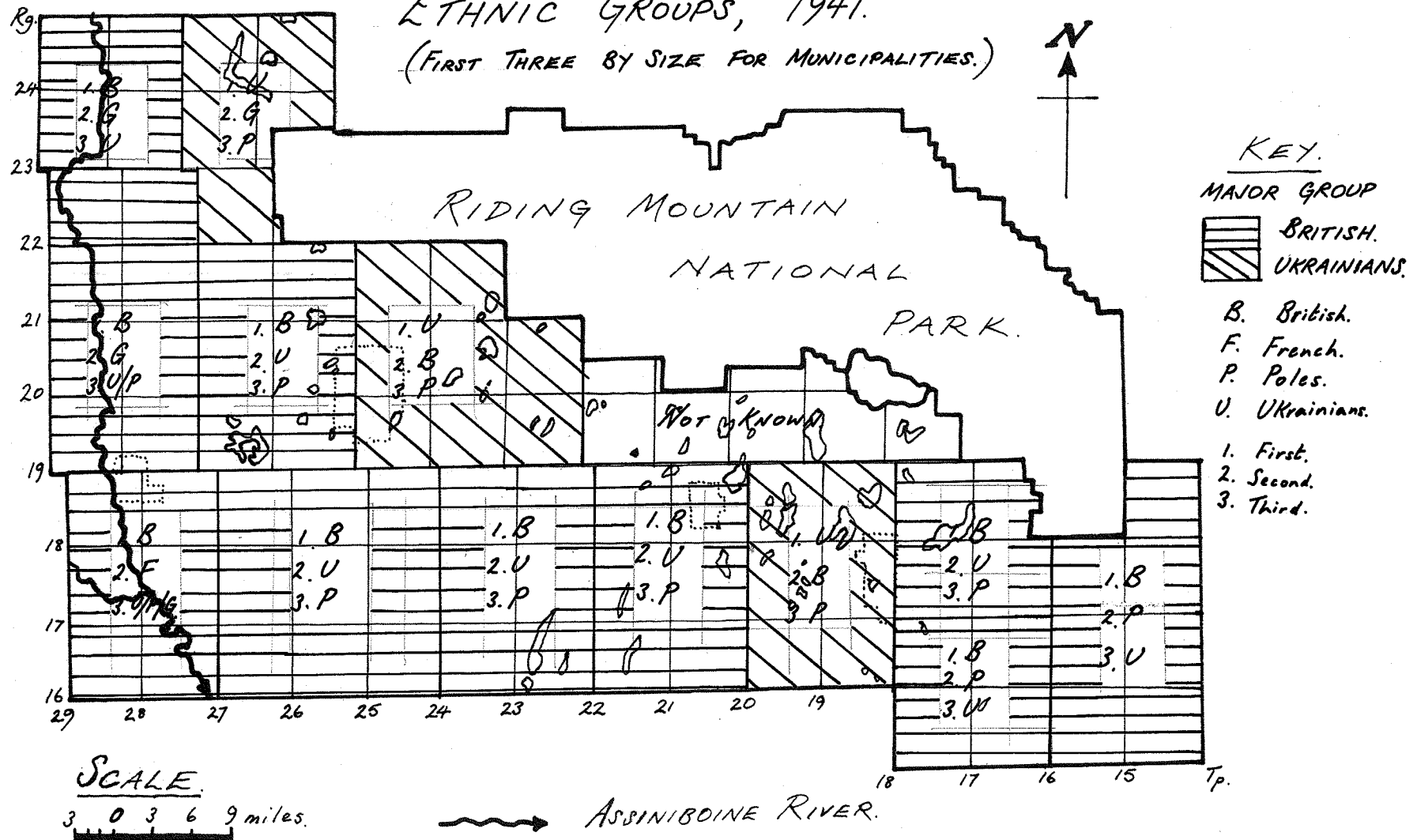
\* German, Ukranian, Polish.

The spectacular percentage increases in German numbers is partly attributable to the reluctance to admit to German origin during the war years, and may to some degree be discounted as the actual numbers involved are very small.

The figures quoted above do, however, serve to indicate that the East European settlers are more ready, for whatever reason, to remain on the poorer land than their British-origin counterparts. Their location there is partly attributable

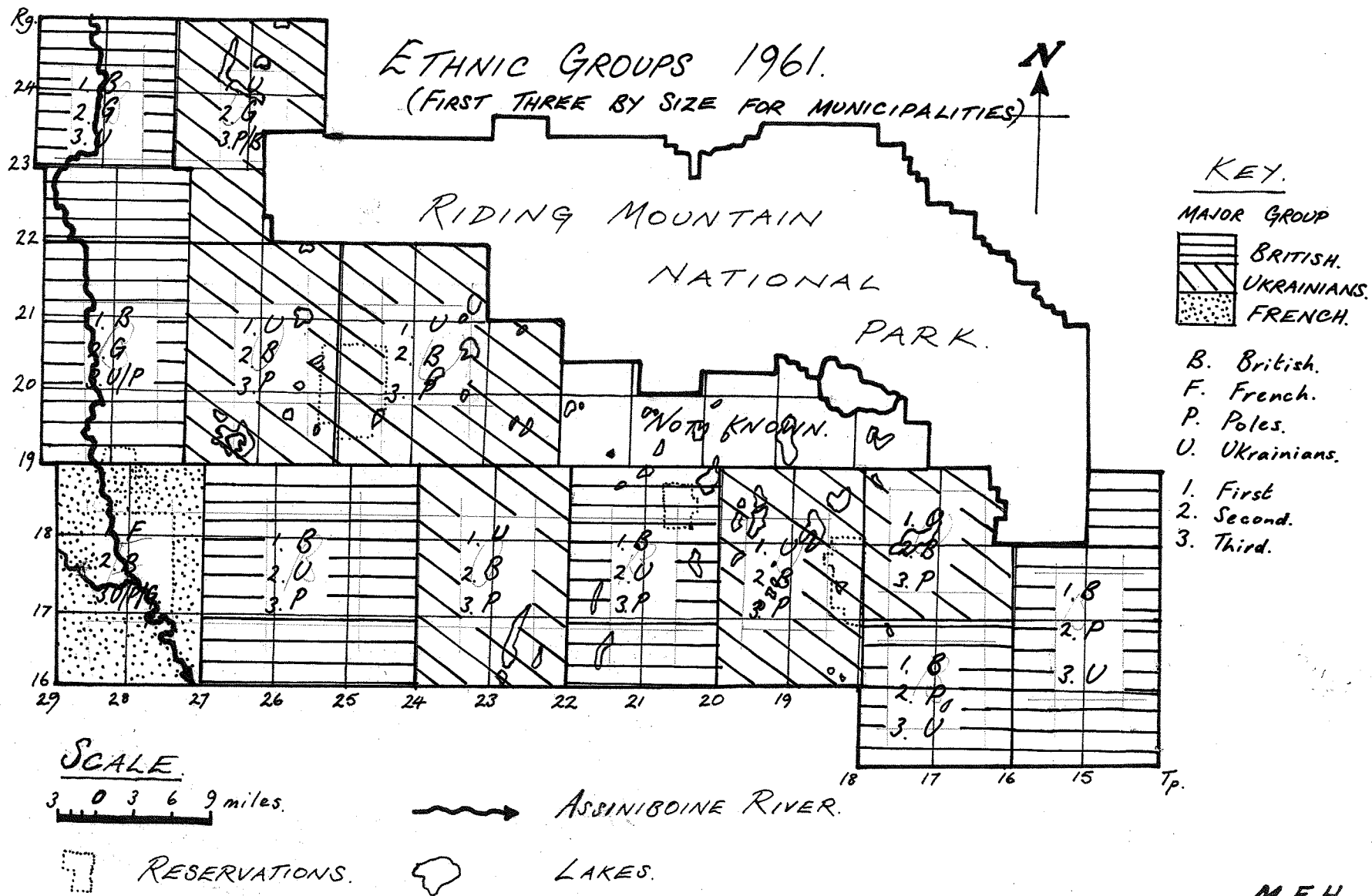
Map: 16

# ETHNIC GROUPS, 1941. (FIRST THREE BY SIZE FOR MUNICIPALITIES.)



M.F.H.  
'68.

Map: 17.



M.F.H.  
'68.

to the fact that they came into the area comparatively late in the settlement period, when much of the better agricultural lowland was already occupied.

#### Age-Sex Structure.

The present (1961) situation of the age-sex balance is shown in the following pyramids (full details of the numbers may be found in the appendix). A problem arises in the construct of these pyramids in that the Canadian census gives its age-sex data (from which they are derived) by five year age groups up to the age of twenty-four, and thence by decades to the age of sixty-five. Over sixty-five, age groups are grouped by five year periods. This device for grouping the relatively demographically inactive middle years presents one with an odd number of age groups, difficult to group by ten, and inaccurate to group by five year periods. Hence the writer has resorted to plotting by ten year groups, and has plotted the odd five year group at the base of the pyramid. In order not to give an unbalanced profile, we have resorted to the subterfuge of doubling the numbers aged 0 - 4 years so that overall proportions are better shown. This should be born in mind whilst examining the diagrams.

Comparison of the age-sex pyramid for the whole area with the Provincial diagram serves to indicate that the local structure is roughly akin to that for the rural non-farm element for Manitoba, as might be expected in this farming-and-service-settlement region. The pyramids for individual

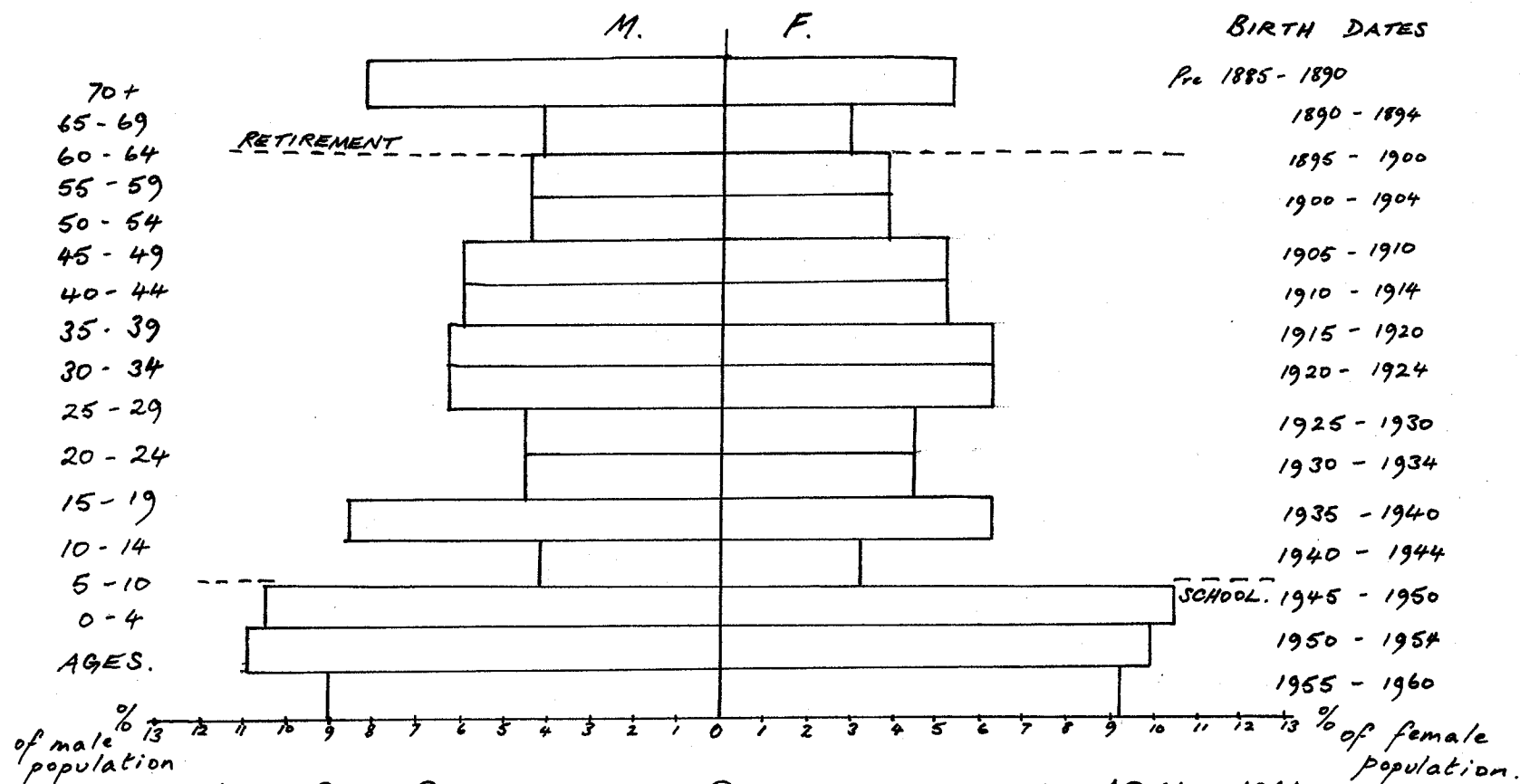
municipalities were independently grouped,<sup>(6)</sup> and divided as being roughly approximate to rural farm and rural non-farm in superficial shape. Those which appeared to indicate a rural farm structure were the municipalities of Boulton, Russell, Ellice, Rossburn and Clanwilliam, and those indicating a rural non-farm structure were the Shellmouth, Shoal Lake, Harrison, Strathclair and Rosedale municipalities. The pyramid profiles of Minto, Birtle and Silver Creek proved difficult to categorise.

It may be noted that there is fair correlation between the rural farm areas so defined with those municipalities experiencing greatest population decrease and having few and small urban centres.

More important however, is a consideration of the age-sex situation implied by these graphs - especially the one for the whole area. (Fig. 2).

Firstly the distorting effects of rural-urban migration are abundantly clear. Despite the fact that almost equal numbers of each sex are born, and attend school, the extreme differences in sex ratios between the ages of 15 and 25 years reflect the greater propensity for females to migrate to cities, and away from the farms. Similar differences in ratio for the older age groups are due in large part to the fact that widows remain on farms much less frequently than do widowers. The smaller proportions of the 1961 population in the young adult years reflect the effect of the depression, and consequent out-migration.

Fig : 2.



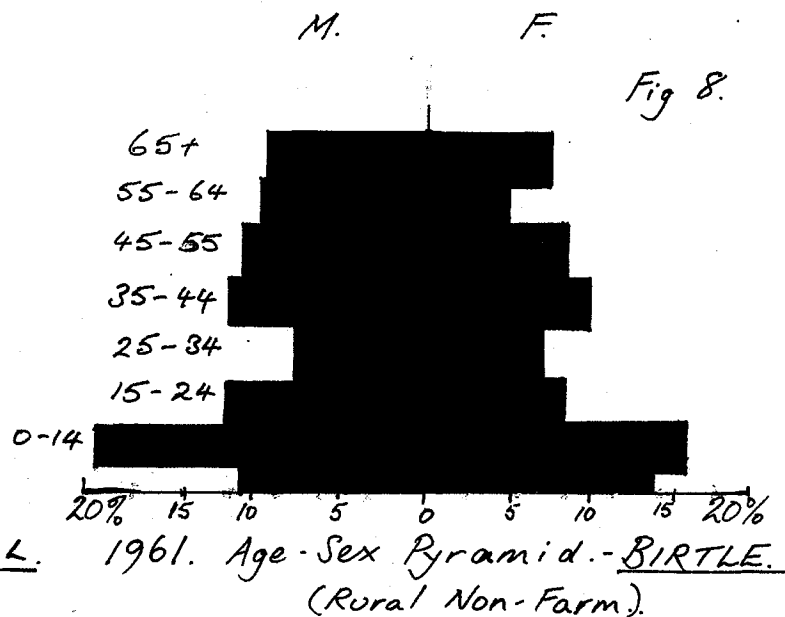
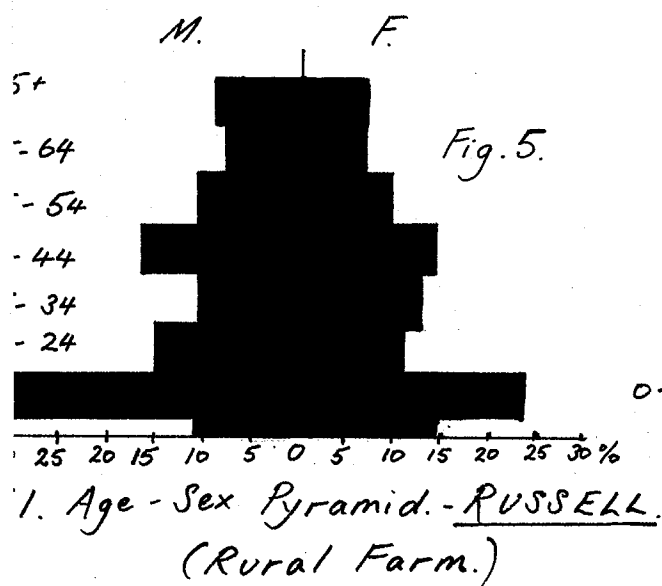
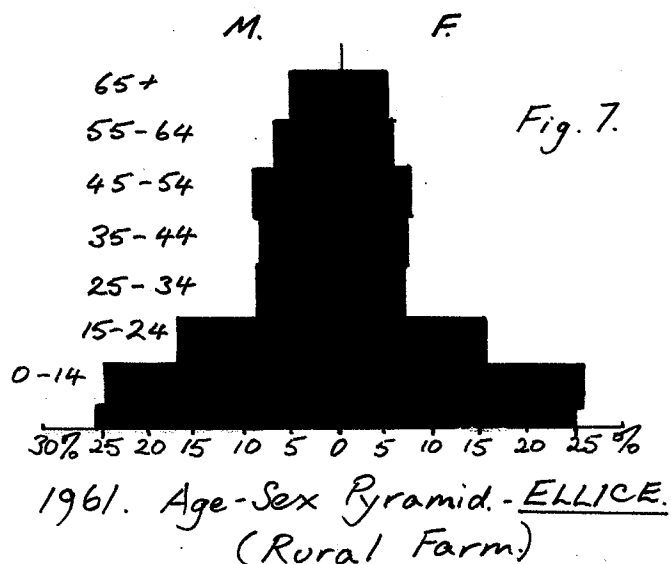
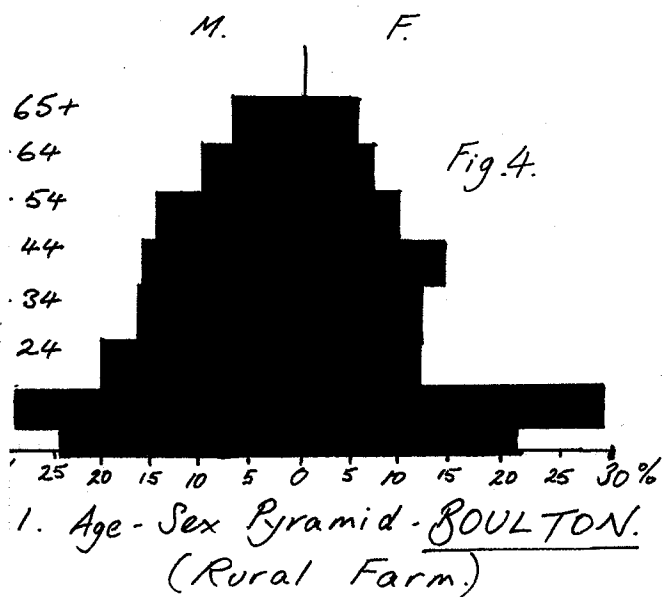
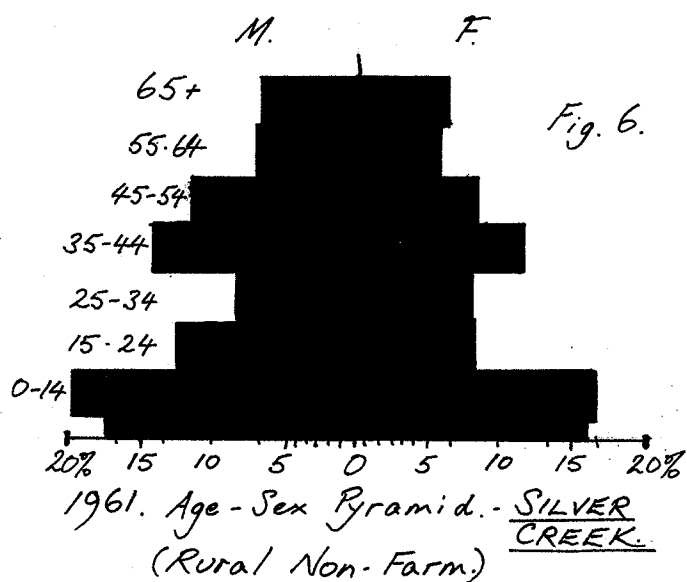
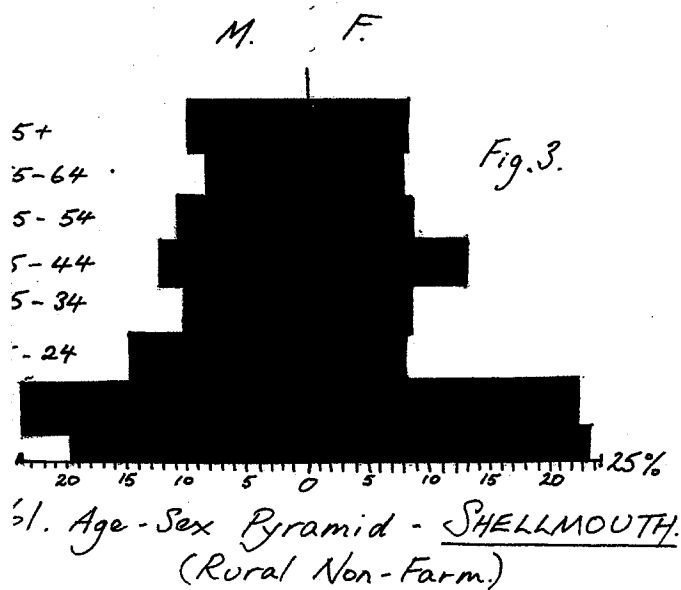
AGE-Sex PYRAMID OF RIDING MOUNTAIN AREA, 1961.

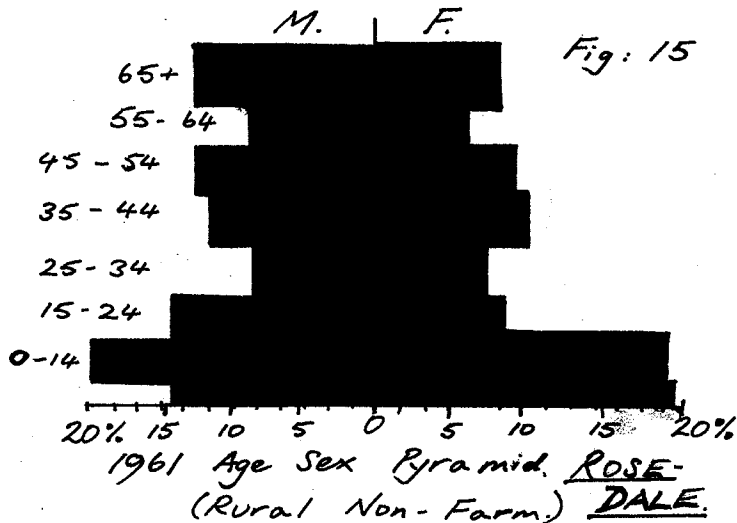
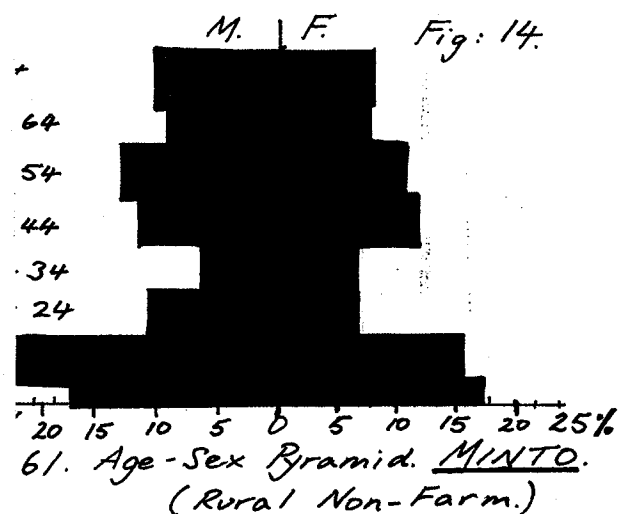
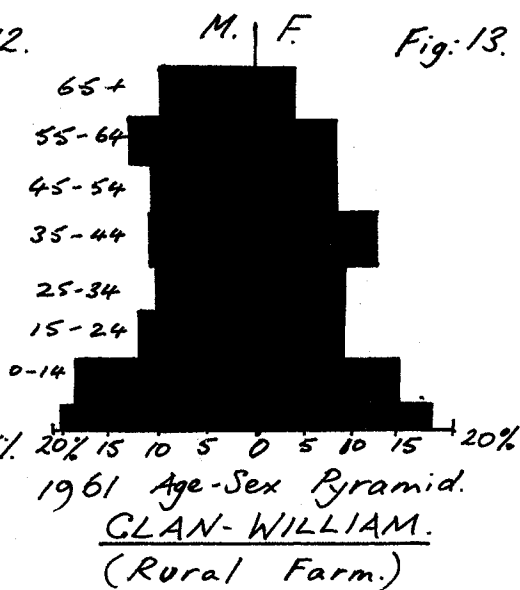
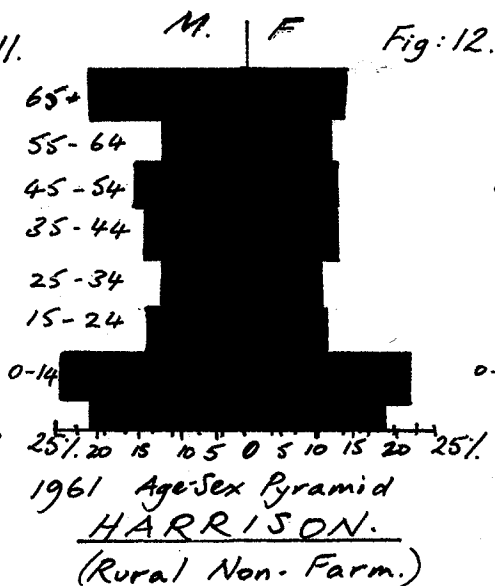
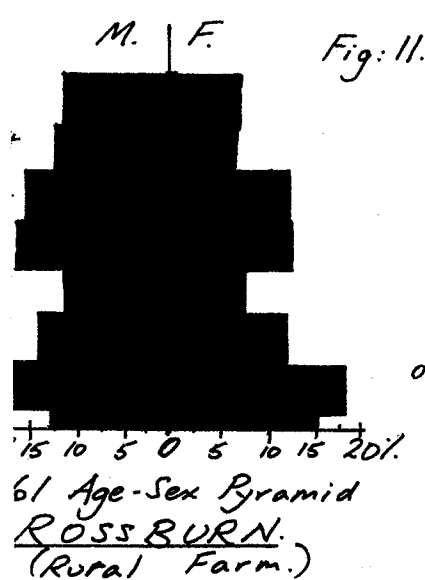
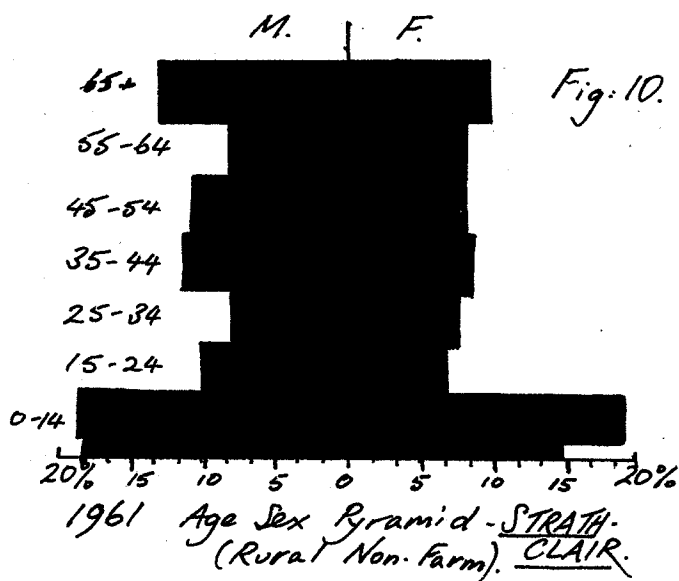
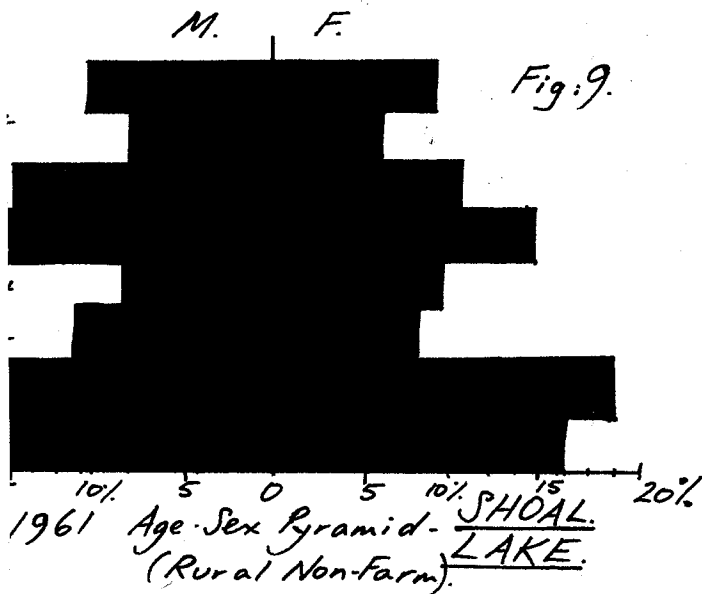
by 5 year age groups

Percentages are for each sex-group & should be halved for total population.

SOURCE. D.B.S. Census 1961.

M.F.H. '68.





Detail differentials are also important.

(a) Age group 65 and over. These people were born between 1885 and 1895, or even earlier, and many of them were not eligible for service in World War I. Having survived early infant mortality, improved medical facilities have enabled many of them to enjoy long life. Their particular dominance in those municipalities which have urban settlements may indicate a tendency for towns in our area to be used as retirement centres.

(b) Age group 55 - 64. Born between 1896 and 1905, some of these may have suffered in the war, or left the land during the depression, thirty years later.

(c) Age group 45 - 54. In all cases more numerous than the preceding group, these persons were born prior to World War I and are in a low mortality bracket.

(d) Age group 35 - 45. Born after the Great War, in a period of relative prosperity, although some would fight in the Second War, which however had a greater demographic effect on:-

(e) (Age group 25 - 34. A small birth cohort, the result of low wartime and depression marriage rate, and the emigration of many potential parents in the thirties.

(f) Age group 15 - 24. The sex imbalance here must be the result of selective migration. There is a numerical improvement in these people born in the early forties, but it bears no relation to the much greater numbers in the:-

(g) Age group 5 - 14. These children are many in

number as part of the postwar boom in prosperity and births. However they are roughly twice as many as the 15 - 24 years age group. This suggests the effect of selective migration on school leavers, who are unable to find jobs within the area; as well as increased births.

(h) Age group 0 - 4. This five year group is relatively small in number. If we double their numbers to give them their appropriate weight in this table we find that there are still fewer pre-school children than school children. This is born out by the five year totals printed on the graph. Hence the baby boom of the immediate post-war seems to be declining. By the time these infants leave school it seems likely that they will be rapidly decimated by migration out of the area. The effects of this drain on numbers will be discussed in later chapters. In short, our age-sex tables show us that two sets of factors are at work on our population balance. One is the impact of external events which make incursions into any population: wars, economic growth, and depression. The other is the local effect of in- and out-migration which effectively alters the sex and well as the age balance of the population. Our next task is to consider the differences in the demographic movement between farm and non-farm sectors of the occupants of the study area.

#### Rural farm and non-farm.

If we turn our attention to the differences in rates of

change between farm and non-farm population in the Riding Mountain area over the last decade, it is immediately apparent that the trend has been from farm to off-farm employment. Whilst all the municipalities in our study have experienced a decline in "population in farm", all but one (7) showed growth in their non-farm sector. (See Tables B & C in the appendix.) With the exception of Boulton, and Park L.G.D. where the numbers are small, all the municipalities had non-farm gains smaller in terms of percentage increase than the provincial average. Conversely they experienced generally greater percentage losses of farm population than the province as a whole. In short, although 3,751 persons left the farm population, only 1,400 persons swelled the numbers of the rural non-farm population, leaving a net deficit of some 2,350 persons despite the natural increase over the decade. As might be expected, the municipalities recording the greatest concentrations of non-farm workers are those enclosing urban settlements. It is worth noting here that percentage gains and losses can be misleading as is evinced in the case of Shoal Lake, which despite its low percentage growth, is probably the most 'urbanized' of the municipalities in the area. Some individual cases demand explanation, for instance the growth of non-farm population in the rather remote Ellice area might be accounted for by the opening of a mine across the border in Saskatchewan, or by the location of a P.F.R.A. pasturing area in the Municipality.

Before passing to a consideration of the effects of these internal movements on total migration trends we may give attention to the changes for the incorporated, or urban, settlements in this region, over the period.

Changes in numbers for towns and villages. (See map 20)

Three main size groups for the urban centres in our area may be distinguished, taking 1951 as the base year:

(i) those with more than 1,000 occupants, (ii) those with between 500 and 1,000 occupants, and (iii) those of under 500 occupants. It is a testimony both to the apparent utility of these arbitrary limits and to the comparative lack of urban growth in the Riding Mountain area that we find no town moving from one group to another in the period 1951-66. The towns in each group are listed below. (8)

Table 4.

Incorporated Places of 1000<sup>x</sup> population.

<u>Centre</u>	<u>1951</u>	<u>1961</u>	<u>% Change</u> <u>51-61</u>	<u>1966</u>	<u>% Change</u> <u>61-66</u>
Minnedosa	2085	2211	6.0	2286	3.4
Neepawa	2895	3197	10.4	3170	-0.8
Roblin * (9)	1055	1368	29.7	1582	15.6
Russell	1100	1263	14.8	1495	18.4
Provincial Average			31.4		5.6

Incorporated Places of 500-1,000 population

Birtle	741	846	14.2	852	0.7
Erickson	-	531	-	532	-
Rosburn	586	591	0.9	629	6.4
Shoal Lake	721	774	7.4	823	6.3
Provincial Average			9.5		1.7

Incorporated Places of less than 500 population

<u>Centre</u>	<u>1951</u>	<u>1961</u>	<u>% Change</u> <u>51-61</u>	<u>1966</u>	<u>% Change</u> <u>61-66</u>
Binscarth	451	456	5.2	485	13.6
Foxwarren	271	272	0.4	234	-14.0
St. Lazare	320	449	40.3	378	-15.8
Provincial Average			6.0		-1.8

Although the figures given in Table 4 are very varied they may perhaps bear out the supposition that the smaller centres are declining in importance and that although urban dwellers are forming a larger proportion of the total community, no really large centres are likely to develop. There is a considerable throughput resulting in a less than provincial degree of urbanisation as people pass through the hierarchy of towns to larger centres outside the area of study. The growth of incorporated places is not proportionate to the rate of rural decline. It is perhaps worth noting that the smaller settlements tend to be in the more remote areas with an increase in size as one approaches the south-eastern extremity of our region. Although the percentage changes in the urban population have been occasionally spectacular, the increase in numbers in incorporated places 1951-66 has only been of 2,241 persons, of the order of 16%. In the case of small towns only 55 people have been added in fifteen years, in the medium sized settlements less than eight hundred, and the four large towns have together grown by just under fourteen hundred persons over the period. The growth and future of these towns will be examined more fully in Chapter 5,

whilst here we must give our attention to drawing together all the foregoing threads to obtain a unified picture of the overall situation.

#### Population Changes in the Municipalities (10) 1951-66

Despite rural-urban, age-sex and ethnic differentials, the general trend, as expressed before, has been towards a loss in net population for the Riding Mountain area. This has been evinced in different degrees in different parts of the area as the following figures may serve to indicate.

Table 5.

#### Municipality Population Changes to 1966

	<u>1951</u>	<u>1961</u>	<u>1966<sup>*(11)</sup></u>	<u>% 1951</u>	<u>% 1961-66</u>
				<u>-61</u>	
Shellmouth	1572	1460	1284	-7.1	-12.1
Boulton	1267	979	892	-22.7	- 8.9
Russell	1081	1046	1378	- 3.2	+31.7
Silver Creek	1391	1188	1065	-14.6	-10.3
Ellice	983	845	897	-14.0	+ 6.2
Birtle	1832	1569	1403	-14.4	-10.6
Rosburn	2054	1499	1278	-27.1	-14.7
Park L.G.D.	2893	2412	2059	-16.6	-14.6
Shoal Lake	1513	1327	1279	-12.3	- 3.6
Strathclair	2211	2012	1801	- 9.0	-10.5
Harrison	2005	1697	1605	-15.4	- 5.4
Clanwilliam	1460	835	755	-42.8	- 9.6
Rosedale	3237	2662	2609	-17.8	-2.0
Minto	1324	1080	917	-18.4	-15.1

In percentage terms the results present a mixed picture. Five municipalities showed declining rates over the last five years as against the first decade. Seven showed accelerating rates of decline between 1961-66 compared to 1951-61 and two municipalities reversed the trend and showed numerical growth. In half the cases however, it seems that some degree of balance is being reached and the population is

settling as its decline is assuaged. No pattern for the area is discernible at this scale however.

But the total decline in numbers is not so great as the total out-migration, because of the previously mentioned positive contribution of natural increase. In our final chapter we will attempt to work out the effect of migration upon the total population in order to predict the future numbers of this area. The next task, however, is to consider the effects of agricultural and urban factors on the population's location and growth.

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### References

- (1) Depending on the statistics employed, average overall declines of 28%, 29%, and 31% were deduced. The figure of 30% is sufficiently accurate for present use, however.
- (2) Op. cit. P.5.
- (3) The following definition by Stancliff, Intovich and Moore may be of value:-  
"Ethnic group - an identifiable human group, the members of which share certain distinctive cultural characteristics whether overt or covert in nature. Language is often, though not necessarily, one such distinguishing culture trend. An ethnic group is typically one among other identifiable social groups which constitute part of a larger social whole." - P. 238, 'A Comparative Study of Value Orientations Among Three Ethnic Groups Living in The Province of Manitoba.' A.R.D.A. 1965.
- (4) Ethnic figures for Park L.G.D. not available. Table 'A'. of ethnic groups, is included in the appendix.
- (5) This sample does not include all ethnic groups listed. However it seems likely that the other groups followed the major trends as the total % loss for the given groups is 29.2% compared with the total % loss of population of 30%.

- (6) To avoid bias this was done by C. J. Kitching, B.A., of the Department of History, University of Durham.
- (7) Strathclair: 1951: 943. 1961: 938.  
Decline - 0.5% Source, Man. Dept. Agric.
- (8) Source, D.R.S. Census of Canada. 1951. 1961. 1966.
- (9) Part of increase due to annexation of extra territory.
- (10) Source, D.B.S. Census. Cited by G. A. Kristjanson in "Population Changes of Manitoba Municipalities 1951-61-66." Manitoba Department of Agriculture.
- (11) Provisional figures for 1966.

## CHAPTER 4

### AGRICULTURE.

In a study of population change such as this, it is desirable to know the past and present residence and employment patterns of the area under review, and to discover how far changes in occupation or production techniques have accelerated or modified the location and movement of the population. In the Riding Mountain area, as in other rural areas on the Prairie Margin, the agricultural sector is of major importance, and its fluctuations are an important economic factor in population change. Hence it is appropriate to give our consideration to changes in land use and agricultural practise over the study period in the Riding Mountain Area.

From the general decline in population numbers, evinced in the previous two chapters, it seems apparent that even if the larger settlements are holding or even increasing their population, there is a general consensus that the smaller settlements and rural areas are not, even though there are differences of opinion as to the reasons for and the effect of this movement. The rural secretary-treasurer for Russell municipality expressed this by saying that the increase of 41 persons in Russell R.M. during the past censal period had been in the fringe areas near the townsite. Elsewhere there is a slow rural decline:

"A farmer sells out of his  $\frac{1}{4}$  or  $\frac{1}{2}$  or  $\frac{3}{4}$  section but his place is rarely taken. It is mostly neighbours buying out; few new farmers moving in. The small farmer is

selling because he may need new machinery and the cost of re-equipping is too high for a small farm for it to be economic. Land values are good; they've been around \$130 an acre; so the older men retire on the profits. It's mostly men over fifty who are leaving - the others are trying to build up their farms. So the farm population is getting younger in most cases. You need a bigger farm to pay for machinery. Between five and eight farms a year are closing down in my area. Young people are moving to the towns. A few of them go to work at Esterhazy; they were short of men when the mine opened but not now. Farms always have labour problems; seasonal work, long hours. They only offer short periods of employment but they aren't prepared to pay high wages. Some of the small farmers work part time on the farm and at the mine." (1)

A similar situation seems to obtain in the Park L.G.D. although here land impoverishment rather than uneconomic operation of small units seems to be important.

"In the north part (Township 20, Range 19, 20, 21, 22), the edge of the Park, we hold several tax titles for arrears in payment. It's declining, poor land. There's nothing to keep a young person there - mostly the farmers are bachelors. Unless they can find a girl and keep her there, she leaves the area. The land is stony, only good for grazing, really sub-marginal. Further south it's good." (2)

In addition to the pressure for leaving uneconomic rural holdings, there are attractions in the larger towns further east. Views such as the following are common:

"The young people go to the city for education, and they don't come back. The old people retire to the small towns." (3)

"There's new buildings, modernizing and a good deal of money. But it's all old people in this town. The young ones go to Brandon, Winnipeg, where the jobs are. More town children leave than farm children." (4)

A variation in the east to the general pattern of neighbours buying out retiring farmers is found in Rosedale municipality. Since 1960 two Hutterite colonies have been established, and their members have bought up much land in

Tp 15, Rg.15 near Howden, Tp 15, Rg.16 near Polonia, and Tp 18, Rg.15 near Riding Mountain. Another has been established near Arden. (5)

A final comment which seems appropriate for inclusion because of its clarity is that of the Secretary-Treasurer of Birtle Rural Municipality. (6)

"Over the last couple of decades there has been a loss of about ninety persons every five years (from this municipality.) They leave because farming needs equipment, machinery, to compete efficiently - which is only economic if operated on a large farm - a section not a half section. The  $\frac{1}{4}$  to  $\frac{1}{2}$  section farmers have gone. Three quarters of a section is the minimum for operation today; some are one to three sections. People are not moving off the land into the small towns like this (Birtle) but as labour into industry. The existing more prosperous neighbours buy up the land that comes vacant - with the aid of Federal and Provincial Farm Loans. Their present land is offered as security to finance the loan. Much of the land is financed. There are fewer occupants but they have a better life. The population remaining is ageing somewhat. A lot of the leavers go east. The small schools are closing and the school districts are enlarging. The roads are better so they can take the children further to school in buses.

"In 1956 there were fifteen small school houses; now there are eight; soon there'll be only six. This is an area of moderate decrease. It's a good farming area; fairly prosperous and there are only a few tax arrears. The other settlement in this municipality is Solsgirth; it's decreasing in size. But the rural standard of living is good and improving."

There was also the feeling that the area was "getting into balance now" and that "though there are fewer people they're better off".

We will return to the discussion of these motives for migration from the rural area when we consider the survey undertaken by J. G. Mackenzie in 1961, (P60) and in our final chapter. Before doing so it is desirable to consider in

detail the agricultural base of the study area during the period 1941-1961.

About 58% of the land in the area (excluding the park) is under cultivation and some 90% of the cultivated portion is given over to grain and flaxseed. In general wheat thrives on the Black earth soils, and barley and oats are grown on the poorer soils, with flax in parts of the south eastern area. The general cropping practice is fallow, followed by two years of grain. Livestock are produced on most farms and in some areas are the major enterprise.

The use made of the land in our study area is seen by reference to the following table, which relates to the period 1941-51.

1941-51.

The figures in table 6 show that with a few exceptions the land in the respective municipalities was nearly all held as farms. The exceptions include Ellice municipality in which a large portion of the land was used for community pastures, and Boulton municipality which contains a portion of the National Park. However the figures must not be considered as too precise, for as the Census Report explains, the area of occupied farms reported for each municipality represents the area of land operated by farmers whose headquarters are in that municipality, and large areas of timber land or land not operated as part of the farm business were excluded. In fact, almost all of the land in the area, other than that mentioned in the foregoing exceptions was held as farm land.

The table shows that whereas there was generally a slight increase in the farm acreage between 1941 and 1951 the number of individual farms in many municipalities was already showing signs of decrease, as farms grew in size. A consideration of the reasons hypothesized for this continuing trend in rural decline is given elsewhere.

Table 6.

1941-1951

<u>Municipalities</u>	<u>Number of farms</u>		<u>Acreage held as farms</u>		<u>Farm land as percent of total</u>	
	<u>1941</u>	<u>1951</u>	<u>1941</u>	<u>1951</u>	<u>1941</u>	<u>1951</u>
Shellmouth	328	300	117,627	126,452	82.23	88.40
Boulton x	340	311	85,997	88,120	64.28	65.40
Russell x	258	263	118,090	119,998	96.84	98.49
Silver Creek x	332	316	125,357	128,840	83.74	86.07
Rossburn x	554	485	152,820	154,902	91.49	92.73
L.G.D. of						
Park (Part)	446	335	106,819	104,639	86.14	84.39
Ellice x	159	149	124,486	124,156	52.58	52.45
Birtle	450	441	193,700	196,016	95.14	98.49
Shoal Lake	288	284	140,168	134,506	101.4?	97.30
Strathclair x	332	332	125,524	129,351	90.80	93.57
Harrison x	355	302	108,104	114,832	78.20	83.07

x Includes Reserves and Pastures.

Census of Canada 1941-51.

The data presented shows that there is considerable variation in the percentage of improved land in different portions of the map area. (See map 18) In general the proportion of land under cultivation decreases from south to north and is at its lowest in the wooded zone on the south slope of Riding Mountain. An exception occurs in Ellice, where the extensive areas of gravelly soils are used for grazing. The unimproved land may be composed of ravines;

stony, gravelly or coarse textured soils; dunes; saline soils; wet unbroken land is chiefly utilized for pasture and woodlots, and native hay is obtained from the poorly drained areas. The most common farm size over the area in the decade 1941-51 was the three quarter section unit. As was previously indicated, this seems to be the minimum area which it is economic to farm with modern mechanical techniques. However, farms vary in average size in different portions of the study area, being largest on the gravelly and sandy soils of Ellice, and smallest on the wooded soils in Rossburn, Boulton and the L.G.D. of Park. The average number of acres per farm in each of the municipalities above the escarpment has been calculated from the D.B.S. Census figures as follows:

Table 7.

1951 Farm Size (Average) for Municipalities

(Section)	640 acres	Ellice	833 acres
Shellmouth	422 "	Birtle	444 "
Boulton	283 "	Shoal Lake	474 "
Russell	456 "	Strathclair	390 "
Silver Creek	408 "	Harrison	380 "
Rossburn	319 "		
L.G.D. of Park	312 "		
		Average	429 acres. (67% of section)

It is now advisable to turn to a more detailed consideration of recent trends in the agricultural pattern of this area. Instead of alluding to the whole area as a unit, the author has divided it into four sections to facilitate the delineation of local differences. As the study area encompasses the Russell and Shoal Lake agricultural

representative areas, and includes portions of Roblin and Minnedosa A.R.A.'s also the division has been made along their section lines. In addition to rendering data from their reports more immediately utilizable, this provides us with four areas each centreing on a main local market town, from which the farms receive the bulk of their day-to-day foods and services, and to which they contribute much of their produce for processing and shipment. These towns will be considered separately in the subsequent chapter on urban centres; here we will be concerned with agricultural and rural changes in the areas that they serve.

#### 1951-61.

The four divisions are shown on the accompanying map. They are composed as follows. The northern division includes the rural municipalities of Shellmouth and Boulton, the western comprises Russell, Silver Creek and Ellice, the central is made up of Rossburn, Birtle, Shoal Lake, Strathclair and the western part of Park L.G.D., and the eastern division holds the eastern part of Park L.G.D. together with Harrison, Clanwilliam and Minto. Rosedale, lying below the scarp largely, is not included in the eastern region as it looks towards Neepawa rather than into our present area. (See map 26).

#### The northern division

The total population of this area over the ten year period 1951-61 decreased by 27%. Although some overall lowering of the rate of natural increase occurred, the bulk of this

decrease was due to net out-migration from the area. Farm population showed a decrease of 25.9%, slightly above the provincial average of 21.0%. However non-farm population increased at more than the Provincial rate - especially in Boulton (322.2%).

Children up to the age of 14 constituted just over 37% of the entire population. About 15% of the population were over 55. 23% of the population was between the ages of 35 and 54. There was a tendency for males to exceed females in almost every age group.

Of the population not attending school, over 90% had no more than Grade IX education. The town of Roblin, the main centre for this area, had 76.7% in this category. The majority of school attenders are in Grade IX or below and this is true throughout the area. Roblin may attract retired persons to some extent as 22.4% of its population was in the "over 55" age group.

#### The western division

This region had the lowest decrease in population over the decade, registering a decline of only 1.3%. There was a lowering in the rate of natural increase in Russell and the town of Russell, but Silver Creek and Ellice showed increases. The decrease in population in the area may be attributed to out-migration. Farm population decreased at the same rate as the provincial average. Non-farm population increased by only 28.4% however: below the provincial rate of 48.4%.

Children under 14 were about 38% of the entire population

of the three municipalities and about 24% of the population were in the 35 to 54 age group. The proportion of males to females was only above unity in the 15-24 age group. Of those who had left school, some 84% had less than Grade X education. However the Town of Russell had only 70.5% of its similar group in this category. Like the other urban centres the town had a relatively low proportion of children (26.8%) and a high proportion of retired persons, 28.8% over 55 years against an area average of 13.8% for that age group.

#### The central division

In these four municipalities and part of the local government district, the decade's decline in population was 10.5%, again largely the result of net migration loss. Although farm population decrease (22.8%) was virtually similar to that for the province (21%), non-farm increase was slight (8.2%) and in Strathclair a minute decrease of 0.5% was recorded.

Schoolage children made up 30.7% of the population though the larger settlements showed lower percentages, just as their proportion of older people was higher than the average (20%) for the whole area. (See table 8).

Table 8.

	<u>% under 14 yrs.</u>	<u>% over 55 yrs.</u>
Birtle town	30.5	26.8
Foxwarren village	26.4	37.4
Rosburn village	22.3	34.3
Shoal Lake village	26.3	25.8
Average for area	<u>30.7</u>	<u>20</u>

Although males exceeded females in all age groups for the rural parts, the opposite appertained in the villages; of the post-school population 81% had not gone beyond Grade IX, with a slightly lower urban percentage (72.8%).

The eastern division

Here the population decrease for 1951-61 amounted to 8.1%. Minnedosa however showed an increase of 6.0%, and is probably the most dynamic and prosperous settlement in our whole study area. As before, migration rather than declining natural increase characterize the decline. In this area farm population decrease was 24% and non-farm increase only 18.4%.

The "under 14" age group was responsible for 32% of the local area's population, and the "over 55" age group accounted for 21%, with the urban centres having modified returns as follows:

	<u>Under 14</u>	<u>Over 55</u>
Minnedosa	30.1%	25.1%
Erickson	27.9%	25.0%

Some 26% of the area's people were between the ages of 35 and 54 in 1961. In common with the other divisions a high proportion of the inhabitants had no more than Grade IX schooling (82%) although this was again ameliorated in Minnedosa (70.2%) and Erickson (79%). The general trends are thus apparent across the whole area, though there are variations with local agricultural prosperity and urban size.

### Agricultural situation over the last five years

In the following pages, the local farm statistics are again compared to each other and to provincial averages, to give an indication of variations and trends. While in the province as the whole there was an increase of 8.3% in the area of rented farm land, for the area under review the percentage varied between a 0.4% increase (for the western division) and 14.9% (northern). The central and eastern divisions experienced an increase of 5.5% and 4.5% respectively. The area of farm land owned in Manitoba showed a decrease of 0.7%. In the north of our area it declined by 2.9%, in the west by 6.0%, in the centre by 6.4% and by 1.5% in the east; indicating a more than average sale of land throughout the Riding Mountain area. However the total area of farm land in use for the province was increased by 1.3% and the improved area increased by 4.5%. Our four divisions showed changes quite at variance with the province and each other, viz:

	<u>% land in use</u>	<u>% land improved</u>
North	1.1% increase	8.5% increase
West	4.7% decrease	10.4% increase
Central	0.6% decrease	6.1% increase
East	0.1% increase	4.6% increase

(Red figures indicate above provincial average trend and vice versa.)

Despite the substantial increase in improved land area, all four divisions still have lower percentages (60%) of their farm land improved than the provincial average (66%). Throughout the study area just over half the improved land

was given over to crops at one time though the area of summer fallow in the central area was well below that in the rest of the region. Woodland was heaviest in the areas that are adjacent to the park slopes, and much thinner in the gravelly, lower land of the Russell and Ellice municipalities.

Livestock figures are not included in the Representative's report for the western part of the area. However for the remaining area cattle numbers showed an increase only a little below the provincial average of 14%. In common with the rest of Manitoba dairy cattle, the most 'tying' farming element, decreased and beef cattle increased markedly. In the north swine numbers decreased slightly, but the area south of the park showed an overall increase of 35% similar to the provincial increase of 40%. The growth in swine numbers was uneven however, and Shoal Lake and Rossburn had actual decreases.

It seems that sheep present a local and specialized case for though more than average increases were observed in some municipalities some showed actual declines. This is probably related to local housing conditions. Hen, chicken and pullet numbers throughout the area decreased markedly, contrary to an overall rise in Manitoba of some 4.6%.

If we turn to a consideration of farm numbers and size, we find that Manitoba experienced a 17.3% decrease in numbers of units over this period. Except for the Boulton and Shellmouth area, the average decline in the municipalities was everywhere below this figure, despite a general increase

of average farm size to around 450 acres each. As formerly, the largest farms tended to be along the south west edge of the area, and the smallest grouped along the southern slope of Riding Mountain. In common with the rest of the province, the trend towards larger units was accompanied by a decline of the small farms of less than half a section, because of their increasing economic unviability. The changes were, however, less evident than those for the rest of Manitoba.

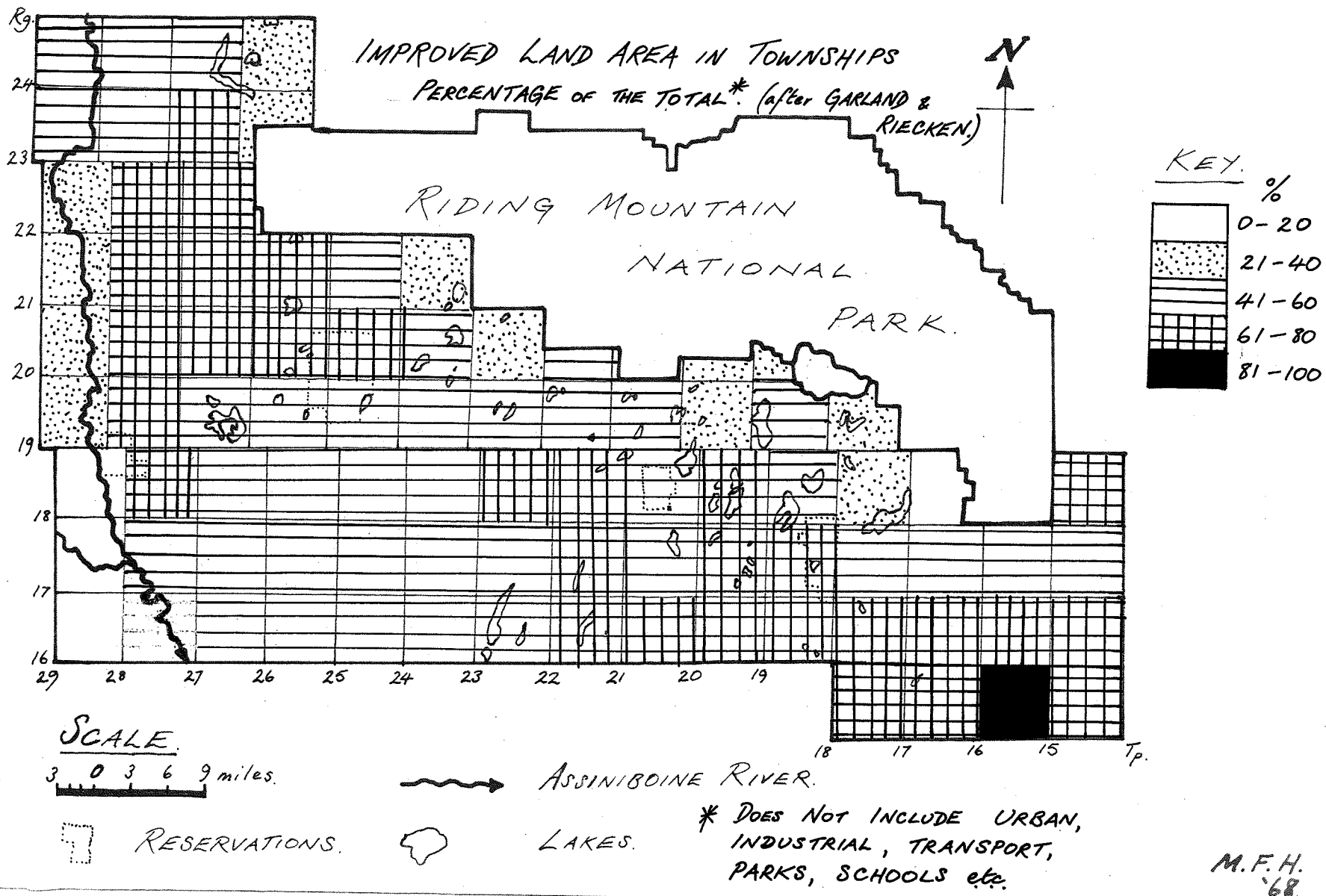
Table 9.

	<u>% increase in farms</u> <u>over 560 acres</u>	<u>% decrease in farms</u> <u>under 240 acres</u>
Manitoba	27.3	37.0
West division	16.2	23.1
Central division	26.3	36.3
East division	20.0	34.4

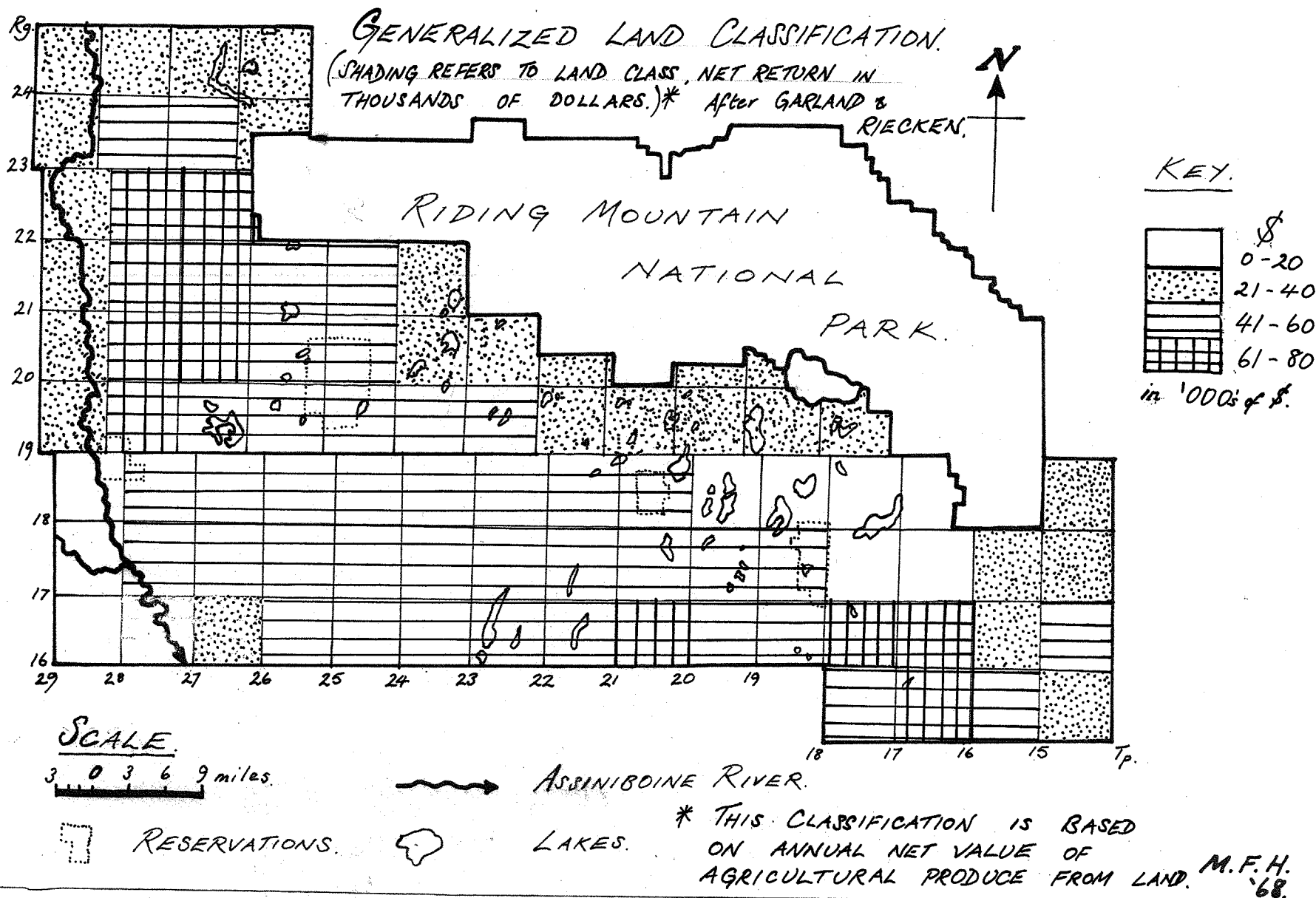
No figures for Shellmouth, Boulton and Rosedale.

The proportion of improved land per farm increased markedly over the decade from 1951, especially in the poorer areas of the north and west corner, and stood at around 270 acres per farm (roughly the provincial average) by 1961. Although by 1961 over 85% of the farms had electric power, this was still a little below the average for Manitoba. Also there were relatively fewer tractors per hundred farms than in the province as a whole, except in the area around Minnedosa, and this may be some indicator of lagging modernization for the Riding Mountain area. However as no details are available for size or age of machinery, this comparison may be of limited validity.

Map: 18.



Map: 188.



One method of classifying commercial farms is by total value of agricultural products sold off the farm. The Canadian Census defines a "commercial farm" as one whose gross value of sales from farm products is above \$1200 in any one year. Farms whose gross sales are under \$1200 may be broken down into three categories. The first, classified as "part-time farms" are those where gross sales from farm products are between \$250 and \$1200 but where off-farm income is above farm income, or at least 100 days are worked off the farm each year. The second class, which the census defines as "other", sell between \$250 and \$1200 worth of produce, but off farm income is less than farm income and less than 100 days are worked off the farm per annum. The third classification is "residential farms" - which sell less than \$250 worth of agricultural produce, being essentially places of residence. The accompanying table indicates the number of farms in each of the foregoing categories in the four agricultural divisions. (See Table D in appendix.) These figures show that there are relatively few very prosperous farm units in the study area, especially in the northern area. However the low percentage of part time and residential farms serves to indicate that farmers in the area are primarily full time operators with little significant off farm employment. About a quarter of the farms in the Riding Mountain area were holding mortgages, which suggests that an appreciable number of farmers are using credit to enlarge their units or increase farm productivity.

Throughout the area large increases in the proportion of wheat in the improved land area were made during the period 1956-61, greatest in the north and west indicating a swing to this grain with the use of hardier strains and increasing prices, at the expense of other crops. Appendix Table E indicates the way that improved land was divided according to crops in the five years under review.

The figures indicating increases for rye and mixed grains and corn should be conservatively interpreted, as they not only indicate very small actual acreages, but also very short term trends. In the case of mixed grains, there was a heavy seeding in 1961, a dry year, in the hope of offsetting possible feed shortages in the coming winter. Wheat, however, comprises some 40% to 50% of the area under crops and is the pre-eminent cereal in the area, and wheat farms accounted for over one third of the farms in the area. Small grains (30%) and livestock (15%) were the other main farm types in the region. As might be expected increases in wheat acreages occurred in the areas where the crop had a relatively low degree importance or dominance, so that the acreage increases were more uniformly spread than the percentage changes.

The vast majority of farmers were resident on their farms throughout the year and only about one in ten were operated by absentees. Over half the farmers were between the ages of 35 and 55. Roughly 20% were under 35, another 20% were between 55 and 65, and 10% were over 65 years of age. Compared to the rest of the province these statistics indicate

something of an ageing of the farm population in the area. More than a quarter of the capital investment on the farms of each division was in the form of machinery and equipment which seems to indicate an increasing awareness and use of modern farm techniques, especially as this is a rather high degree of investment for Manitoba. (7)

In concluding this chapter on the general pattern and trends of agriculture in the area, it may be worthwhile considering the methods by which the changes in farm size and numbers have occurred: the mechanics of agricultural re-organization in this area. Very apposite in this regard is a detailed study conducted by J. G. Mackenzie of some 561 farms in the Riding Mountain area, over the period 1956-60, (8) for the Canada Department of Agriculture.

In 1956, of the farms surveyed, 74% were of three-quarter section size or less. The accompanying table shows the distribution of these farm units, by size, and the number of new units formed in each group up to 1960. (See Table F.)

Of the total number of farms recorded in 1956, about 25% had disappeared by 1960. The land parcels which made up these units had either been absorbed into neighbouring units or re-organized into new units by new operators. Some 23% of the 1956 farms were larger in size when the area was revisited four years later. For the purposes of Mackenzie's table it should be borne in mind that these farms, in the process of acquiring new land, frequently moved up into the next size group where they are recorded as new units. (See Appendix Table F.)

In 1960 the area of Mackenzie's study comprised 471 farm units. About 60% of these were of the same size as before, and 40% were "new units". (9) The proportion of units which had remained the same size was fairly constant for all unit-size groups. As well as the farms of increased acreage, many new units were formed either by the re-organization of land parcels which were sold directly by operators who had abandoned farming, or through the settlement of estates. The 12 new farms in the smallest group (see column 1, Table F, Appendix) would all have been formed from land parcels which previously had been part of larger units that had broken up through sale or inheritance. However, the new units in the other farm size groups came also from farms which had "moved up" because of accretions.

The relationship between the number of new farm units and the number of units which disappeared varied by unit-size group. During the 1956-60 period the change was as follows:

	<u><math>\frac{1}{4}</math> section - farms</u>	<u><math>\frac{1}{2}</math> section farms</u>	<u><math>\frac{3}{4}</math> section farms</u>	<u>section farms</u>	<u>and larger</u>
1956-60	- 30%	- 31%	- 27%	- 13%	-100%

By 1960 because of the shift to larger farm sizes the full section and larger unit farms made up 39% of the total. Another proportion which varied with farm size was the propensity of farmers to own their land. The smaller farms are more often owned than the larger. (See Mackenzie's second table - Appendix.)

"Farm people", says Mackenzie, "seem to associate

security of livelihood for the family with land ownership."<sup>(10)</sup> He opines that to reach this stage of security the operators of smaller farms strive to own their land, whereas the larger farmers, being economically secure, try to enlarge their holdings in order to increase returns to labour and capital investment in machinery. They are prepared to rent land to do this. Moreover, of course, the farmer often acquires more land by mortgaging his present holding.

Mackenzie found that many operators of small uneconomic units are not fully replacing capital investment in buildings and machinery, but are inclined to sell out when faced with heavy new capital expenditure. Neighbours and families often pool capital equipment to achieve greater economy. He summarizes his findings by saying: "The shift of land parcels from small to larger units would suggest that operators of grain or grain-livestock farms on Newdale clay loams consider an economic unit to be one that is at least four quarter sections in size."<sup>(11)</sup>

Before comparing Mackenzie's comments with the author's own findings noted previously,<sup>(12)</sup> it is desirable to follow this general review of agricultural practice with an analysis of the urban centres which serve the Riding Mountain area.<sup>(13)</sup>

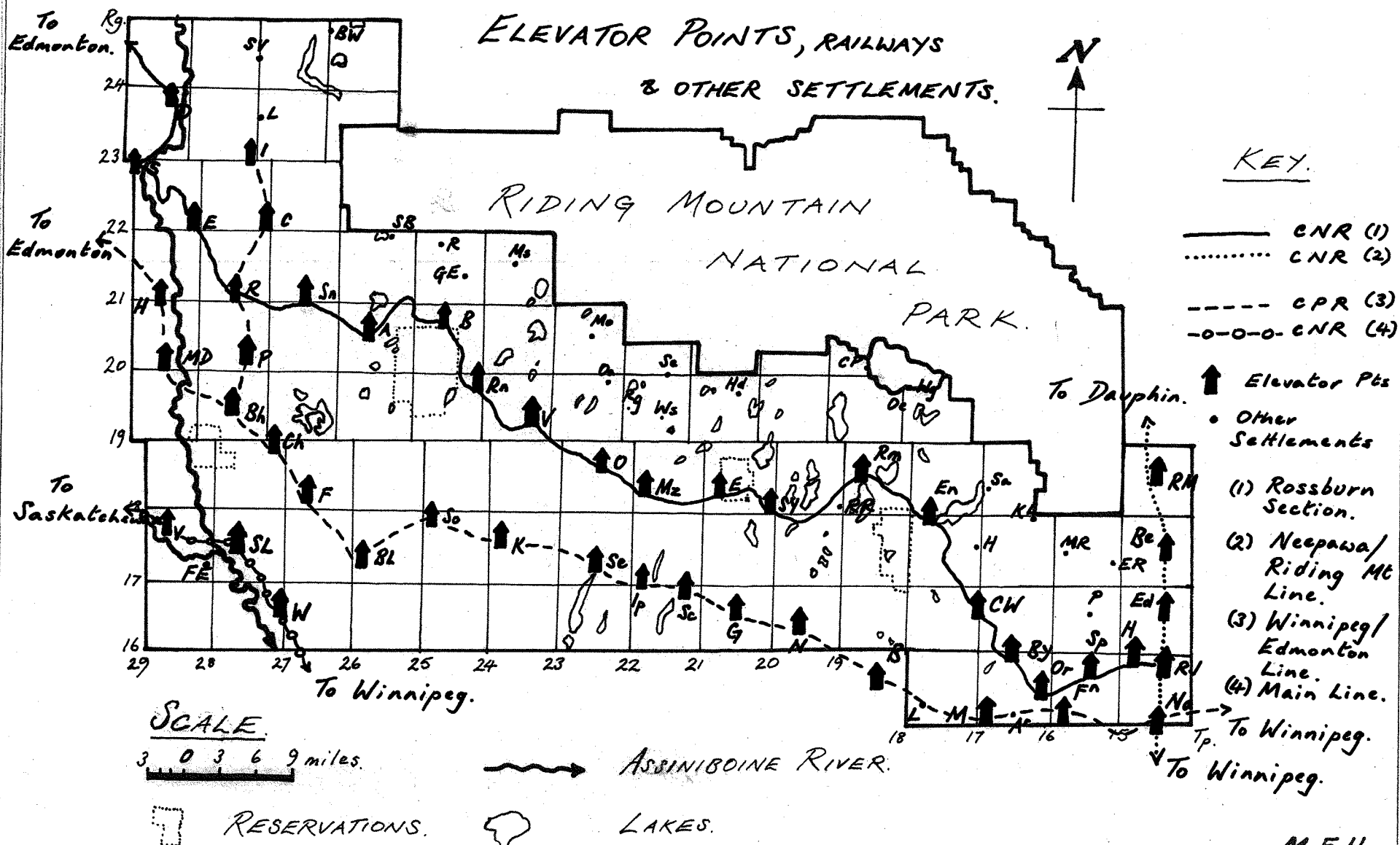
## References

- (1) Interview with H.D. Showdra, Sec/Treasurer, Russell R.M.
- (2) Interview with Mrs. Donelda Payne, Resident Administrator of Park.
- (3) Interview with Mrs. Davidson, Sec/Treasurer, Birtle Town.
- (4) Interview with Mr. Fitzsimmonds, Neepawa.
- (5) Interview with Miss N.K. Benson, Rosedale R.M. Sec/Treasr.
- (6) Interview with Miss Olson, Birtle R.M. Sec/Treasurer.

All foregoing comments are almost exact verbatim replies in field-interviews. June, 1967.

- (7) Capital investment in real estate and machinery amounts to about \$16,500 on farms up to half section size and \$32,000 on larger units. Source: "Economic Analyst", August, 1961.
- (8) J. G. Mackenzie, "Changes in Number and Size of Farm Units in the Russell - Minnedosa area of Manitoba, 1956-60". "Economic Analyst", Vol. XXXI, No.4 (1961) pp. 92-94 (Ottawa).
- (9) opus cit. "New units (by size group) were formed either by purchasing or renting all land and setting up new headquarters or by enlarging existing units. In both cases there was a decrease of the number of units in another farm size group." P. 92.
- (10) opus cit. P. 93.
- (11) opus cit. P. 94.
- (12) See Chapter 4, pp. 45-47.
- (13) Much of the material for this chapter, as well as the accompanying tables and statistics are drawn from the Agricultural Representative Area Reports, Manitoba Department of Agriculture.

Map: 19.



M.F.H.  
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Key to Map 19.

A	Angusville	Ms	Mears
Ar	Ancer	Mz	Menzie
B	Birdtail	N	Newdale
B	Basswood	Na	Neepawa
Be	Birnie	O	Oakburn
Bh	Binscarth	Oa	Olha
Bl	Birtle	Oe	Onanole
BW	Blue Wing	Or	Orrville
By	Bethany	Oz	Ozerna
C	Cracknell	P	Penrith
Ch	Chillon	P	Polonia
CP	Crawford Park	R	Russell
CW	Clanwilliam	R	Ruthenia
D	Dropmore	Rg	Rogers
E	Endcliffe	RJ	Rossburn Junction
E	Elphinstone	Rm	Rackham
Ed	Eden	RM	Riding Mt.
En	Erickson	Rn	Rossburn
ER	Elk Ranch	RR	Rolling River
F	Foxwarren	S	Shellmouth
FE	Fort Ellice	Sa	Scandinavia
Fn	Franklin	SB	Silver Beach
G	Glossop	Sc	Strathclair
GE	Glen Elms	Se	Seech
H	Harrowby	Se	Shoal Lake
H	Hilltop	SL	St. Lazarre
H	Howden	Sn	Silverton Station
Hd	Horod	So	Solsgirth
I	Inglis	Sp	Springhill
Ip	Ipswich	SV	Shell Valley
K	Kelloe	Sy	Sandy Lake
KL	Kerr Lake	W	Wattsvew
L	Lennard	Ws	Wisla
L	Largs	Wg	Wasagaming
M	Minnedosa	V	Victor
Md	Millwood	V	Vista
Mo	Marco		
MR	Mountain Road		

## CHAPTER 5

### URBAN CENTRES. (See Map 19)

It is now necessary to turn to a consideration of the towns and villages - the urban centres - of the Riding Mountain region, because they form a major location for the population in the area. In contrast to the rural farm population discussed in the last chapter the rural non-farm population living in the small towns of the area has tended to increase over the last twenty-five years, as was evinced in the figures quoted in Chapter 3. The following quotation seems to the writer to express the situation in respect of the towns of the study area briefly and simply.

"Most towns in Manitoba came into being originally to serve a local need as a supply depot and social focus. This function has changed somewhat in many towns due to the pressures of modern economics and living.....

"In this modern world of fast-changing consumer demands and complicated technology, the automobile has reduced distances drastically. In many cases this has also resulted in a reduction of a town's importance and most towns are no longer indispensable." (1)

In this chapter we are going to discuss the function and changes in population structure in the urban settlements of our area; by referring to the location, character and distribution of all the incorporated places in the area. The numerical changes in population which have occurred are mentioned on page 40, and we will follow the division employed in that table (4), considering them in order of population size in three relative size groups; large, medium and small. In addition attention will be given to two other settlements

which are in the nature of special cases - Onanole and Wasagaming, a service and a resort centre near Clear Lake, on Provincial Trunk Highway No. 10, close to the south gate of the Park. Photographs of some of the numerous elevator points are also included.

The study area is served by both railway companies and by Highway No. 4 which runs east and north through Neepawa and Minnedosa to Russell and thence northwards through Roblin as P.T.H. 83. A secondary all-weather road runs west-east from Russell to Erickson serving the area just south of the park: Highway 45 which joins Highway 10, from Minnedosa to Dauphin at Erickson. These roads are traversed twice daily by Greyhound buses and by local trucking firms. The Canadian National Railway runs along the more northerly route, and the Canadian Pacific along the southerly one, in rough parallel with the roads. At the eastern end the C.N.R. line runs from Rosburn Junction near Neepawa northwards through Howden, Eden, Birnie and Riding Mountain along the line of Highway 5, through McCreary to Dauphin. On the western margin the C.P.R. runs north from Binscarth to Inglis. The towns and villages in our area have grown up on the bordering routes of the rough rectangle thus created by road and rail. The northern string of settlements runs Russell, Silverton, Angusville, Birdtail, Rosburn, Vista, Oakburn, Elphinstone, Sandy Lane and Erickson to Hilltop. The southern line is from Birtle through Solsgirth, Kelloe, Shoal Lake, Ipswich, Strathclair, Glossop, Newdale, Basswood,

Largs, Minnedosa, Ameer, Franklin to Neepawa. The eastern settlements we have mentioned; and the western include Foxwarren, Chillan, Binscarth, Penrith, Russell and further north Endcliffe, Shellmouth and Dropmore on the C.N.R. and Inglis, Lennard and Shell Valley above the C.P.R. track. Many settlements, villages and hamlets exist outside this rough frame, but almost none in the damper land in the centre, with its lakes, streams and cropland. The settlements listed above, with the exception of those which enjoy advantages of site, communications, trade or history, are primarily elevator points. Where the road and track intersect, roughly every five miles, the various companies and elevator pools built their elevators to serve the local farmers in transporting their grain to Winnipeg. The general characteristics of each of these crossroad settlements are so generally similar that enumeration of each would be tedious - one or two elevators, a garage, a railhalt with a water tower, perhaps also a public house, or bus-stop and lunch counter, general store or post office and a few houses. Alternate ones may have a Ukrainian or British church, an oil dealer or a pool room. These very small settlements with their declining and often ageing populations are the basic framework of the Prairie urban scene. As motor vehicles have enabled grain, farm produce and consumer goods to be carried over longer distances, their function as self-contained units has declined, and the supporting population having thinned, the survival of some of their stores and chapels is uneconomic.

However it is on this frame that the urban hierarchy is based. Every fifteen or twenty miles or so, the medium sized settlements with their wider range of services - newspapers, lawyers, agricultural advisors, plumbers and clothiers - are located. These include Birtle, Shoal Lake, Erickson, Rossburn and Wasagaming. The highest level is of the towns such as Russell and Minnedosa and the peripheral towns of Roblin and Neepawa (which really belong to the northern and eastern adjacent areas) which offer a full range of services second only to the cities of Brandon, Portage, and Metropolitan Winnipeg.

The study area is insufficiently large or homogenous for us to propose any firm urban hierarchical theory, but it is worthwhile to note that our settlements approximate in scale and location to the dictates of communication links which serve the agricultural needs of the area.

In the case of the larger urban settlements, the attractions of rural taxation and the availability of labour may be advantageous to some industries. These factors, together with the readiness of local and provincial Industrial Development Funds to offer assistance, weighed heavily with Agristeel, the farm equipment manufacturers, in their choice of location at Minnedosa rather than Rugby, according to their Distribution Manager, Mr. L. E. McCracken. Local Tradespeople in Minnedosa agreed that "the town had grown quite a bit in recent years" with the introduction of new industries. This was born out by Mr. Wishart, Minnedosa's secretary-treasurer, who pointed out that whilst the town had grown, the rural area around it had

declined in numbers. At Russell, Mr. Brad, the town secretary, said that despite the tendency to smaller families the town population was increasing, with about a dozen new homes being built each year. However he added that farm size was increasing and that the town population was ageing as more retired farmers took up residence.

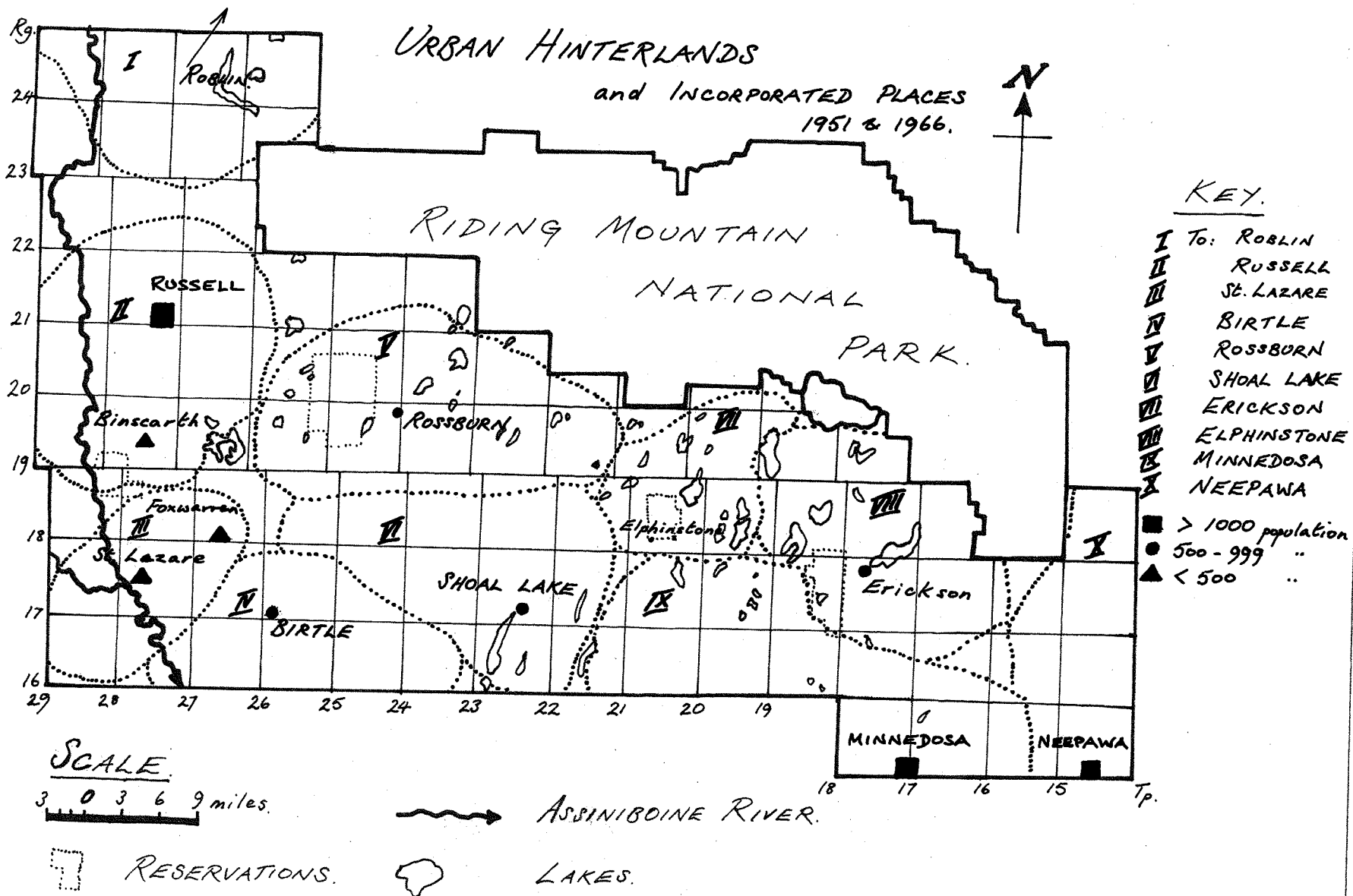
In the pages that follow, and in Map 20 which accompanies them, the 'urban hinterlands' or spheres of influence of the settlements have been determined from field interviews and from the surveys of the Department of Industry and Commerce. (See Reference 1). They refer to the area that each settlement provides with the majority of its goods and services. Obviously some settlements send commodities far outside these limits, e.g. the agricultural machinery market of Minnedosa extends into the northern United States. Similarly for occasional purchases, e.g. cars, furniture, local inhabitants go to the nearest town which has a large enough choice of these commodities rather than to the local stores. However in terms of day to day requirements the areas demarcated rely upon their central settlements for goods and services. Although some overlapping occurs, the map gives a reasonably accurate expression of the areas of influence of each service centre.

Large settlements - population of over 1,000 (1951 & 1966).

Neepawa. (see map and air photograph).

The largest centre in our area, <sup>(2)</sup> the town of Neepawa is located 120 miles northwest of Winnipeg at the junction of

Map 20.



M.F.H.  
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P.T.H. 4 and P.T.H. 5 on the western slope of the Neepawa Creek Valley at a height of 1,200 feet. The immediate locality is known as the 'Beautiful Plains' region, and the rural economy is devoted to cereal cultivation and livestock farming. The settlement dates from 1878, being incorporated in 1883 and is served by both C.N.R. and C.P.R. branch lines. Its population at June 1966, after an increase in territorial size, stood at 3,320. Previous years' numbers were as follows:

<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>1966</u> (Jan.)
2,895	3,019	3,197	3,170

In 1910, as a result of oil drilling activity, salt brines were discovered. This formed the basis of Manitoba's only salt refining plant (see air photo.) Since 1929 they have been worked by a branch of the Windsor Salt Company, itself a subsidiary of the Canadian Salt Company. Daily production fairly small, about 90 tons, but some 70 local people are employed full-time. In addition the Swift Canadian Company employ 65 persons on a seasonal basis at its poultry plant and hatchery.

Today Neepawa is a trade-industrial service centre with some 130 businesses and an industrial employment of 200 people. In addition to the firms mentioned the following enterprises are the other main employers.

#### Neepawa Employers

		m.	f.
Allied Canvas Products	Canvases and tarpaulins	1	3
Foley's Hatchery Ltd.	Chicks and poults	4	1
Guina Brothers	Memorial stones	5	-

Hips Fruit Syrups	Fruit Syrups	m.	f.
		2	5
Hurnells Bakery	Bread and pastry	3	3
Neepawa Canvas Works	Canvases and tarpaulins	3	5
Neepawa Creamery	Butter and ice-cream	5	5
Neepawa Feed Service	Livestock feeds	2	-
Neepawa Press	Newspapers and printing	7	3
Provost Signs and Stamps	Signs	2	-
Thomas Cabinet Works	Cabinets, fixtures	2	-

The town is quite vigorous in its desire to attract new industries, and improve its attractions. The town's Development Corporation (NADCO) was responsible for the introduction of the feed manufacturers, and in recent years a new school, the area collegiate institute, a new old people's home and a new hatchery have been built. Two years ago \$200,000 was spent on paving and curbing the streets. In 1967 improvements were made in Irwin Lake Park as a Centennial project. Neepawa is well supplied with services, including two halls, a library, three hotels, nine churches, two parks, two bowling alleys, a golf course and a flying club. However there is a tendency for an ageing in the population, as young townspeople leave for jobs in the city. Despite the wealth in the town, no money was spent on industrial development in 1965, as against \$265,000 on residential accommodation.

According to the Town Trading Survey<sup>(3)</sup> of 1965, the retail sales of Neepawa's businesses are an estimated \$9,750,000. This represents a 30% increase over the previous five years,

which is only moderate. Nor does it seem likely that the trading area, which embraces some 15,000 people, (see map 20) can be enlarged very noticeably. The Department of Industry and Commerce considers that an increase in trade volume of some 7% or \$650,000 is possible. This again is quite small. The main complaints mentioned in the 228 questionnaires returned were that more doctors (58% mentioned) and dentists (68%) were needed and that the range and prices of clothing stores were unsatisfactory (39%). The main competing trading centres seem to be Brandon, Winnipeg and Minnedosa.

Minnedosa (see map and air photograph)

Located a dozen miles west of Neepawa, at the junction of Highways 4 and 10, Minnedosa is situated in a valley and dominated by the morrainic slope to the north which marks the beginning of the Riding Mountain foothills. The 1966 (November) population stood at 2,300 and in preceding years was as follows, indicating a slow recent growth:

<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>1966</u> (Jan.)
2,085	2,306	2,211	2,286

Incorporated in 1883, the town grew up around a bridging point on the Minnedosa River known as "Tanner's Crossing".

The town acts as an agricultural service centre to a trading population of some 12,500 in an area between Neepawa and Shoal Lake (see map 20) of some 1,400 square miles. In 1961 the retail trade volume was around \$3,550,600. Until 1951 the town was a C.P.R. division point, when the roundhouse

was closed with the withdrawal of passenger services. Fortunately the slack in employment was alleviated by the coming of a farm machine plant, which took over the old C.P.R. buildings. "Agristeel" (founded in 1960 as Minn-Toba Industries) decided to locate in Minnedosa in preference to a site at Rugby, North Dakota, because of the available labour supply and despite tariff advantages in the U.S.A. The firm now employs about 170 men, with a winter peak of 210, 90% of whom are local. Agristeel manufacture tractor and combine cabs, deep chisel ploughs and field cultivators, which are distributed in Manitoba, Saskatchewan, Alberta, Peace River district, Iowa, Minnesota, the Dakotas, Montana and Wyoming. The firm has the co-operation of eight local farmers to try out their new machinery, and was set up with the aid of the Manitoba and Minnedosa Industries Development Funds. They have just completed a new extension to their works costing over a million dollars. The other major employer is the C.P.R. which still employs 100 men. Other employers, of minor but local importance are the following:

Minnedosa Employers

		m.	f.
Jacks Bakery	Bakery products	5	3
Johnsons Homes	Laminates and buildings	4	winter
		20	summer
Leo's Bakery	Bakery products	4	2
Manitoba Telephones System		16	
Minnedosa Hospital		3	37
Minnedosa Tribune	Newspaper and printing	9	1
People's Co-op Creamery	Dairy produce	15	

There seems to be greater enthusiasm in the town for further development than in Neepawa, and more money was spent in 1965<sup>(4)</sup> on construction in Minnedosa than in Neepawa.

	<u>Residential</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Institutional</u>	
Minnedosa	\$343,725	\$199,780	\$25,000	\$178,000	1965
Neepawa	\$265,000	\$100,000	NIL	\$ 1,500	

The Development Corporation has been endeavouring to negotiate the establishment of a distillery in the town, and has spent some \$20,000 on improving the resort area at nearby Minnedosa Beach (see photograph) as a Centennial project. Considerable emphasis is given to the attractions of water ski-ing and the annual Manitoba Farmers Fair. In short, the town seems likely to enjoy gradually increasing importance and prosperity in the future.

Roblin (not within map area).

Although this town is outside our area, it has been included because like Neepawa, it has considerable influence over the edge of the study area, viz: the north eastern townships. The town's trading area extends as far south as Inglis and Shellmouth, though the town is sited between the Duck and Riding Mountain Parks at the junction of P.T.H. 5 and P.T.H. 83. The latter road is a main artery between the U.S.A. and northern Manitoba and is increasingly in use as a tourist route. Although the town's trading area is large, it is sparsely populated with a third of its 13,500 inhabitants living in Saskatchewan. Hence the 1964 trade amounted to only

\$5,787,000 dollars, although the Department of Industry and Commerce believe that this could be increased by some 30%. (5)

The chief desires expressed by consumers were for dentists, optometrists and doctors, and improvements in clothing store facilities. The town is 240 miles north west of Winnipeg, and although there are two buses per day, the distance precludes the possibility of frequent trips. Yorkton to the west and Dauphin to the east are the main competitive centres, although Russell is also able to provide the absent dental and optometric services.

The economy of the surrounding area is based on mixed farming and the forest products industry. Wheat, malting barley and coarse grains are the main crops, and livestock production is significant. Lumbering, pressure treating and woodworking operations are the main industrial occupations, employing some 120 people, and forest products are sold throughout Canada and in some northern states of the U.S.A. The main sources of employment are these:

<u>Roblin Employers</u>		m.	f.
Roblin Forest Products	Pressured wood products	19	1
		50	seasonal
Olsens Timber Products	Lumber	50	seasonal
Manitoba Dairy Co-op.	Dairy Produce	8	1
Roblin Review	Newspaper and printing	1	2
Manitoba Telephone System		11	

As yet there is no planning or development activity in the town, but the population figures over the last fifteen years

indicate that growth is taking place, and the town's position on Highway 83 may lead to some demand for resort facilities.

Population of Roblin

<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>1966</u>
1,055	1,173	1,368	1,582

Russell (see map and air photo)

With a population of 1,511, which has grown slowly over the last twenty years, Russell is a fairly prosperous agricultural service and market centre for the surrounding area. Its service area extends into Saskatchewan, for the border is only ten miles away, and is roughly circular including Angusville, Binscarth and Inglis (see map); an area of some 950 square miles with a population of 5,600 and a 1961 trade volume of over two and a half million dollars. The town is sited in rolling country at a height of 1,865 feet with the Birdtail valley to the east, Silver Creek to the south, Shell River to the north and the Assiniboine to the west. Its location on the Manitoba extension of Highway 83 from the U.S.A., and its proximity to the Park, give it some recreation and tourist potential including ski-ing, fishing and duck hunting. First settled after the 1878 section survey, Russell was incorporated as a village in 1907 and as a town in 1913. Its population numbers over recent years have been as follows:

<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>1966</u>	<u>1967 (Jan.)</u>
1,100	1,227	1,263	1,495	1,511

The agricultural area surrounding the town is dependent

on grain growing with mustard and rapeseed, and cattle rearing. In some services the town has a wide catchment, e.g. it provides dental services for Roblin residents. Six churches, three hotels, three schools, three doctors, two lawyers, an optician, chiropractor and veterinarian are located in the town which also has a bank and newspaper. Each year ten or a dozen new houses are built, and even though the population has an increasing proportion of retired people, numbers are growing.

Recent stimuli have been the supply of piped water in 1956, the opening of the potash mine at Esterhazy, Saskatchewan, and the prospect of the introduction of a chemical plant either here or at Roblin. The location in Russell of the rural municipality offices for Russell and the Park L.G.D. may also induce some extra traffic.

"Medium sized" settlements - population between 500-1000 (1951 & 66)

There are four settlements in this size category, within our area: Birtle, Shoal Lake, Rossburn and Erickson.

Birtle (see map and air photo)

This town lies in the valley of the Birdtail River some 200 miles west of Winnipeg. Its population is predominantly of Anglo-Saxon origin and has grown to 852 (1967 Jan.). The town is served by P.T.H. 83 and is notable for its Indian Residential School which with the hospital occupies the north slope of the valley, the townsite being mostly on the less steep southern side. Birtle has a trading area of some 500 square miles with a

population of about 5,000 people and a 1965 estimated trade volume of some two million dollars. Though relatively small the town provides a good range of services for its agricultural area, including doctors, lawyer, banking, two schools, three hotels, six churches, a newspaper and a trucking firm, as well as a new hospital (see photograph.) Birtle is also the headquarters for No.5 District of the Highways Department, the town's major employer with its staff of twenty four men. This District is responsible for road works around Russell, Miniota, Newdale and to the Saskatchewan boundary. With the advent of a new potash mine at St. Marthe-Rocanville, just across the border, as a development of the Esterhazy mining concern, it is proposed to extend Highway 41A past St. Lazarre to the province boundary to provide a route to the mine. This may increase the value of Birtle's location and provide a source of employment for the townspeople. The other main employer is the Residential School, where the Indian children are housed during term-time whilst they attend local day schools. The pupils, at present 108 in number, come from all over the Province and are largely the products of broken homes. During vacation they may go to foster parents. The school now only caters for children above grade 5, the younger children being at Brandon. Some retarded pupils, or children who received schooling late, in grades 6 and 7 are taught practical subjects at the school, but the rest go to class in Birtle. There is a large farm attached to the school, with a herd of some 90 head of cattle which are frequently exhibited.

Wheat, oats, barley and rye are grown, and cattle and poultry raised in the surrounding area. Hogs, once important, are now of diminished significance, and are kept by only half a dozen farmers in the local municipality.

Shoal Lake (see map and air photograph)

This village is located at the junction of P.T.H. 21 and P.T.H. 4 where the Oak River enters Shoal Lake, roughly mid-way between Neepawa and the Saskatchewan border and some 75 miles north west of Brandon. The surrounding land is sparsely wooded with willow and poplar groves, dotted with intermittent ponds and small lakes, and used for cereal grains and livestock and dairy farming. Apart from a good deal of seasonal duck hunting on Shoal Lake, the "economic base of the village is mainly the service trade typical of all of Manitoba's agricultural communities." (6) With a 1966 population of 823, the town serves an area of some 400 square miles including a trading population of around 2,700. These are served by five churches, two hotels and several retailers and bulk oil dealers as well as medical, veterinary, law and accountancy services. In addition the village has a branch of the Canada Department of Agriculture to give assistance in animal health care.

Rosburn (see map)

A predominantly Ukrainian settlement of some 630 people, the village is situated at a height of 1940 feet on highway 45: the 'turkey trail' between Russell and Erickson. Rosburn is sited on the valley of the Birdtail Creek, at the edge of the

wooded southern fringe of the Park. The townsite possesses a school, Ukrainian-Catholic and Orthodox churches, a bank, hotel and co-operative dairy as well as retailers and a R.C.M.P. office. In addition to serving an area of fairly sparse settlement which includes the Lizard Point Indian Reserve, running from Birdtail to Seech and south to Oakburn, Rossburn is an elevator point on the Canadian National line. The settlement's population has shown only slight increase in the last two decades.

Erickson (see map)

With a population of 532, Erickson is only just large enough for consideration as a medium sized settlement. However on a trade basis the "indications are that Erickson is doing more business than might be expected".<sup>(7)</sup> Sited at the junction of Highways 10 and 45, Erickson serves an area of some 570 square miles with a population of 4,350 and a 1964 retail trade volume of \$1,959,000. The settlement serves a roughly circular area from Wasagaming in the north to Clanwilliam in the south and from Sandy Lake in the east to Kerr Lake in the west. For some goods and services however, customers come from as far away as Seech. Erickson undoubtedly profits from its site as a route centre and its position on the road to the Clear Lake resort, as well as from the lack of local competition. In 1964 some \$70,375 was estimated as the expenditure from Clear Lake, and with increasing tourist traffic this might be improved. Local residents are spending about 85% of their income in Erickson, though residents of Sandy Lake, Elphinstone and Oakburn tend to

be loyal to their own settlements. There is considerable demand for dental and optometric services and clothing stores in Erickson. The townspeople have taken the bold step, for so small a settlement, of building a clinic in the hope of encouraging these professions into Erickson.<sup>(8)</sup> Existing services include Ukrainian and Romal Catholic churches, a school and occasional visits by a Russell lawyer. It seems likely that this settlement will continue to be prosperous for its size.

It is important to note in the instances stated above, where reference has been made to demand for increased professional services or improved retailing facilities, that this is no indication of profitability for such enterprises. The threshold of demand for dentists and clothing stores is high because of the infrequency with which families use them. Hence it may not be economically feasible to improve these services even though the local councils are anxious to do so.

"Small" settlements - (population less than 500 - 1951 & 1966)

Only three incorporated places exist in this last category within our area: Binscarth, St. Lazarre, and Foxwarren.

Binscarth (see map) Pop. 478.

Located north of the Gambler Reservation, on the Silver Creek, near the junction of Highways 4 and 41, Binscarth is some twelve miles south of Russell and largely under the sway of that town. As it is on the extension of U.S.A. Highway 83 to Northern Manitoba, it may cull a little through trade from passing traffic but it is largely a local retail centre. The

C.P.R. branch to Inglis joins the main line at Binscarth, and there are two large elevators. The valley is wooded and there are some larger houses of retired farmers in the village.

St. Lazarre. (see map) Pop. 378.

Sited on the easterly bank of the Assiniboine River, a dozen miles west of Birtle, St. Lazarre serves the farmsteads in the south west corner of our study area between Chillon and Wattsvie and serves as an elevator point for them on the C.N. line. There are a good proportion of French Canadians in this corner of the province, and it is at the French town of Ste. Marthe-Rocanville that a new potash mine is opening. As we previously stated it is proposed to extend the highway from Birtle westwards across the Assiniboine to the Saskatchewan border from where it is only three miles to the mine. Thus St. Lazarre may have some increased importance as a service dormitory for mineworkers on a small scale, if this proposal is carried through.

Foxwarren (see map) Pop. 234.

Also in this south west corner of the study area, Foxwarren is a service and elevator point on the C.P.R. supplying the nearby farms and acting as a bus stop and mailing point. In addition to its two elevators, foxwarren has a public house, and may draw a little business from Highway 4 which runs past the settlement.

In addition to the incorporated settlements described in

the preceding pages, the writer considers that attention should be given to two rather special settlements near Clear Lake: Onanole and Wasagaming.

Onanole lies two miles south of the National Park gate near Clear Lake on Highway 10 which runs north as the main scenic route across the park to Dauphin. It has grown up as an ugly roadside sprawl of houses, shops and filling stations, as a result of the restrictions imposed on further cabin leases within the park at Clear Lake camp site. Private speculators have bought land near the park and built drive-ins, cabin lots, and filling stations on to the original small nucleus of shops, school, post office and United church buildings. There are now Esso and Royalite agencies, a hotel, two motels and a Legion branch. The retail liquor establishments flourish during the tourist season as these are not to be found inside the park boundary. The Resident Administrator, Mrs. Payne, informed the writer that efforts at planning roadside signs and commercial establishments are now being made. Map 21 shows the distribution of property in the settlement. (9)

Wasagaming, inside the Park, is a planned resort settlement with well screened campsite, and a restaurant, cinema and shops for the tourists. The main buildings are constructed as log cabins and the whole settlement is very attractive in aspect. (See photograph) The streets have been planted with trees and the properties are well supervised by the Park Authorities. Seasonal trade is such that both settlements tend to be empty

Map: 21.

RIDING MOUNTAIN  
NATIONAL  
PARK.

VICTOR AVE

P.T.H. No: 10

ONANOLE



STREAM

ROSE ST

SLOUGH

POPLAR AVE

SLOUGH

ASH ST

OAK ST

EAST AVE

FIFTH ST

ASH AVE

GOVT ROAD

ALLOWANCE

GOVT ROAD ALLOWANCE

SCHOOL

UKRAINIAN CHURCH

WHIRLPOOLS DR.

OCTOPUS  
LAKE

ENSIONS NOT ACCURATE.

ALBIN AVE

G.

P.T.H.  
No: 10

SLOUGH

SLOUGH

KEY



- RESIDENTIAL.
- COMMERCIAL - RETAIL.
- SERVICE & GOVERNMENT.
- ACCOMMODATION - TOURIST.
- SCHOOLS & CHURCH.
- ENTERTAINMENT.
- ROADS OR PATHWAYS.

0 100' 200'  
SCALE = 1" to 130' approx.

INFORMATION: JULY 1967  
After MANITOBA DEPT.  
OF URBAN DEVELOPMENT  
& MUNICIPAL AFFAIRS  
Nov: 199 NO: 4R 50-139A  
M.F.H. '68.

in the winter, with the property owners living on their summer earnings. It is the development of the Clear Lake resort and the development of the Riding Mountain Park as the second most popular one, that has encouraged an increase in "urban" population. The surrounding morrainic land is relatively poor for farming.

The overall trend in the Riding Mountain area, then, is of slow growth in the large settlements accompanied by an ageing of the population, and of stagnation or actual decline in numbers of people in the small villages and rural areas. Whilst the previous chapters have outlined the pattern and indicated some correlated aspects, it is now necessary to draw what conclusions we can from the present situation and to attempt to estimate the future population pattern of the area.

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### References

- (1) Introductory remarks from the 'Town Trading Surveys', P.1, prepared by the Regional Development Branch, Department of Industry and Commerce. Province of Manitoba. 1965.
- (2) Although the site of Neepawa is peripheral to our study, the town has been included because of its size, close proximity to and influence over the eastern end of the area. Similar considerations determined the inclusion of Roblin in the north east.
- (3) opus cit.
- (4) Most recent available figures. Community Reports (1966) of Regional Development Branch, Department of Industry and Commerce, Manitoba.

- (5) Ibid.
- (6) opus cit. Community Report on Shoal Lake. Feb., 1967.  
Department of Industry and Commerce. Winnipeg.
- (7) Erickson Town Trading Survey. Department of Industry  
and Commerce. April, 1966. Winnipeg.
- (8) opus cit.
- (9) Base map: Municipal Planning Branch. Manitoba Department  
of Urban Development. Land use by the writer.



PLATE : 1.

NEEPAWA'S NEW SHOPPING CENTRE.

MINNEDOSA →



NEEPAWA →



BIRTLE →



PLATE: 2. MAIN SHOPPING STREETS.

ANGUSVILLE →





← THE OLD 'SACRED HEART'  
R.C. HOSPITAL AT RUSSELL.

PLATE: 3. HOSPITALS.

THE NEW BIRTLE  
DISTRICT HOSPITAL





PLATE: 4, SCHOOLS.

IN MANY TOWNS NEW  
SCHOOLS ARE REPLACING  
EARLIER BUILDINGS.

← RUSSELL

NEEPAWA →



RUSSELL →



NEEPAWA →





← RUSSELL.

MINNEDOSA →

PLATE 5: ELEVATORS.  
 MOST OF THE SETTLEMENTS  
 IN THE AREA WERE FIRST  
 LOCATED AS GRAIN-  
 LOADING POINTS ON THE  
 C.P. & C.N. RAILWAYS



← NEWDALE.



← MINNEDOSA BEACH.

SHOAL LAKE →

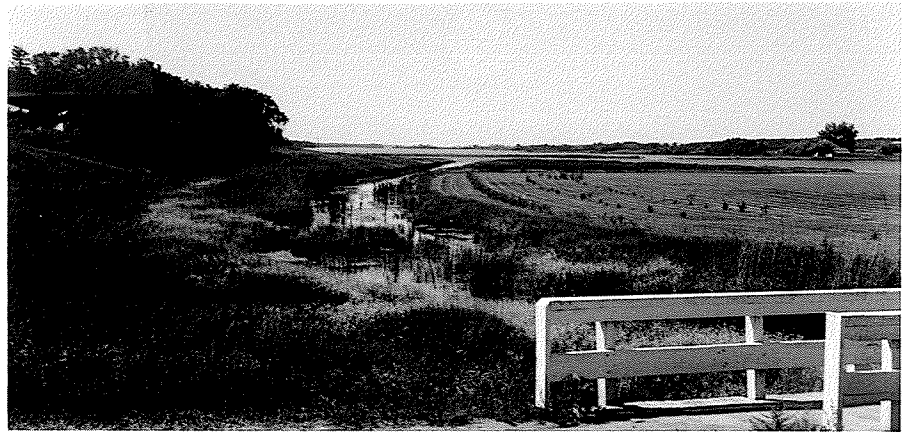
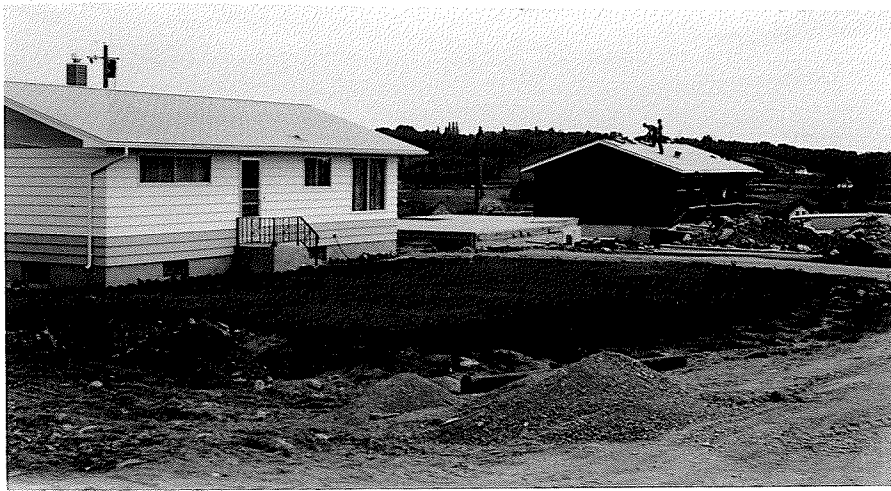


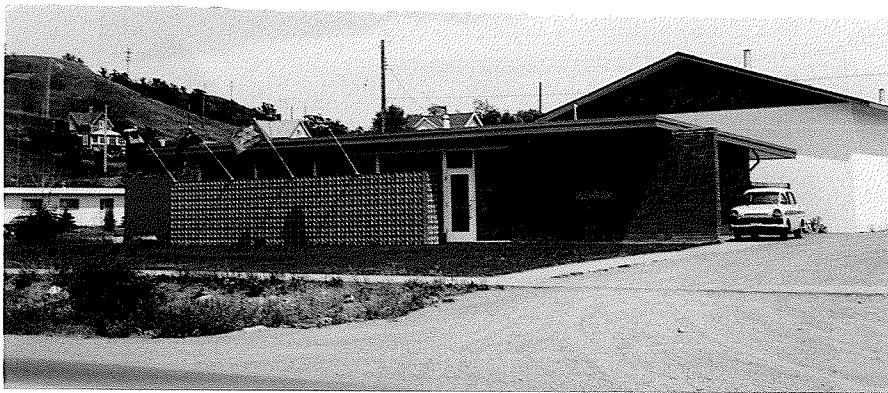
PLATE: 6  
RESORT AREAS

CLEAR LAKE →  
(Wasagamung.)





← NEW HOUSING  
AT MINNEDOSA.

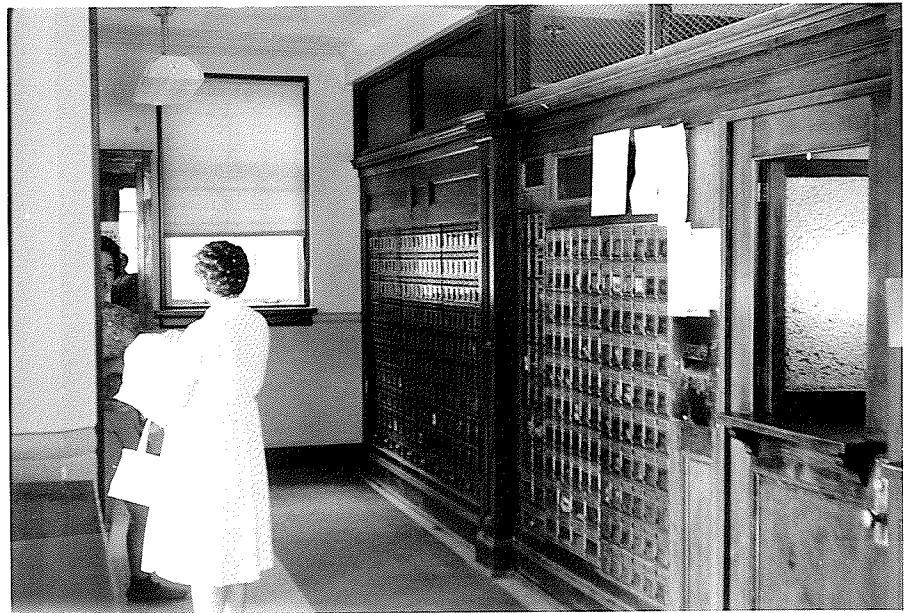


← 'AGRISTEEL' OFFICES  
AT MINNEDOSA.

PLATE: 7

BIRTLE POST OFFICE

IN SOME RURAL AREAS  
RESIDENTS MUST  
COLLECT THE MAIL



## CHAPTER 6

### POPULATION PROJECTION AND CONCLUSIONS.

We must now draw together the lines of thought pursued in the previous chapters, and form general conclusions from the trends which have been discovered. Before doing this, however, it is desirable to attempt some indication of future population numbers in the Riding Mountain area. To this objective a population projection has been made for the area for 1971 and 1976. This has been based on the population numbers for 1951-1966 according to the method given below. The method is unsophisticated, merely a simple arithmetic projection where the trend lines of the birth and death rates for the period 1951-1966 are projected forwards for 1971-1976. The migration rate over the 1951-1966 period is simply averaged, and the average rate applied for the 1971 and 1976 numbers.

#### Method

The formula for the birth rate and death rate projection is as follows:-

$$y = \frac{\sum_{i=1}^3 (a - \bar{a}).(b - \bar{b})}{\sum_{i=1}^3 (a - \bar{a})^2}$$

Where a = intercensal periods 1, 2, 3, (i.e. 1951-56  
1956-61  
1961-66 )

and b = corresponding values of the rate in question  
(birth rate or death rate.)

By this formula the trend line for the rates during periods 1 - 3 (1951-66) can be projected for periods 4 and 5 (1971 and 1976).

The denominator in the formula is a constant for all the calculations, viz:

$$\begin{aligned} \sum_{l=1}^3 (a - \bar{a})^2 &= (1 - 2)^2 + (2 - 2)^2 + (3 - 2)^2 \\ &= 1 + 0 + 1 \\ &= 2 \end{aligned}$$

If we let  $a - \bar{a} = A$ ,  $b - \bar{b} = B$ ; then,

$$y = \sum_{l=1}^3 \frac{A \cdot B}{2}$$

From this the sum of the birth (or death) rates, divided by the number of intercensal periods, equals  $\bar{b}$ . Or more simply  $\bar{b}$  equals the average birth (or death) rate.

An example may clarify the working.

E.g.      Strathclair, R.M.      Death Rate Projection

a	b(= D.R.)	(Constant)		A x B	A <sup>2</sup> (Constant)
		A	B		
1	7.1	-1	-1.6	+1.6	1
2	8.1	0	0	0	0
3	10.8	+1	+2.1	+2.1	1

$$\sum_{l=1}^3 b = 26.0$$

$$\sum_{l=1}^3 A \times B = 3.7 \quad \sum_{l=1}^3 A^2 = 2$$

$$\frac{b}{3} = \bar{b} = 8.67 = 8.7$$

$$y = \frac{+3.7}{2} = 1.8$$

$$4 = 3 + y = 12.6$$

$$5 = 4 + y = 14.4$$

Figures 4 ( $3 + y$ ) and 5 ( $4 + y$ ) are of course only rates of births or deaths but when applied to the previous known population numbers (for periods 1, 2, and 3) they can give future population totals. All that remains to be done is to apply the net migration rate to these figures. As indicated area this rate was taken to be the average migration rate during the period 1951 to 1966. To discover it, required working out the birth and death numbers for periods 1951 - 1966 and applying these to the final population numbers; the difference indicated total net migration which could be transformed to a rate per thousand of the population. When averaged the rate for periods 1, 2, and 3 was applied to the population for periods 4 and 5.

#### Results

The following projected numbers for municipalities were produced. Whilst the 1971 figure is moderately reliable, the 1976 figure is only very approximate, being based on the 1971 figure. There is of course no guarantee that the trend of births, deaths and migration will follow their present courses. Greater security would be obtained by using more known intercensal periods in the projection. Unfortunately, however, the effects on population numbers of World War II would be likely to complicate the issue if the projection were based on pre-1951 data.

Table 10.

Population Projection for Municipalities \*

\* includes population of  
incorporated places.

<u>Municipality</u>	<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>1966</u>	<u>1971</u>	<u>1976</u>
Shoal Lake	2234	2195	2101	2122	<u>2034</u>	<u>1918</u>
Park L.G.D.	1694	1464	1390	1238	<u>1118</u>	<u>1004</u>
Russell	2632	2767	2765	3088	<u>3145</u>	<u>3139</u>
Silver Creek	1391	1346	1188	1070	<u>991</u>	<u>832</u>
Boulton	1267	1209	979	890	<u>772</u>	<u>659</u>
Shellmouth	1572	1502	1460	1294	<u>1109</u>	<u>906</u>
Harrison	2005	1804	1697	1629	<u>1449</u>	<u>1304</u>
Birtle	2844	2803	2687	2514	<u>2320</u>	<u>2091</u>
Ellice	1303	1256	1294	1286	<u>1291</u>	<u>1304</u>
Strathclair	2211	2082	2012	1825	<u>1588</u>	<u>1330</u>
Minto	3409	3521	3291	3228	<u>3015</u>	<u>2750</u>
Rosburn	2640	2441	2090	1922	<u>1612</u>	<u>1381</u>
Clanwilliam	1460	1383	1366	1318	<u>1235</u>	<u>1153</u>

Allowing for the weaknesses of such a projection, outlined above, what can be gathered from these figures? Firstly, with the exception of Russell and Ellice, it seems likely that all the municipalities will continue to decline. In the case of Russell with its growing urban centre this seems a reasonable trend. Ellice is a more surprising case. Perhaps this area which has a low density of population and only a few minor settlements has reached an equilibrium level of numbers around which it will fluctuate and from which it is not likely to depart drastically. Secondly the municipalities which contain incorporated settlements seem likely

to decline less in numbers than the more rural areas. This is presumably because of the drift into towns as well as away from the country, and the chances of a growth in urban population albeit ageing. Thirdly the areas around the Park fringe, the poorer land, seem likely to continue losing numbers at a more rapid rate than the more fertile land to the south east. Finally there may be an overall tendency for population decline to decrease as a new equilibrium is struck between people and resources, when a balance exists between the highly mechanized farmer and requisite service personnel and the land area which can support them and be cropped by them efficiently.

We may now turn to a consideration of the conclusions which may be derived from this work.

### Conclusions

The findings of this study are of two main types, viz: those relating to the area as a unit, and those which refer to internal trends, differing from one part of the area to another. If we consider the implications of each previous chapter, a reasonable picture of an overall pattern may be discovered.

In Chapter 1 it became apparent that the better land from an agricultural point of view was in the south and east of the Riding Mountain area. To the north and west, on the Park margins, greater slope angle, lower temperatures and precipitation, infertile glacial deposits such as drumlins and eskers

detract from the value of the land for arable purposes. Water erosion is less of a problem on the smoother slopes, and salinity is lower. The effects of climate and surface deposits are testified to by the changes in "natural" vegetation as one crosses to the rougher ground. It is an area where the grassland becomes increasingly marginal along the edge of the upland near the Park boundary. This decline in land quality is not sudden or demarcated but a progressive one.

In the second chapter, the census data indicates that the area has experienced a decline in its rate of population growth since the First World War. By 1941, the beginning of the study period, however, out-migration had reached such a rate that the Riding Mountain Area was suffering a marked decline in actual numbers. Since 1941 the decline has been of a local and discontinuous nature. The rural areas have declined more rapidly than the towns and some townships have occasionally shown periods of actual population increase.

Chapter 3 explores the internal differences in population change, especially over the last decade and a half. A strong correlation between heavy population decrease and areas of marked relief, relative inaccessibility and impoverished soils is established. More surprising is the revelation that the settlers of British origin have declined both in numbers and proportion of the total population to a greater extent than their East-European counterparts. This has sometimes occurred even when the East-Europeans occupy poorer land, by

virtue of their later arrival in the area. Perhaps this differential may be attributed to the more recent settlement of Ukrainian and Polish emigrés after leaving Europe because of political and social difficulties in the 1917 Revolution, and their former relative poverty. It may indicate a more hardy attitude and a willingness to accept a degree of privation which may fade as the material prospects of these farmers improves.

Already it is noticeable that large numbers of young people are leaving the area after completing secondary schooling. Girls especially are leaving the area for jobs in the cities, being unable or unwilling to remain on the farm. The trend from farm to off-farm employment is emphasized by a consideration of the post 1951 statistics, as is the decline of rural areas relative to the incorporated settlements. Whilst the rate of decline is slowing, and in some areas reversed, the general tendency is still for a drop in population numbers in this area.

Some explanation of the decline in population is offered in the chapters on the Agricultural and Urban sectors. Increasing mechanization renders the cultivation of large areas more efficient. The small farmer cannot afford large capital sums for new equipment, and cannot produce in efficient competition from his small  $\frac{1}{4}$  or  $\frac{1}{2}$  section unit. Not only does the land need fewer people to produce crops, but it will not support the large numbers previously engaged in farming. Mechanization and the efficiency of large scale

farms have exposed rural invisible underemployment. Farm size has increased, farm numbers have decreased. There are marked variations from one part of the area to another but overall the pattern is of younger farmers holding larger units buying out the older smaller farmers who retire on their profits to the small towns within the area. Crop production has increased considerably over the last two decades, and individual income has probably risen too. These findings are borne out by those of Mackenzie, cited in Chapter 4, who concludes that a full section unit is now the economic size for cultivation.

In the towns and villages, alternative sources of employment are being developed, but the new machinery plants, and mineral exploitation, are not likely to alter the basic function of Riding Mountain settlements as service and supply centres rather than as manufacturing towns. Manufacturing and tourism are useful and remunerative ancillaries to these settlements but their main function is still as market centres for the rural area. With improved communications, and a smaller rural population, many of the existing towns and villages are likely to decline in function whilst larger settlements such as Russell, Minnedosa, Neepawa and Dauphin and Roblin expand their influence. The prairie farms have always needed their own transport to carry grain to the elevators and goods to the home. The superseding of the horse and cart by the motor car and truck have extended the range of travel of the residents of this and other areas, and rendered the

duplication of facilities unnecessary.

### Summary

The agricultural sector of the Riding Mountain area may perhaps have received undue stressing in this dissertation, but this the author would maintain is because of the great importance of the land as a dominant factor of population location and change in this part of the Prairie margin. The geographical background with its climatic and physical controls determines what can be done in a locality; the economics of various sorts of action largely control what will be done within the physical framework. It is from these "determinants" that political and social pressures stem in most cases. The overall decline in rural farming population, especially for the more remote and marginal parts of the area, with an increasing size of farm unit, a gradually ageing population, a fairly conservative social climate in the towns and villages, and a reduction in the numbers of young people, is an almost predictable development given the economic and geographical situation. In the author's opinion two major points emerge from this study.

Firstly the foregoing chapters give evidence to substantiate the reasonable and likely trend in population change for this rural area. They provide factual backing for what is believed to be happening to the numbers of people in the Prairie Provinces. Secondly, and more important, the differences between townships, the fluctuation and reversal of population movements, the differentials between ethnic groups, farm and

non-farm population, urban and rural dwellers, age and sex groupings, small and large land holders, serve to show that the overall pattern of population change is not related to any single group of factors. Small scale examination of the marginal Prairie areas is not sure to reveal a pattern of population change. Rather the overall tendencies to grow or decline, to immigrate or emigrate, can be correlated to geographical and economic factors; but the small scale movements will be many and various, the product of a balance of local needs, opportunities and individual decisions. As in a drainage system, the general flow of people is the product of fluctuating tributary movements, some of which are even contrary to the general stream of direction. It is on this scale that the dynamics of population growth and decline must be studied for an understanding of the general broad trends of population change to be achieved.

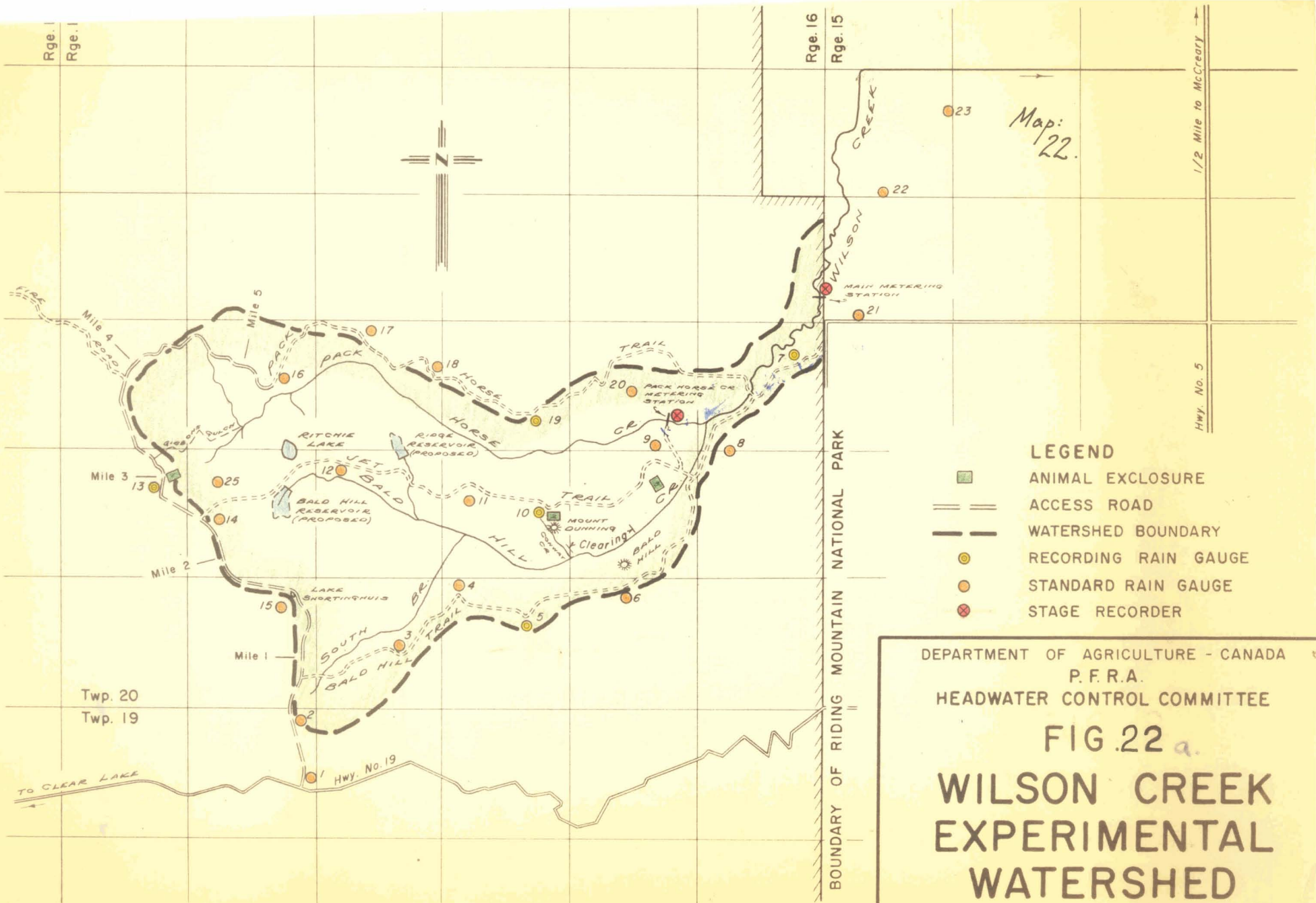
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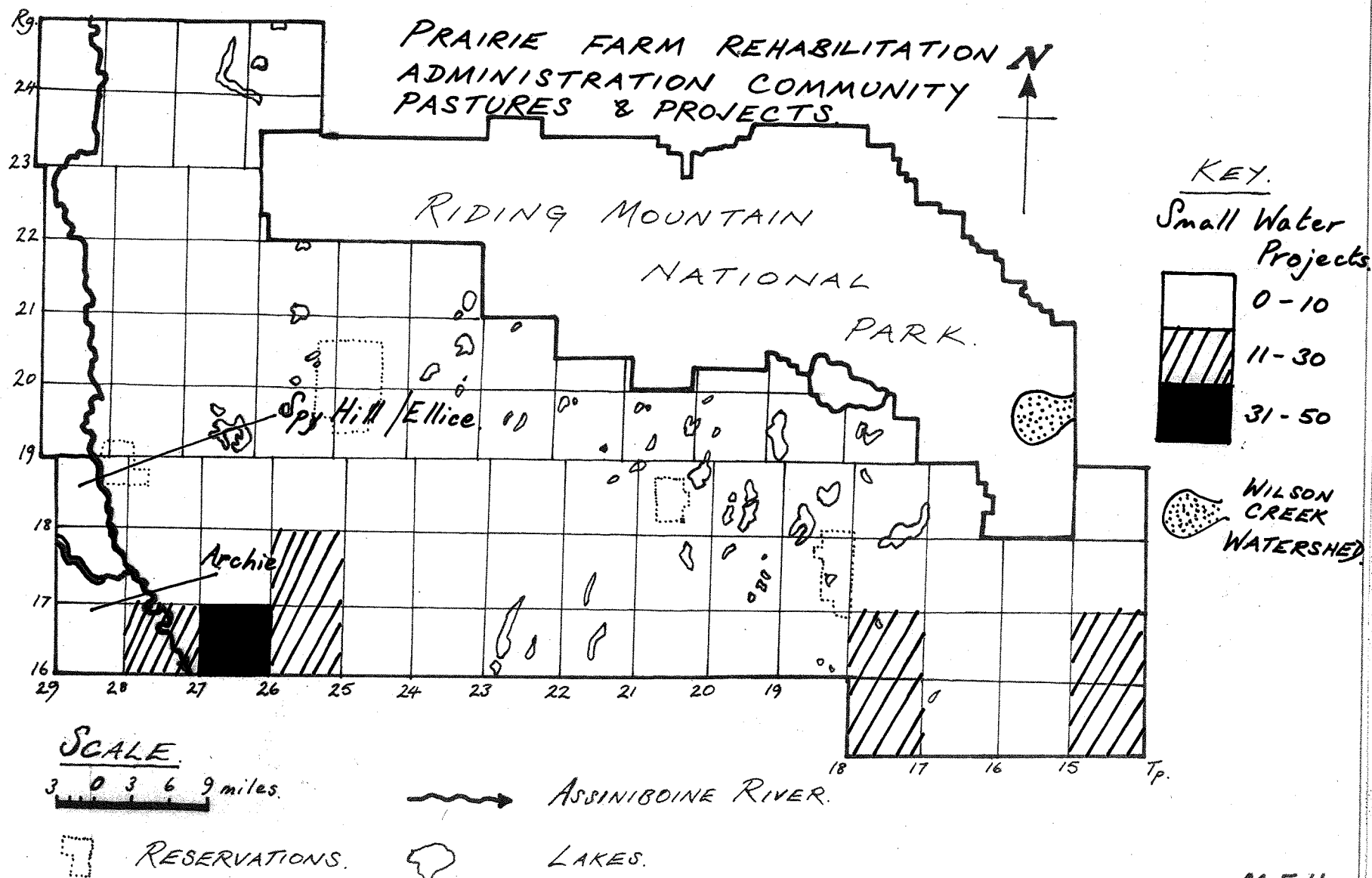
- (1) The author is indebted to Messrs. D. Old and C. N. Jensen-Butler for help in preparing the population projection.

M. F. Hopkinson.

August, 1968.



Map: 23.



M.F.H.  
'68.

## SUPPLEMENT

Having considered the various aspects of population change in the Riding Mountain area, it may be relevant to conclude with a brief consideration of the efforts being made to improve rural agricultural facilities by the Federal and Provincial Authorities. Perhaps the most significant of these have been the Prairie Farm Rehabilitation Administration's schemes, of which there are three types in our study area.

The P.F.R. Act was passed in April, 1935, to deal with the immediate problems of drought and depression then blighting Canadian Prairie agriculture. The programmes of long term land rehabilitation that have followed have all had as their main objectives the more complete utilization of available water resources, and making more efficient use of soil and climatic conditions. Of the various projects fostered by the P.F.R.A. the three in operation in the Riding Mountain Area are (i) small farm water projects, (ii) community pastures and (iii) the Wilson Creek watershed control experiment.<sup>(1)</sup> (see map 22.)

### (i) Small farm water projects

Individual water conservation efforts by farmers are the smallest scale but probably the most basic aspect of the P.F.R.A.'s work. In addition to such dry farming processes as strip cropping and summer fallowing, it is often necessary to conserve runoff water for stock supplies by dugout ponds or small dams. P.F.R.A. leaves the construction of these

minor projects to the farmer but provides an advisory engineering service free and a portion of the costs. This is based on the yardage of earth moved, being at present 7 cents per cubic yard up to maxima of \$250 for dugouts, \$350 for stockwatering dams and \$600 for irrigation projects.

Reference to map 23 will indicate that few of the townships in our area have recourse to these projects, and that in particular the centre area is very sparse in such activity. The great quantity of intermittent ponds and small lakes already existing, and the concentration on grain rather than stock farming, are the main reasons for this pattern. It is only in the dry area of the south west and near Neepawa and Minnedosa that any number of these projects are in operation. The dam near Minnedosa was built as a community project with P.F.R.A. assistance to serve local farmers and the nearby urban dwellers.

(ii) Community pastures

In 1937 the P.F.R. Act was amended to include land utilization and settlement in the Federal Government's Programme. By agreement with the provinces of Saskatchewan and Manitoba, land not considered suitable for crop production may be transferred to the Federal Government for development by P.F.R.A. as community pastures. The provincial government selects and purchases the land which is then leased to the Federal Government which maintains it.

"In this way land uneconomical to farm or subject to drought and soil drifting is removed from cultivation and protected under a permanent grass cover."

"As these submarginal and marginal lands are converted into pastures and once again made productive for grazing purposes, farmers in surrounding districts are encouraged to increase their livestock numbers and develop complementary farm forage supplies ... As a result the average carrying capacity of community pastures has been more than doubled, (2) during the years in which they have been in operation."

'Pasture Privileges' are accorded to the farmers located nearest to the area designated as a community pasture - first those moved from the area by the Administration, then those in Municipalities adjoining the pasture, and then those in adjoining Municipalities; up to the carrying capacity of the pasture. The animals spend the fall and winter on the owner's farm and the summer at the pasture in a sort of modern modified transhumance system. As well as grazing, insurance and vaccination services are provided for a small charge.

In our area community pastures are located in the dry south west corner: in Ellice Municipality west of the Assiniboine River. The Spy Hill - Ellice and Archie pastures are located here and in the township to the immediate west and south. This location helps account for the absence of urban settlements and the steady decline in population which the area has experienced in recent times. The tendency of the township in which Victor is sited to show a slight population increase, (Tp.17, Rg.29), may be because of the few stockmen dwelling there. Otherwise this pasture area is naturally sparsely peopled.

(iii) Wilson Creek Experimental Watershed (see map 22)

In recent years increasing attention has been given to

the construction of larger irrigation and reclamation projects by the P.F.R.A. Among these is the scheme for the reclamation of the North West escarpment in Manitoba. The most southerly of these experiments is within the margins of our area, near McCreary on the eastern edge of the Riding Mountain National Park. Since 1958 attention to the serious flood and erosion problems has been concentrated on the headwaters of the Wilson Creek, to discover improved methods of flood control.

Along the North West escarpment, between the high, forested plateau of between 2,300 and 2,700 feet and the gently sloping plains of about 1,000 feet, is a steeply sloping band of land, about four miles wide. Down this slope rivers and streams have cut deep valleys into the glacial till, beach deposits and bedrock shale, and at the base, an almost continuous deposit of reworked alluvial material has been formed by stream action. A system of subdivision, roads, railways and ditches, was superimposed on the basins disturbing the natural drainage pattern of peaty swamps. As a result clogging of the ditches, problems of severe and costly flooding and crop destruction arose. (e.g. June, 1923). In addition, prolonged reduction in crop productivity on the valuable land bordering the creeks and draining ditches. Over the last twenty years, average loss due to flood damage in the area has been around \$150 per quarter section per annum.

Over the period from 1908 many piecemeal attempts have been made to cure flooding in the plains. In 1948 the P.F.R.A.

was authorised to make an attempt at an overall solution. Four years later repair work was becoming prohibitively expensive, so a water-shed expert, Mr. R. W. Bailey, was consulted and suggested that upstream control and water storage would be more useful. The Wilson Creek Watershed was selected for intensive study of the problems in a typical escarpment basin.

Beginning in 1958 maps and photographs were produced and measuring stations were established. Two years later two storage reservoirs to control runoff were proposed, and built in 1961. Between 1962 and 1964, 48,000 spruce were planted to control runoff. Despite several storms in 1964 and 1965 no flooding occurred in the experiment area.

The overall cost of this project has been \$211,350 including continual observation and the building of two dams. In one storm in 1953, the damage in one township (Tp. 21, Rg. 15) to some 11,213 acres cost \$228,550. It seems that the reduction in flood damage has justified the expenditure on the project. The most significant facet of the North West Escarpment Reclamation, however, is the change in policy from the operation of piecemeal and inefficient drainage and shale clearance work to an overall experiment in head-water management, in 1957. In short it marks the realization that preventive conservation in the watershed is both more effective and economic than repair work in the eroded valleys, although the latter is also necessary.

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- (2) opus cit. P. 25.

APPENDIX

Census Returns, Riding Mountain Area, 1901-1961	Page i-iv
Tables: A. Ethnic Groups .. .. .	v.
B. Change in Population in farm 1951-61	vi.
C. Change in non-farm population 1951-61	vii.
D. Types of Farms by Commercial Value	viii.
E. Percentage Changes in Crop Acreages	ix.
F. Disposition of Farm Units	x.
G. Proportion of Land Purchased & Rented 1960 by J.G. Mackenzie ..	xi.

Census Returns, 1901 - 1961. Municipalities

Rosedale

TP	Rg.	1901	1911	1921	1931	1941	1946	1951	1956	1961	% change 1941-61
15	15	<u>841</u>	371	300	272	284	272	255	216	217	-23.6
15	16	80	<u>586</u>	572	477	472	402	427	392	302	-36.0
16	15	384	401	436	<u>537</u>	419	413	407	377	337	-19.6
16	16	380	385	353	<u>624</u>	<u>625</u>	558	413	301	299	-52.2
17	15	191	304	403	448	<u>451</u>	427	409	374	328	-27.3
17	16	264	493	<u>544</u>	525	516	421	330	308	280	-45.7
18	15	143	265	412	385	<u>520</u>	496	446	416	404	-22.3
<u>Minto</u>											
15	17	364	347	442	<u>485</u>	427	360	344	320	270	-36.8
15	18	178	<u>214</u>	176	199	205	182	181	158	162	-20.9
16	17	422	457	<u>629</u>	542	535	509	458	416	371	-30.7
16	18	200	<u>414</u>	376	361	361	301	341	321	277	-23.3
<u>Clanwilliam</u>											
17	17	177	279	219	378	<u>410</u>	326	304	275	240	-41.5
17	18	138	244	503	513	681	687	<u>769</u>	283	297	-56.4
18	17	158	183	<u>367</u>	186	247	200	159	143	125	-49.4
18	18	115	273	<u>304</u>	284	293	245	228	194	173	-40.9
<u>Harrison</u>											
16	19	151	201	216	244	235	<u>295</u>	184	185	135	-42.6
16	20	330	444	<u>556</u>	510	454	375	454	414	411	- 9.5
17	19	31	106	172	<u>239</u>	213	188	137	109	122	-42.7
17	20	92	256	395	<u>453</u>	386	328	283	230	205	-46.9
18	19	15	97	169	296	348	338	283	271	218	-37.4
18	20	-	385	639	740	<u>810</u>	726	664	595	606	-25.2
<u>Strathclair</u>											
16	21	150	245	<u>281</u>	233	219	176	185	158	159	-27.4
16	22	307	465	653	601	565	617	<u>692</u>	673	686	<u>+21.4</u>
17	21	172	164	<u>293</u>	279	221	202	176	184	164	-25.8

Strathclair (continued)

Tr	Rg.	1901	1911	1921	1931	1941	1946	1951	1956	1961	%change 1941-61
17	22	140	160	262	<u>274</u>	273	251	238	216	199	-27.1
18	21	142	266	454	519	<u>653</u>	635	<u>654</u>	593	553	-15.3
18	22	172	249	382	<u>407</u>	<u>407</u>	313	266	258	251	-38.3
<u>Shoal Lake</u>											
16	23	107	139	<u>193</u>	160	152	160	159	155	118	-22.4
16	24	57	104	210	<u>232</u>	152	130	127	127	111	-26.9
17	23	<u>553</u>	226	192	292	228	252	232	193	175	-23.3
17	24	118	236	<u>273</u>	266	241	229	181	191	150	-37.8
18	23	193	260	464	544	<u>650</u>	632	610	596	580	-10.8
18	24	193	183	<u>271</u>	253	224	196	204	182	193	-13.8
<u>Park L.G.D. (Part)</u>											
19	18	-	10	8	159	<u>289</u>	267	96	105	158	-45.3
19	19	6	-	23	284	<u>296</u>	371	<u>532</u>	493	516	<u>+74.3</u>
19	20	-	-	1	237	<u>328</u>	262	194	140	121	-63.1
19	21	109	376	<u>491</u>	489	383	332	265	202	158	-58.7
19	22	37	341	464	<u>510</u>	460	397	282	263	225	-51.1
20	19	-	-	4	<u>62</u>	54	45	36	39	19	-64.8
20	20	-	4	13	139	<u>159</u>	144	120	108	105	-33.9
20	21	44	46	<u>79</u>	51	47	41	28	17	10	-78.7
20	22	44	237	355	<u>357</u>	261	206	141	97	78	-70.1
<u>Rosburn</u>											
19	23	261	447	525	<u>551</u>	475	449	343	322	244	-48.6
19	24	242	250	311	<u>341</u>	330	322	317	303	273	-17.3
19	25	82	<u>330</u>	119	124	122	149	135	155	130	<u>+ 6.6</u>
20	23	245	433	<u>595</u>	584	526	417	295	222	155	-70.5
20	24	176	346	409	431	359	302	220	192	149	-58.5
20	25	129	170	220	<u>266</u>	265	202	172	175	170	-35.9
21	24	40	330	458	<u>466</u>	444	344	268	221	157	-64.6
21	25	177	410	449	<u>571</u>	455	389	304	262	221	-51.4

Birtle

Tp	Rg.	1901	1911	1921	1931	1941	1946	1951	1956	1961	% change 1941-61
16	25	38	101	<u>229</u>	189	146	165	175	170	166	<u>+13.7</u>
16	26	80	153	207	209	167	174	184	175	160	- 4.2
16	27	152	145	172	<u>200</u>	149	148	143	149	120	-19.5
17	25	120	218	<u>318</u>	278	277	269	281	238	225	-18.8
17	26	113	145	232	<u>239</u>	215	179	201	195	159	-26.0
17	27	131	190	151	242	208	185	234	195	180	-13.5
18	25	219	229	<u>268</u>	238	235	230	202	211	189	-19.6
18	26	84	133	166	<u>181</u>	163	141	170	178	151	- 7.4
18	27	229	<u>421</u>	237	255	235	252	242	216	219	- 6.8
<u>Ellice</u>											
16	28	100	66	92	<u>129</u>	105	60	54	39	49	-53.3
16	29	59	54	66	<u>105</u>	69	63	69	64	50	-27.5
17	28	226	330	383	508	<u>640</u>	568	341	307	282	-55.9
17	29	94	87	81	121	137	106	101	105	<u>144</u>	<u>+ 5.1</u>
18	28	120	218	209	<u>253</u>	213	238	228	213	196	- 7.9
18	29	31	147	199	181	134	129	190	<u>205</u>	124	- 7.4
<u>Silver Creek</u>											
19	26	108	135	155	<u>167</u>	161	113	121	114	96	-40.4
19	27	149	173	<u>210</u>	184	149	149	116	119	119	-20.2
20	26	137	272	445	<u>495</u>	481	467	467	452	394	-18.1
20	27	179	210	259	<u>276</u>	261	235	230	231	194	-25.7
21	26	81	330	<u>494</u>	483	468	374	268	244	212	-54.7
21	27	201	201	<u>234</u>	232	208	220	189	173	173	-16.8
<u>Russell</u>											
19	28	352	<u>514</u>	208	220	216	235	206	273	212	- 1.9
19	29	61	104	102	150	<u>151</u>	92	134	88	120	-20.5
20	28	86	206	237	221	224	190	186	163	162	-27.7
20	29	114	190	200	<u>213</u>	209	180	206	195	155	-25.8
21	28	<u>684</u>	208	155	249	190	187	209	239	281	<u>+47.9</u>
21	29	90	129	119	159	<u>162</u>	152	140	130	116	-28.4

Boulton

Tp	Rg.	1901	1911	1921	1931	1941	1946	1951	1956	1961	% change 1941-61
(22	26)	-	-	0	5	9	3	0	3	4	-55.6
22	27	192	234	<u>342</u>	<u>341</u>	311	273	212	216	177	-43.1
23	26	1	33	25	110	<u>166</u>	110	112	96	76	-54.2
23	27	67	227	380	442	<u>458</u>	429	318	316	282	-38.4
24	26	-	-	0	239	<u>359</u>	340	277	241	181	-49.6
24	27	-	13	223	409	432	411	348	337	259	-40.1
<u>Shellmouth</u>											
22	28	97	177	199	414	444	443	538	532	<u>550</u>	+23.8
22	29	145	271	343	<u>377</u>	294	287	283	248	249	-15.3
23	28	101	303	396	<u>399</u>	329	263	246	227	213	-35.3
23	29	15	143	253	<u>266</u>	162	188	158	153	137	-15.4
24	28	46	95	239	242	<u>253</u>	235	223	223	207	-18.2
24	29	47	125	137	<u>186</u>	163	134	124	119	104	-36.2
<u>Total</u>		13299	20062	25045	28185	27483		23074		19095	Average -29.9%

Source: Dominion Bureau of Statistics.  
Census of Canada. 1901/11/21/31/41/46/51/56/61.  
Vol. 1.

TABLE A  
ETHNIC GROUPS

MUNICI- PALITY	BRITISH			GERMAN			UKRAINIAN			POLISH			TOTAL
	41	61	%	41	61	%	41	61	%	41	61	%	%
Shell- mouth	716	452	-36.9	260	326	+25.4	213	282	+ 32.4	110	129	+17.3	-11.25
Boulton	119	73	-38.7	318	226	-28.9	578	364	- 37.0	222	75	-66.3	-43.6
Russell	819	586	-28.5	110	152	-38.2	18	67	+272.2	19	60	+215.8	- 9.2
Silver Creek	729	381	-47.5	28	51	+82.1	702	526	- 25.1	105	138	+31.4	-31.3
Ellice *	445	305	-31.5	3	8	+66.7	12	8	+ 33.3	9	5	-44.5	-34.9
Birtle	1454	973	-33.1	6	25	+316.7	147	357	+142.9	31	77	+148.4	-12.6
Rosburn	439	248	-43.5	30	28	- 6.7	2189	1037	-52.6	251	168	-33.1	-49.6
Shoal Lake	821	373	-54.6	37	14	-62.2	682	756	+ 10.9	92	132	+43.5	-19.4
Strath- clair	1178	980	-16.8	37	32	-13.5	786	476	- 39.5	194	204	+ 5.1	-13.9
Harri- son	689	423	-38.6	8	20	+150.0	1376	978	- 28.9	292	194	-33.6	-30.6
Clan William	369	191	-48.2	2	12	+500.0	332	229	-31.0	102	48	-52.9	-48.2
Rose- dale	2100	1440	-31.4	55	85	+54.5	666	444	-33.3	675	470	-30.4	-29.6
Minto	1144	780	-31.8	22	17	-22.7	56	47	-16.1	121	79	-34.7	-29.4
Total			-34.6			+ 8.7			-28.2			-16.2	<u>-29.2</u>

\* Ellice 1941 French 390 British 445  
1961 507 305.

Source: D.B.S. Census 1941-61.

TABLE B  
Change in Population in farm 1951-61

<u>Rural Municipality</u>	<u>1951</u>	<u>1961</u>	<u>% change</u>
Manitoba	219,053	172,946	-21
Shoal Lake	1,064	853	-19.8
Strathclair	1,268	1,074	-15.3
Birtle	1,732	1,398	-19.3
Rosburn	1,903	1,280	-32.7
Silver Creek	1,113	889	-20.1
Ellice	739	537	-27.3
Russell	1,065	877	-17.7
Shellmouth	1,180	939	-20.4
Boulton	1,249	903	-27.7
Park L.G.D.	866	557	-35.7
Minto	1,066	780	-26.8
Clanwilliam	992	753	-24.1
Harrison	1,287	933	-27.5
	<u>15,524</u>	<u>11,773</u>	

TABLE C

Change in non-farm population 1951-61

<u>Rural Municipality</u>	<u>1951</u>	<u>1961</u>	<u>% change</u>
Manitoba	149,214	221,427	+48.4
Shoal Lake	1,170	1,248	+ 6.7
Strathclair	943	938	- 0.5
Birtle	1,112	1,289	+15.9
Rosburn	737	810	+ 9.9
Silver Creek	278	299	+ 7.6
Ellice	564	757	+34.2
Russell	467	625	+33.8
Shellmouth	392	521	+32.9
Boulton	18	76	+322.2
Park L.G.D.	180	465	+158.3
Minto	258	300	+16.3
Clanwilliam	468	613	+31
Harrison	718	764	+ 6.4
	<u>7,305</u>	<u>8,705</u>	

TABLE D \*

Division	Commer- cial farms %	Sales of \$1200- \$2500	Sales of \$2500- \$3750	Sales of \$3750- \$10000	Sales of over \$10000	Part time farms	Other farms	Resi- dential farms	
Northern	74.5	35.7	26.7	34.4	3.2	5.2	15.4	4.9	100
Western	89.4	22.6	19.6	49.9	7.9	1.5	5.2	3.7	100
Central	86.2	28.2	24.3	41.2	6.2	2.1	9.4	2.2	100
Eastern	85.6	23.6	21.8	49.3	5.2	3.2	8.2	3.1	100
Average	83.9	27.5	23.1	43.7	5.6	3.0	9.5	3.4	

\* %-ages indicate number of farms in each category for each division.

TABLE E

% Change in crop acreages

	Wheat	Oats	Barley	Rye	Flax	Mixed	Tame Hay	Corn
Northern	-158.4	-25.8	-45.1	-17.0	-59.6	-1218.2	-152.3	-47.1
Western	- 88.3	-41.9	-43.5	- 7.3	-28.3	- 539.3	-123.4	-
Central	- 71.0	-34.0	-39.8	-44.6	-35.6	- 485.0	- 92.5	-27.8
Eastern	- 37.0	-28.6	-51.0	- 9.5	-18.1	- 502.6	- 76.5	-31.7
Provincial	- 32.5	-13.6	-57.7	-	- 5.1	- 134.0	- 60	-

TABLE F

Disposition of Farm Units on New Dale Clay Loam Soils  
According to Size of Unit,  
Russell - Minnedosa Area of Manitoba 1956-60

	Size of Unit (Acres)							
	70- 239	240- 399	400- 559	560- 719	720- 879	880- 1039	1040 & over	All Units
Number of farm units								
No. of farm units 1956	50	223	140	70	38	21	19	581
Disposition of farm units 1956-60:								
Units disappeared	21	54	30	15	7	8	4	139
Units enlarged	6	52	38	14	14	3	0	127
Units remained same size	23	117	72	41	17	10	15	295
New farm units, 1960	<u>12<sup>x</sup></u>	33	30	40	20	18	23	176
No. of farm units 1960	35	150	102	81	37	28	38	<u>471</u>
Percent change in number of units								
Change in no. of farm units 1956-60	-30	-31	-27	+13	-3	+33	+100	-16

TABLE G

Proportion of Land Purchased and Rented in the  
Formation and Enlargement of Farm Units  
According to Size of Unit,  
Russell - Minnedosa Area of Manitoba, 1960

Acquisition	Size of Unit <sup>(a)</sup> (Acres)							
	70- 239	240- 389	400- 599	560- 719	720- 879	880- 1038	1040 & over	All Units
Purchased <sup>(b)</sup> Rented <sup>(b)</sup>	Percent of acreage							
	83	76	78	62	42	50	38	56
	17	24	22	38	58	50	62	44
Total	100	100	100	100	100	100	100	100
Total, purchased & rented	5	13	9	22	11	14	26	100

(a) Size of farm unit at time when occupancy maps were prepared to November 1960.

(b) Data not obtained for land outside the study that made up part of farm units with headquarters inside area or for land inside the area that made up part of units with headquarters outside the study area.

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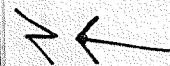
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8619-176



BIRTLE.





SANDY LAKE





8631-110

11

ANGUSVILLE.

628-207



VISTA.

8631-71

11



RUSSELL.



KODAK AEROGRAFIC SAFETY FILM

2622-111



NEEPAWA.

SALT  
WORKS.

