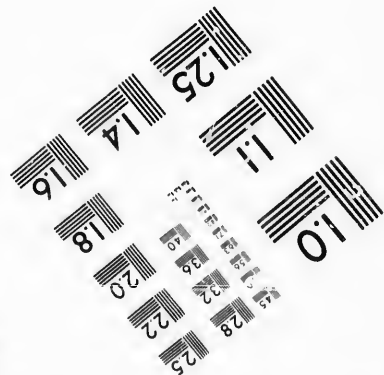
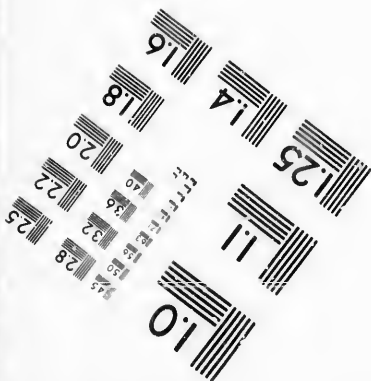
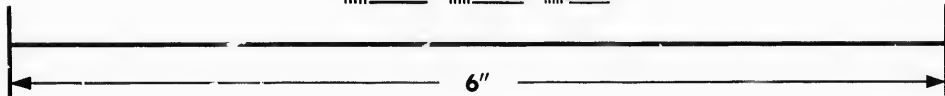
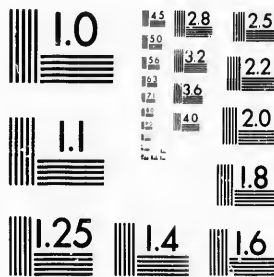
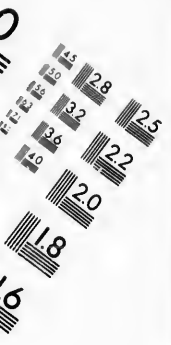


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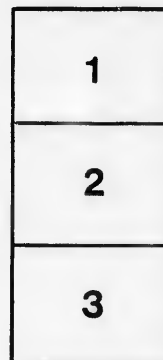
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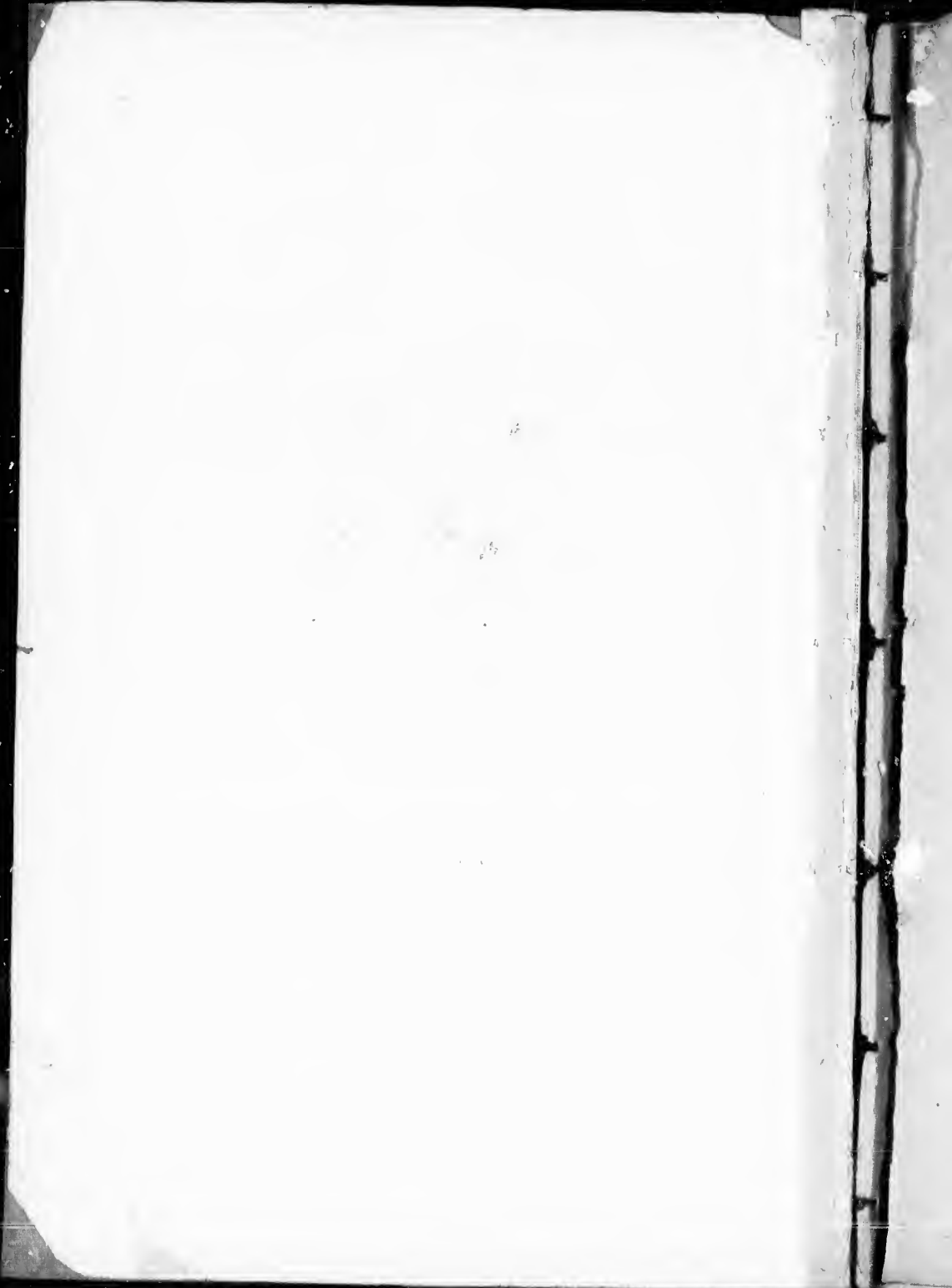


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HAND-BOOK OF NEW BRUNSWICK,

CANADA





HAND BOOK
OF
NEW BRUNSWICK
(CANADA).

190

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PREPARED BY
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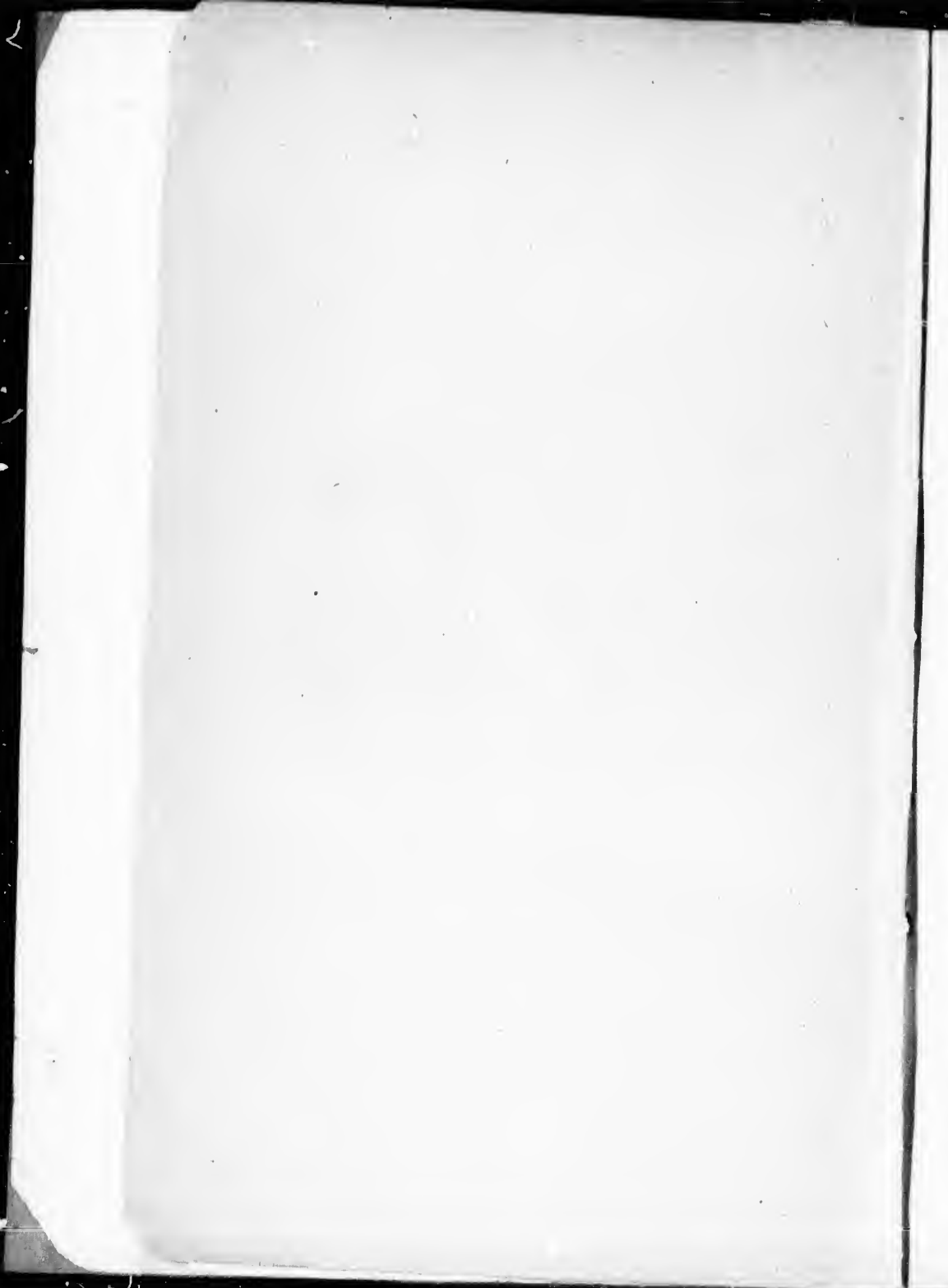
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FREDERICTON, NEW BRUNSWICK,
DOMINION OF CANADA.



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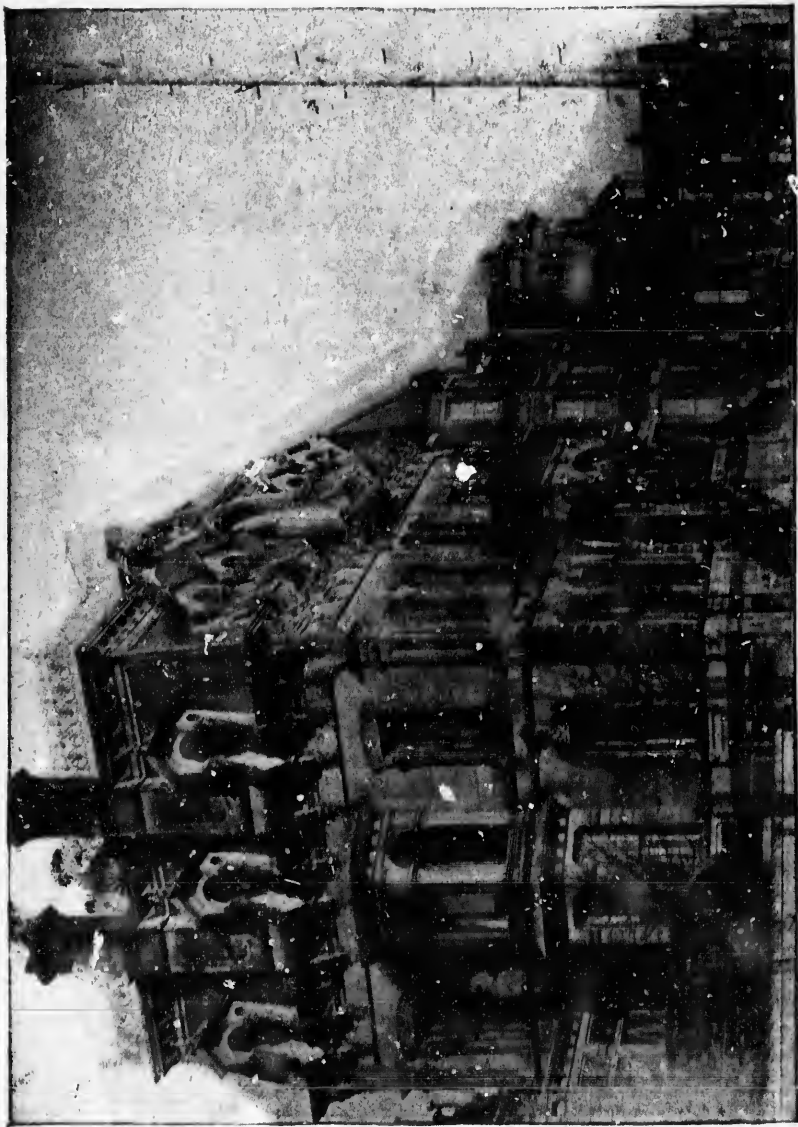
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PREFACE.

To undertake a description of the Province, which should be authoritative and give the various economic particulars as they should be given, would involve a considerable amount of labour and time. This, in the present work, I have been unable to give. When, at the request of the Provincial Government, I undertook to write a description of the Province, I was busily engaged in preparing to lecture in Great Britain on the resources of the country, and my time was most limited. I was therefore only able to devote a portion of my time during some three weeks to dictating the following description, and from the method of preparing it, it must necessarily be inferred that the work is far from as full as I should care to make it. The facts are, however, I believe, correct in as far as they go, and have been adduced, for the most part, from personal observation—anything that has been quoted having been credited to its proper source at the time. The works which I have referred to in the course of the preparation are: "A Hand-book of Information for Immigrants to New Brunswick," by M. H. Perley, Esq., London, 1857. "Province of New Brunswick, its Resources, Advantages and Progress," by Charles H. Lugin, published by authority of the Legislature, 1886. "A report on the Agricultural Capabilities of the Province," by J. F. W. Johnson, F. R. S., etc., Fredericton, 1850. "The Mineral Resources of the Province of New Brunswick," by L. W. Bailey, Ph. D., LL. D., F. R. S. C., Ottawa, 1899. "Gun and Rod in New Brunswick," by W. K. Reynolds, and D. G. Smith, Fishery Commissioner for New Brunswick; and "St. John, New Brunswick, as a Canadian Winter Port," by a Committee of the Board of Trade, St. John, 1898.

W. ALBERT HICKMAN.



Residence of P. S. MacNutt, formerly occupied by the late Hon. John Boyd, Lieut.-Governor of N. B.

THE PROVINCE OF NEW BRUNSWICK.

The Province of New Brunswick, the largest of the Maritime Provinces of Canada, has an area of approximately 28,200 square miles—something over 17,000,000 acres. The Maritime Provinces of Canada occupy a position which is a peculiarly favored one, with regard to its relation to the Empire and its interests as a whole. They are situated nearer to the mother country than any very considerable food-producing area in the Empire. They constitute the eastern-most portion of the most important of the British colonies. Through them lie the natural path of the vast, absolutely incalculable stores of wealth of the Dominion of Canada to the United Kingdom. If these Maritime Provinces were incapable of producing any of the things required in the mother country, they would necessarily derive their greatest importance from the fact that they lay in the path of the produce of Canada further west. This, however, is far from being the case. Though the fact is yet to a great extent unappreciated abroad, it remains as a fact that no equal section of country in the world has more resources and more advantages from every point of view than do these same Maritime Provinces; and in the greatest measure is this true of New Brunswick, the largest and most resourceful of them all. New Brunswick, half as large again in area as Nova Scotia, is roughly quadrilateral in form, and is bounded as

follows:—On the west and southwest by Maine, one of the United States of America; on the north by the Province of Quebec and the Baie de Chaleur, a portion of the Gulf of St. Lawrence; on the east by an open portion of the same Gulf and further south Northumberland Straits, and on the south by the Province of Nova Scotia and the Bay of Fundy. Situated as New Brunswick is with relation to the British Empire, she occupies a position with regard to the home land, of which the importance can only be estimated by the full knowledge of the resources and peculiarities of this magnificent province. No country in the world is more blessed with natural advantages than is this. To go still further, I have yet to learn, as far as I am personally concerned, of a section that possesses from every point of view advantages which equal those of this province. On the north, east and south lie magnificent harbors. On the east and north rolls the Gulf of St. Lawrence, teeming with fish and not subject to sudden storms. The southern shore is washed by that wonderful body of water, the Bay of Fundy, the geographical peculiarities of which are sufficient to give the country an interest which it could obtain in no other way. It is a country of complicated and elaborate internal water-ways which penetrate to every portion of the province and present all the advantages that pure water always give a country, both for economic and more sentimental reasons; blessed with a soil more fertile than the greater portion of the lands surrounding, the water-ways tend enormously to enhance the value of this feature by laying down thousands of acres of alluvial interval land along their courses. The climate is magnificent. The summers for the most part clear and cool and the winters cold, bracing and, especially in the interior, free from sudden changes. The climate is especially favorable for the production in their best form of the most valuable crops of the temperate zone. During the summer, especially in the growing season there are frequent showers occurring often at night, the time between them being for the most part during the day one of almost uninterrupted sunshine. The comparatively severe frosts in the winter are

far from being as might be supposed by a resident of a more southern or a warmer climate, unmitigated evils. On the contrary these frosts have a most valuable effect in connection with agriculture, saving the farmer an incalculable amount of work in the tillage of the soil. The upper layers of the soil are so thoroughly loosened by the action of the frost, especially as it is leaving the ground in the spring, that ploughing becomes an operation so much easier than it would under other circumstances, as not to entail more than half the labor. Many an essay has been written on this subject alone, and I could occupy much time and space in giving some more definite idea of the value of this feature. Of course, on the other hand, there is the danger that the frosts will injure the roots of fruit trees and do other damage that may mean very considerable loss. This is very rarely even a consideration in New Brunswick, the reason being that before the frosts have penetrated sufficiently deep to have done any injury, the ground becomes covered with a heavy coating of snow which prevents any further freezing below. And here again another advantage accrues; a considerable amount of the elements which the soil obtains usually through the agency of the rain from the air are stored up in the layer of the snow that sometimes lays three feet in depth over the surface of the ground in this province, and these elements are added to the soil suddenly as the snow melts during the months of March and April, and are in a condition to do their best work for the crop by the time that the frost is thoroughly out of the ground and the seed sown. To give a fair idea of the amount of sunshine in the province—and there is no more important element that goes to make life happier and healthier—I shall give herewith in tabular form the report furnished to the Department of Agriculture of the province by Thomas Harrison, L. L. B., the Chancellor of the University of New Brunswick, showing the hours of bright sunshine in Fredericton for each month of the year 1898, as compared with the average amount of sunshine for each month of the year for the last seventeen years, these facts being the most interesting as giving a better idea of what we are to expect:—

Months of the Year.	Hours of Bright Sunshine in Fredericton, 1898.	Hours of Possible Sunshine in Fredericton, 1898.	Average Hours of Bright Sunshine deduced from the last 17 years.
January,	98	279.33-60	113
February,	90	287.29-60	128
March,	199	365.18-60	153
April,	168	400.42-60	189
May,	201	456.05-60	206
June,	198	462.12-60	219
July,	249	466.41-60	238
August,	174	428.50-60	217
September,	178	370.03-60	182
October,	141	334.39-60	146
November,	58	281.20-60	94
December,	75	267.18-60	98

From this Table it can be readily seen that New Brunswick is, indeed, a country of sunshine. No better conception of this can be obtained than comparing a Table of this sort with one of the same type prepared for, for instance, Great Britain. It will be seen that New Brunswick has nearly twice as many hours sunshine in the year as has the mother country. I also include below a tabular view showing the highest, lowest and average mean temperature during each month in the year, 1898, at Fredericton; also the average mean temperature during each month deduced from twenty-three years' observation, with the precipitation for each month of the year 1898 in inches of rain and melted snow, as compared with the average precipitation of rain and melted snow at Fredericton for twenty-three years. It must be noted in this connection that there would be presented very different conditions in other portions of the Province. Fredericton being much warmer in summer and much colder in winter than is the case with places nearer the sea-coast. The province is entirely free from violent storms of any approach to the types found throughout the western United States, no storm ever attaining sufficient violence, excepting under the most exceptional circumstances to do any considerable damage; nor is the province liable to the droughts

which affect the Western and Middle States, and in some cases, the more Western portions of Canada. The scenery presents an infinite variety, in some portions mighty forests stretch from the point of observation to the horizon in every direction. These are threaded with innumerable streams and rivers, the forests abounding in game, large and small, and the rivers teeming with fish. Some of the streams wind their way through a comparatively flat country. Others move, dark and silent, between vast hills and still others thunder and roar down toward the sea, mere mountain torrents. There is no very high land in the province, the highest of the mountains being the Sagamook in Northumberland County, 2700 feet in height. The general surface of the country is undulating, with a moderate number of comparatively sharp rises. The beautiful St. John River, sometimes (though inappropriately) called the "Rhine of America," winds its way for nearly five hundred miles from its extreme head waters, the greater portion of its course lying through New Brunswick, and empties into the splendid harbor of St. John on the Bay of Fundy, the natural Winter Port of Canada. The next stream of importance is the Miramichi, emptying into the Gulf of St. Lawrence, and tapping the greatest lumbering section in Eastern Canada. Down the valley of the St. John River and its elaborate tributaries, as well as along the course of many minor streams, stretch thousands upon thousands of acres of the finest interval land, which is self-sustaining, being flooded each spring and fall and having its fertility constantly renewed by the coating of soil torn from the banks of the upper waters of the rivers, which is deposited upon it twice each year. Then there are great stretches of the best upland farming country lying over the Upper Silurian Formation, and on the East shore of the province another type of land sloping down to the blue waters of the Gulf of St. Lawrence is to be found; and here the sea comes in and adds its quatum of mussel mud and seaweed as fertilizer; and then around the head waters of the Bay of Fundy, and depending on, the wonderful tides of this body of water for their very existence, lie what are in many

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respects the most remarkable farming lands in the world. The famous Tantramar and other dyke lands, valued often as high as two hundred dollars (forty pounds) per acre, which are absolutely self-sustaining requiring no further fertilizing but that the rich silt-bearing waters of the Bay of Fundy should be occasionally let through the dykes to ebb and flow at will over the land and deposit their rich coating of the wonderfully fertile red mud which is peculiar of all the headwaters of the Bay. As can be seen more definitely under the head of Westmorland County, the marsh mud which can be had in unlimited quantities for the hauling, around the Bay of Fundy region, is the finest fertilizer that can be applied to uplands of all types.

The industries of New Brunswick are: First and most important, farming; second, lumbering, (I am speaking particularly of what might be called the natural industries of the country—those depending on the natural resources.) Third, fishing in its various branches; and fourth, the various manufacturing processes, including prominently the production of pulp from the great forests of spruce that clothe portions of the province. Fifth in importance ranks the development of the mineral resources of the country. Of these, farming is conducted under the most suspicious circumstances. Within the last few years, the development in farming in the Province of New Brunswick has been simply remarkable, the change from old methods which were unscientific to new methods which are scientific from every point of view has been exceedingly rapid. No more important branch of farming has developed, or is developing in the country, than dairying, for which the province is most admirably suited. Before the year 1891, practically nothing was done in that line. Since that time great strides have been made. I publish below a valuable little description in outline of the development of the dairying industries of the province. This was prepared by Mr. Thomas A. Peters, the Deputy Commissioner of Agriculture, and will give some conception of how rapidly dairying is progressing.

DAIRYING IN NEW BRUNSWICK.

The dairying industry in the Province of New Brunswick is one of the most important to be found. The cool, moist climate, rich, deep fertile soil watered by its numerous rivers, streams and lakes, and its broad pastures with plenty of shade trees seem to warrant the statement that there is no country yet engaged in this occupation with so many natural advantages for its successful operation than this country possesses. While our summer season is not probably so long as it is in provinces further west, yet we do not have to suffer the long droughts which are prevalent in other great dairying centres.

Dairying in this province was, I might say, only commenced in 1891, and even then on a small scale, for in that year only about one-eighth of a million pounds of cheese were manufactured. Many difficulties arose at that time to prevent a very rapid advancement. The following year hay and grain sold for high prices, and as a result the cows in a majority of cases were fed on a ration of straw, the effect of which was plainly visible the next season.

A system of Farmer's Institute meetings was established and meetings were held all over the province, which soon began to show their good effects. The New Brunswick government, realizing the vast importance of the dairy industry, decided to offer bonuses to the extent of \$150 for cheese factories and \$250 for creameries to any one who would erect and equip these factories. Many took advantage of this generous offer, and in 1892 sixteen factories were in operation, making 532,000 lbs. of cheese, and two creameries with an output of 31,000 lbs.

Between the years 1892-95 thirty-seven new cheese factories were established, making a total of fifty-three, with an output of 1,263,200 lbs.; and seven creameries were in operation, making 113,892 pounds of butter.

With the year 1896 came a reverse in affairs, for during that season there was a shortage over the previous season of one-half a million pounds of cheese and 32,000 pounds of



Parade of Prize Stock at International Exhibition, St. John, N. B.

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butter. The slump was chiefly caused by the low prices realized for dairy products in 1895.

In 1897 we regained our old position so far as cheese was concerned, and a better price was realized for the output of the factories, but the creameries did not fare so well, and there was a still greater decrease in the make than in 1896, the whole output being reduced to about twenty tons. The rate of increase from 1897 up to the present time in cheese has been about one-half a million pounds of cheese per year, while over three times as much butter has been made this year than last, the total output of the season of 1899 being 2,000,000 pounds of cheese and 305,000 pounds of butter.

OUR EXPORT TRADE.

Our export trade has been steadily increasing from year to year, as the following will show :

CHEESE.

1894.	1895.	1896.	1897.	1898.	1899.
205,000	442,000	450,000	465,000	832,767	1,500,000 lbs.

BUTTER.

1894.	1895.	1899.
40,000	55,000	243,705 lbs.

Reports from across the water have been very flattering regarding the quality of our goods, and now that we have a place on the Old Country market, extra efforts are being made by all our dairymen to hold the ground that we have acquired, which we realize is not an easy thing to do in the face of so many competing countries.

WINTER DAIRYING.

Winter dairying was first started in New Brunswick in 1897, when the Department of Agriculture leased the factory at Sussex, Kings County, and established three skimming stations in connection therewith. A fair business was done during the winter of 1897-8, and it was decided to operate in the same County the following winter on a more extensive scale.

During the summer of 1898 a creamery was erected in Carleton County by private parties, and the work was continued in both Kings and Carleton Counties during the winters of 1898-9.

The quantity of butter made was greatly in excess of that made the previous year, and the prospects for this winter are very encouraging.

It is now a dominant fact that the great industry is fairly established, and with the co-operation of all dairymen grand results must surely follow.

Though every advantage is offered for this industry, it is not to be supposed that the province does not offer equal advantages for the prosecution of other kinds of farming. The Provincial Government has realized the fact that the province has a great agricultural future and has made this the key-note of the most important portion of its policy. So valuable do I consider another little compilation of the Agricultural Department that I also publish it under the head of Agricultural in New Brunswick, below :

AGRICULTURE IN NEW BRUNSWICK.

From an agricultural point of view this province is one of the best in the Dominion. Being situated on the sea, its shores are indented by deep bays, while the inland is beautified by numerous small streams, rivers and lakes. The principal river is the St. John, which, though not navigable for large vessels for more than 140 miles from its mouth, is noted for its beautiful scenery and productive intervals along its bank.

The climate is one of the best, although the temperature reaches extreme points for short periods both in summer and winter, yet the conditions are such that for carrying on all branches of work, it no doubt excels that of the provinces lying around us.

“For any great plan of immigration or colonization there is no British colony which presents such a field for trial as New Brunswick.” This was the official reports of the Commissioners sent out by the British Government to explore a

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Saint John, County Lime Kiln.



line of railway more than half a century ago. If such a report could be made at that time, I am quite sure too much cannot be said from an immigration point of view at the present time. Many broad acres are now under a high state of cultivation which half a century ago were almost an impenetrable forest, and today, with railways extending over all sections, enables the emigrant to accomplish work that was unknown fifty years ago.

The land is gently undulating and without many very high elevations. The soil is rich, deep and very fertile in nearly every section, and being well watered, is suitable for growing nearly every crop with a profitable return.

About 1,500,000 acres of land are now under crops, 1,000,000 acres under pasture, 500,000 under garden and orchard cultivation.

The principal crops grown in 1898 were: Hay, 700,000 tons; oats, 5,000,000; wheat, 410,000 bushels; barley, 109,000; rye, 10,000; buckwheat, 1,658,000; beans, 25,000; turnips, 1,000,000 bushels, and about 5,000,000 bushels of potatoes.

The Local Government realizing the immense importance of wheat growing, established their now famous wheat policy, which has been the means of retaining a large amount of money that has hitherto been sent out of the province for flour. This policy was established in 1898, when authority was granted the Commissioner for Agriculture to offer a bonus of twenty per cent. of the cost of equipment to persons or companies equipping roller mills in sections approved of by the Commissioner.

Authority was also granted to make an importation of seeds for distribution among the farmers of the province, and in 1898 and '99, 3,000 and 5,000 bushels respectively were distributed. During the last two years twelve Hungarian Roller Mills have been established with very gratifying results. The following will give some idea of the increase in the growth of wheat since 1891. In that year only 200,000 bushels were grown, while in 1899 we have the gratifying return of 500,000 bushels. The quality of the wheat grown

is unexcelled, it being large and hard, and as before intimated, with the assistance of roller mills is capable of making a high grade flour.

The counties of Carleton, York and Westmorland are probably the best sections of the province for hay growing and pasture grass, and are equally good for the production of oats, buckwheat and barley; while for wheat production Gloucester and Kent are the banner counties.

With crops such as the above laying at the farmer's command, large quantities of beef are made, the quantity increasing every year, especially in the eastern portion of the province.

The production of pork, which goes hand in hand with the dairying industry, is making very rapid strides, induced largely by the increased interest which is taken in the manufacture of cheese and butter, the by-products of which are supplemented by a grain ration and used for this purpose.

Another very important feature of New Brunswick is the home market for everything produced on the farm. The vast lumbering operations of the province entails the keeping of a large number of men and horses. Then, with the Winter Port at St. John, where large numbers of horses, cattle and sheep are exported to the Old Country from the west, our market is greatly stimulated, for all these animals must be fed.

Dairying is one of the most important branches of agriculture in New Brunswick at the present time and the growth of the industry during the last few years has been rapid, for in 1892 only nineteen factories were in operation, manufacturing 532,000 pounds of cheese and 31,953 pounds of butter; while this year there has been in operation sixty cheese factories manufacturing about 2,000,000 pounds of cheese and ten creameries making 310,000 pounds of butter. About two-thirds of this quantity was exported to the Old Country, for which high prices were obtained and very flattering reports accompanied the returns in nearly every instance.

The principle drawback with which the dairymen have to contend in this province is the long distance from the Old Country, which is our principle market. While the cheese sent over is not materially damaged, the exports of butter do not fare so well, although transportation facilities have been very much improved during the last two or three years, and as the dairying industry is advancing all over the Dominion, we are looking for a corresponding advance in shipping facilities.

The province of New Brunswick is particularly well adapted for dairying. We have a country notably well watered and a moist and cooler climate than many parts of the world at present engaged in this branch of farming. Our pastures are fresher and when properly looked after will produce more per acre than those farther west of us, while the land under cultivation is capable of producing large crops of choice milk producing foods.

Notwithstanding our winter and about seven months' compulsory stable feeding, facts go to show, as already stated, that New Brunswick can produce as choice an article of cheese or butter as cheaply as most any country. When we come to beef production, we are compelled to admit that our own Northwest, the western plains of the United States and the great natural pastures of South America can manufacture it more cheaply than we can. Nevertheless, the New Brunswick farmer realizes the fact that beef can be very profitably raised from cheap foods such as corn fodder, turnips, oats, buckwheat, etc., of which we have abundant crops. We can report fair progress in the beef raising industry, especially in the eastern portion of the Province where thousands of acres of marsh land are available and suitable for this work.

FRUIT.

The cultivation of apples is increasing very rapidly from year to year, especially along the St. John Valley district, which is about the only fruit raising district of the province, the soil being particularly well adapted for the growth of apples.

Few orchards are yet extensive enough to produce a very large quantity of any one variety, excepting the New Brunswick, which loses its flavor very quickly after being picked. Winter varieties such as Bishop Pippin, Fameuse and Ben Davis are being grown quite extensively in some sections, and more attention is being given to the orchards than previously has been devoted to them.

The cultivation of small fruits, such as strawberries, raspberries, currants and gooseberries is also on the increase, especially in the vicinity of towns and cities.

This industry might be considerably increased with advantage both to growers and consumers, and might be considerably increased on the farm for home use.

The Local Government has frequently made importations of pure bred stock consisting of cattle, sheep and swine, at a great expense, and distributed them all over the province with a view of stimulating and encouraging the breeding of a better class of stock. The result of these distributions is plainly visible, for a general improvement in nearly all classes has been realized.

Different kinds of seeds are also from time to time distributed with very gratifying results.

Encouragement is also given to the farmers of the province by the assistance granted by the Government to the Agricultural Societies, \$9,000 being appropriated for this purpose yearly.

Three dairy superintendents are employed by the Government for the purpose of giving instruction to the cheese and butter makers, in order that a uniform article may be made. They also encourage the erection of these factories in suitable sections.

From what I have said and from what can be inferred from this Report, it is very evident that the province has vast capabilities with regard to its power of producing the very food products that are required in Great Britain. It has been the tendency, unfortunately, throughout the province for farmers to raise their hay and make a considerable portion of their very comfortable living by selling it. If this

hay and the other farm products were employed as they should be, being used on the farm in feeding stock, both for meat and dairy purposes, and poultry, the results would be very different than they are at present. Throughout the province there is a splendid chance for the class of farmer who knows his business. The market advantages are rapidly increasing, but so great is the fertile area that the price of land, compared with land in other countries of like fertility, remains remarkably low. Of course it is more difficult to obtain the best class of farms under any conditions, but there are always accidental circumstances which put even the best farms on the market. During the summer and autumn of 1899, the Government has been taking options on the better class of farms through the province and, as far as I know, there has not been a single instance of a man who wished to sell because he was dissatisfied with farming in the Province of New Brunswick. There was always some very good reason why he should do so. Either he was advancing in age and his children, if he had any, were taking up some professions, or, as in the case of a considerable number, he was growing old in the work, childless and was independent, and wishing to move to a town and live quietly without further work for the rest of his life, he had decided to sell the farm. A number of places to be sold under these conditions, including some of the finest farms in the province in the best state of cultivation, are to be obtained. To give some idea of prices, let me cite an instance or two. A farm of 800 acres, 700 of which is an interval, situated at Gagetown on the St. John River valley, can at present (January 1900) be obtained for \$12,000.00, (about 2400 pounds sterling); this price including buildings, etc. Another farm only a mile from Sussex and in the centre of the foremost dairy section in the province, with some forty acres of interval attached, consisting of some 250 acres in all, about 100 being cleared and under cultivation, can be obtained for \$2,800.00, (550 pounds sterling.) This also includes wooden buildings. Some places of course reach considerably above these in price proportionately, and some again can be obtained for

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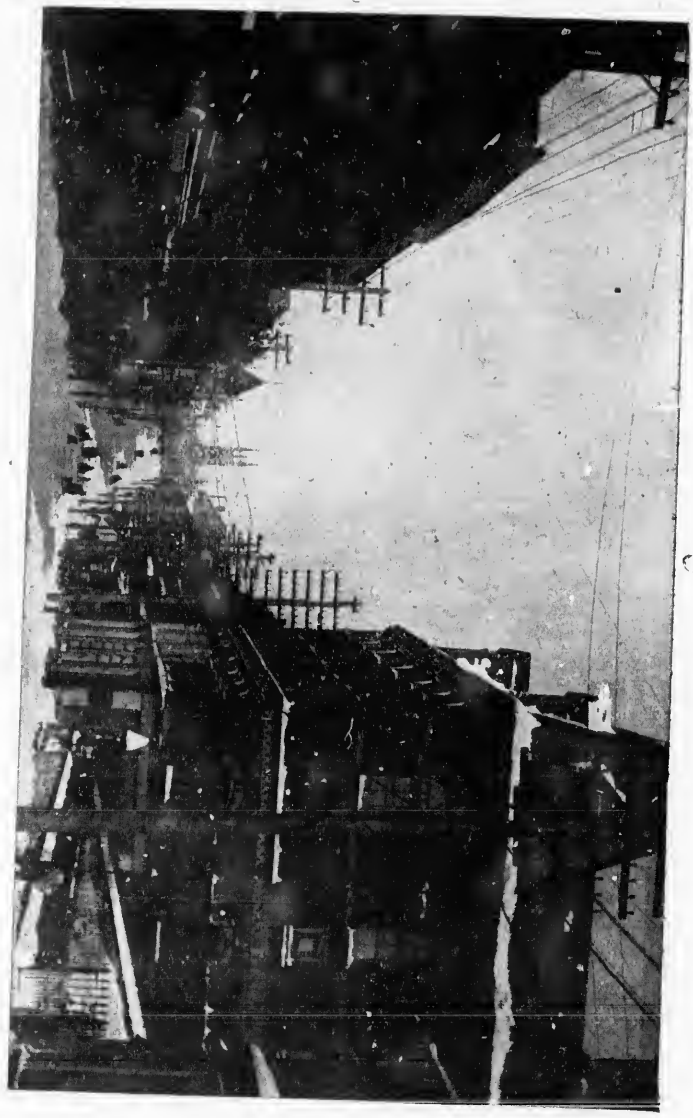
King Square, St. John, N.B., from Market Buildings



much less money. The latter instance however, would be considered a cheap farm in the province, taking into consideration all the advantages which its position presents. Besides this cheapness of land, another feature that makes the province a most desirable home for the farmers is the fact that building materials and fuel can be obtained everywhere for the labor of obtaining them. No portion of the country has become so densely populated but that fire-wood and timber can be found within a day's hauling. The population is scattered, following the wonderfully fertile lands in the river valleys and elsewhere, and leaving considerable stretches of forest throughout the whole province. This of course is a tremendous advantage. Nowhere can a house be erected more cheaply than here, and nowhere can it be warmed more readily during the winter season. The farmer, is indeed, a rarity who has not on his own farm sufficient firewood for his use. Of course, I am speaking now of the man who wishes to live in the most economical way. The majority of farmers throughout New Brunswick burn coal to a great extent, this mineral in its bituminous form here being very cheap. on account of the proximity of the Nova Scotia coal fields. A much better conception can be obtained however, by reading the descriptions of different portions of the province. These will lead one to infer that there are many things to tell the British farmer as to why he should take up his residence in New Brunswick. The man who is bound to make a success of farming in this country is he who has at least a moderate amount of capital to invest in the beginning, thus he will have his farm free from debt, and perhaps, from the beginning, or, under the most unfavorable circumstances, in a few years will be an independent if not a wealthy farmer. Professor Nathaniel S. Shaler, the Dean of the Lawrence Scientific School of Harvard University, said to me of New Brunswick, when speaking of it regarding its adaptability to settlement by English farmers, that it presents more advantages, in his opinion, especially for an Englishman, than any other country to which they could migrate. "The climate," he said, "might be compared

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Germain Street, St. John, N. B., looking southwest.



to that of England, north of Birmingham ; this comparison being a rough one, as the winters were considerably colder and the summer somewhat milder. "An Englishman" he continued, "will find this province more like England than any other portion of the world. There is everything here to recall the old land to him ; the big willows and elms, and the same farming methods may be employed here, with but very slight modification." He said further regarding the province as follows :—

"One of the best things that could happen to this province would be for the people who inhabit it to arrive at a thorough appreciation of what it is actually capable of doing. Its advantages are remarkably numerous. It is a splendid agricultural country, much finer than any section of the New England States."

[Professor Shaler is the largest farmer in the New England States, and an opinion coming from him must necessarily have a great deal of weight, independent of all his knowledge on the subject.]

"Among the other advantages of the province," he continued, "are the following: First, it has an enormous length of coast; both the Gulf of St. Lawrence and the Bay of Fundy are what would be considered safe seas, as they are subject to no sudden storms. The province is so situated that it is free from the worst effects of the storms that travel from the west, as they either travel down the St. Lawrence Valley or reach the ocean across the New England States. The climate is a fine one; the summers are cool and bracing and the winters are cold and healthful. You should be proud of your marsh land, as well as your intervals. One of the defects of the province, from my point of view, is that Indian corn does not mature properly, though it can be raised most readily for the silo. A great many crops that could be raised readily here are absolutely neglected. As an instance of this, hops can be cited. Whoever heard of raising hops in New Brunswick? Still, they can be grown to advantage as far north as the Baie de Chaleur, in the extreme north of the province. Oats are here a magnificent crop, yielding up to sixty bushels to the acre or even more. The same thing is true of buckwheat. There are no drouths; practically every crop that can be raised in this latitude is a success in New Brunswick. The woods contain great quantities of small berries of many varieties, fuel is cheap, and nowhere can houses be built at less cost than here. In six years land can be brought to full cultivation from the absolute wilderness. Along the enormous tidal fronts, with safe landing, are to be found abundance of fish. The smelt fishing through the ice is a feature well worth noting. The large runs of salmon up the rivers, the quantities of herring, shad, cod and haddock, and the

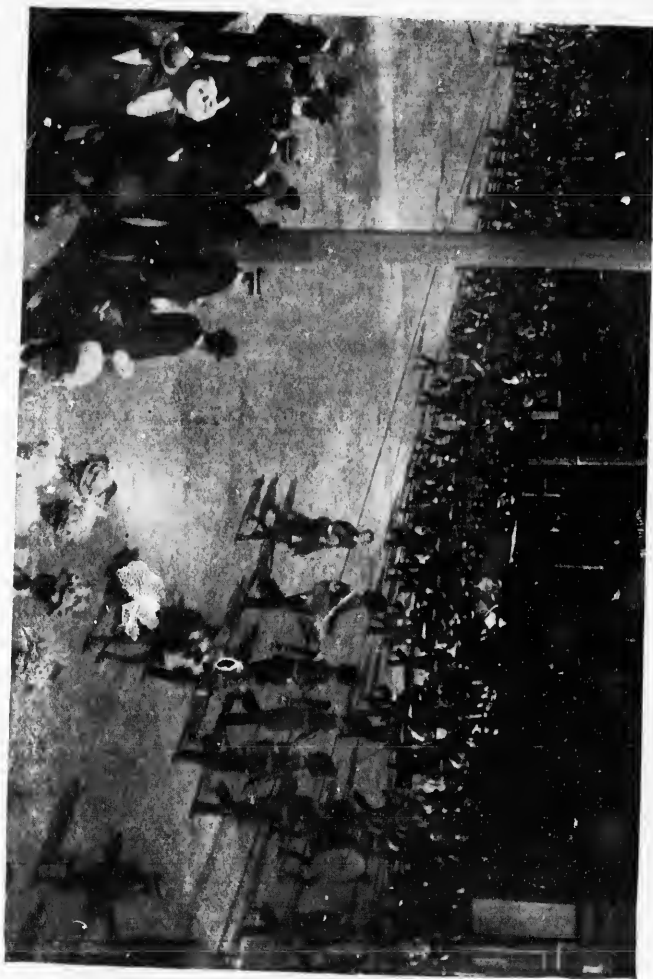
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Church Parade of Battalion Fusiliers St. John, N. B.



large numbers of lobsters and oysters to be gotten on the Gulf coast, are all indicative of the ease with which food can be obtained throughout the province. The River St. John is another magnificent feature.

The climate may be compared with the climate of England north of Birmingham, being colder in winter and with a somewhat milder summer. Spruce renews itself with extraordinary rapidity, and, in my opinion, a man who has five hundred acres and keeps three hundred in spruce, has in this latter a good crop."

Professor Shaler mentioned many other things about the province—its scenery, mineral prospects and other resources which would be too numerous to mention; but what has been said will give some idea of his opinion of the country as a whole.

Professor Shaler also said, in speaking of another phase of the resources of the country, that the province was one of the finest big game countries in the world. One other thing that he said is, that nowhere in his travels had he seen healthier or sturdier looking children than he saw throughout this country.

Let us sum up in brief then the chief advantages which the Province presents to the farmer, whether he comes with very little money at his disposal or whether he has a sufficient amount of capital to make himself independent from the first.

1st. It lies in the extreme eastern portion of the Dominion of Canada, the most important of the British colonies, and is thus, with the sister province of Nova Scotia, nearer the British market than any other portion of the empire possessing the same fertility. When I say nearer, this in the case under consideration, means very much nearer. To convince oneself of this, it is only necessary to look at a map of the world, noting the portions of the empire which lie nearer the mother country and which are unaffected as far as their food supply in the time of war is concerned by the proximity of foreign powers. Independent of this latter phase, it will be seen that New Brunswick's position is an enviable one. Lying only six days' sail from Great Britain, and having this time gradually cut down by the introduction of quicker methods of transportation (steamers of higher speed), no great food-producing colony lies as near the British market as does this, and the Maritime Provinces are the most advantageously situated in this respect. Beside

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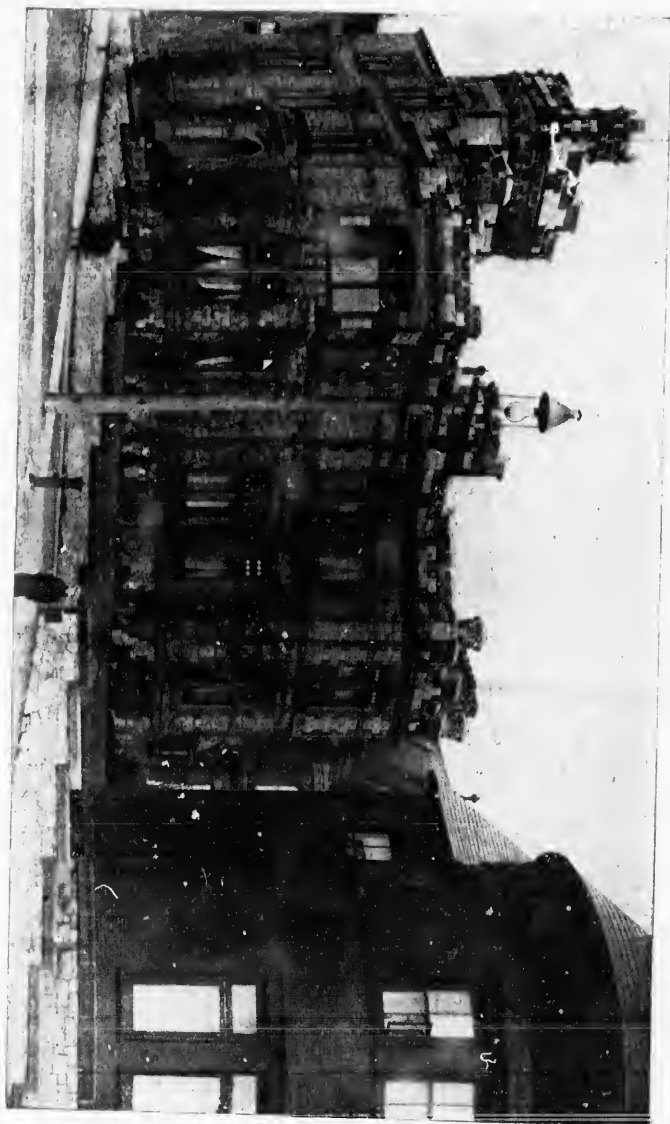
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Residence of Simeon Jones, Sydney Street, St. John, N. B.



this there is a considerable local market which is not to be despised, and which is increasing rapidly.

2nd. The country lies in the midst of the temperate zone and practically half way between the north pole and the equator. It is a wonderfully healthful climate, with clear summers and cold winters. Of all the British garrison stations throughout the world, Fredericton, the capital of the province, when a garrison town, stood first as regards its healthfulness; and this is no light matter to the people who are to live in the country. One writer (an American), speaking of the climate, says: "With one exception, the climate of the New Brunswick winter is the finest in the world, and that exception is the climate of the New Brunswick summer."

The climate necessarily has its direct effect on the people, the result being as fine a class of men physically, having as pure morals and a mental balance and moral sanity as clear and vigorous as have any people under the sun. It is a climate that leads to the youth of the country taking a natural interest in athletics, and nowhere are out-door sports followed more enthusiastically than through this province. In summer canoeing, fishing, boat sailing and rowing, walking, bicycle riding, mountain climbing and camping out fill in the time. In the autumn comes the time when the vast variety of game with which the province swarms is in season, and hunting of various descriptions is carried on most extensively. In the winter the ground is covered deep with snow and out-door sports still reign supreme. Tobogganing, coasting, snow-shoeing and skating are entered into with the greatest enthusiasm by old and young. An American not long since, a noted authority in athletics in the United States, said to me: "The Canadians are the greatest sportsmen in the world; they take a keener interest in out-door life and out-door sport for its own sake than any people I know, and I have been everywhere. They enter into athletic sports in a different spirit than we do, and I can hardly yet understand them. They do not seem to care whether they lose or win, beyond doing their best, and, if they lose, are up and at it

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Gorge of St. John River with Suspension and Cantilever Bridges.

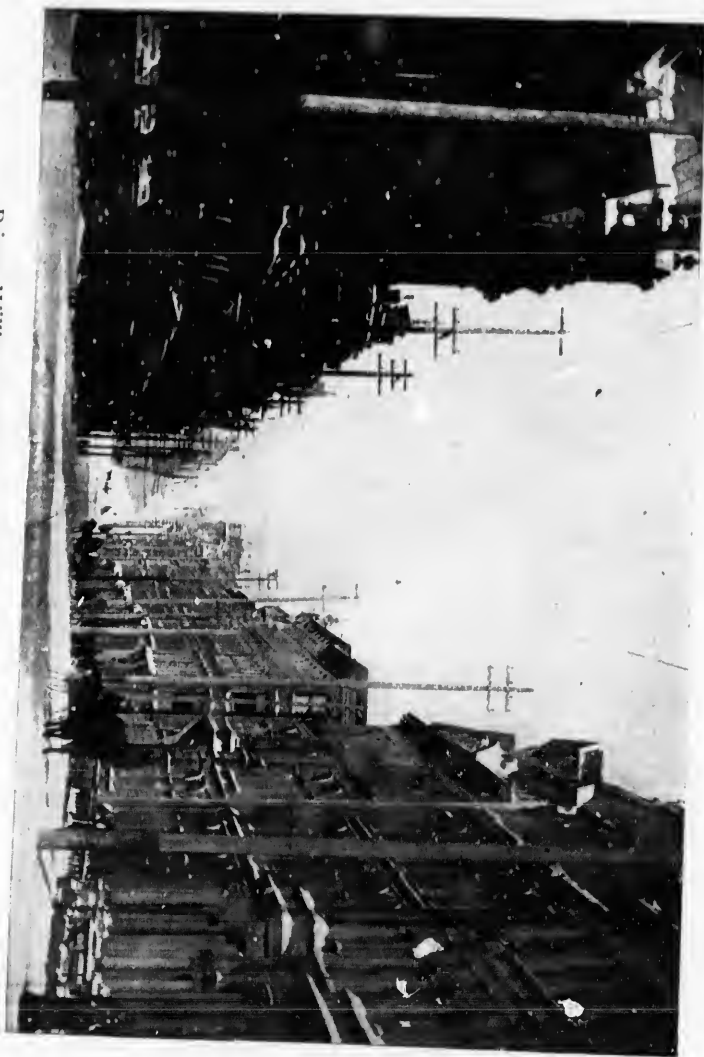


again." This, I think, is not an exaggeration, and is a good indication of the tendency to be found throughout the country.

3rd. The province has a splendid educational system, whose interests are presided over by the Board of Education, a department of the Provincial Government. This Board consists of the foremost educationalists of the province, and by it the work is prescribed. A great pride is taken in educational matters, among the finest buildings in every town being the schools. Great numbers of smaller school houses are scattered throughout the country, and hardly a farm can be found, except in the most out-lying districts, which is more than a mile from the school house. The staff of teachers to be found in these schools is necessarily an efficient one, as they are trained at and obtain their licenses from the Provincial Normal School at Fredericton. The system, as founded in New Brunswick today, is the result of much thought and much labor by men who have given their lives to the subject, the result being that the educational system of the Maritime Provinces is unsurpassed in the world. The schools are free throughout, and the higher courses in the high schools are in reality on a par with the more elementary work of a university course, and the boy or girl who takes advantage of all the educational facilities offered free by the province should be able to write, not only good English, but should have formed a style, with a firmness and breadth that indicates originality. He should have a thorough knowledge of all the more elementary branches of mathematics, advanced algebra, trigonometry and book-keeping. He should have a considerable knowledge of natural science, not in the valueless way it has so often been taught, but a considerable practical knowledge, that will not alone give him a grasp of things as they are, but should be of the utmost economic value to him in his life, especially if that life is to be the life of a farmer. He should have good reading knowledge of French, German, Latin and Greek, and should be acquainted with the more common of the classics. Besides all these things, he should have a practical application of the natural science work, a fair elementary knowledge of physiology and

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Prince William Street, St. John, N. B., looking southwest.



hygiene, embodying a sufficient ground work to enable him to have a knowledge of how to keep himself in the best physical condition. These, as before, are the conditions which the New Brunswick system of education tends to bring about. For a more accurate knowledge of that system it will be necessary to refer to the curriculum, which is uniform throughout the province, copies of which can be obtained from the Educational Department.

4th. Land is cheap, as is the cost of living, and a farm may be bought in New Brunswick for a sum that would in many cases be much less than the annual rental of the same sized farm in Great Britain, and the quality of the soil is unsurpassed, the climatic conditions also being everything that can be desired for successful farming of the type found throughout the temperate zone.

5th. Fuel and building materials are on every hand, practically the only expense connected with obtaining them being that of the actual process, the materials for the most part being obtained free.

6th. There are large, unsettled areas which are yet to be cleared, and, though the labour that is involved is considerable and the results slow to come, compared with those obtained by taking up cultivated farms; still, for the man who has no money, and wishes in a matter of five or six years to place himself in an independent position, no country offers better agricultural facilities than does New Brunswick, uncleared land being obtainable at prices which are really hardly more than nominal. Some of the best uncleared land in the Province can be had for a dollar (four shillings approximately) per acre. The Government will do everything in its power to further the interests of either type of settler. If a man comes out with a moderate amount of capital, and a moderate amount in some countries is a considerable amount in New Brunswick—say five hundred to a thousand pounds sterling, or even very much less, some farms being obtained for one hundred pounds, the Government will do all in their power to see that the settler gets the very best position which he can, with the amount of money which he

has on hand. On the other hand, in the case of a man who comes out with practically no money left after paying his passage, except that necessary to purchase his land from the the Crown, the Government will do all in their power for him on his arrival at St. John, and see that he gets properly placed and comfortably settled.

I publish below extracts from the regulations for carrying out the provisions of the Labour Act of the Province bearing on this matter.

All applications for Crown Land must be made in the name of and by the real applicant, or by his Attorney duly authorized, and the Grant shall be issued only to him, unless his claim be transferred with the approval of the Lieutenant Governor in Council.

If the Petition be accepted, its approval shall be published in the Royal Gazette, and within three months thereafter (but if between 1st October and 1st April, then to reckon as from the latter) he shall improve and clear on his lot to the value of not less than (20) twenty dollars; and also within three months additional to the value in all of not less than (40) forty dollars.

No Labor Act Commissioner is to assign work in payment for Land, until he knows that the applicant has improved to the value of at least \$40, (as required by Regulation 3), and report must be made before 31st October of the same year in which the work is done, otherwise it will not be credited.

He shall within two years after publication of his approval, transmit to the Surveyor-General a Certificate attested to by himself on oath before a Magistrate, and certified by two of his neighbors, that he has built a house fit for occupancy upon the lot, of not less dimensions than sixteen by twenty feet; and is then residing therein, and that he has cleared and had cultivated in the previous year at least four acres of the said lot.

The absence named in the above Act shall not in any one year exceed five months, viz:—In Summer, during the months of July and August; and in Winter, during the months of January, February and March.

Before he shall be permitted to cut any timber or lumber (except that cut in clearing the land for cultivation) he shall transmit to the Surveyor General a Certificate as prescribed in Section 5, and also a Certificate from the Commissioner that he has performed the necessary amount of labour.

All persons who have purchased Crown Lands not exceeding 100 acres, under previous Regulations, and have paid the amount of \$20, or have performed work to the value of \$30 on roads, and are actually



Artillery Officer, Camp Sussex, N. B.

then residing on and improving the lot so purchased, and have so resided and improved the same for the three previous consecutive years, shall be entitled to a Grant upon producing a Certificate to that effect from a Labour Act Commissioner; such Certificate to be sworn to by the settler before a neighboring Magistrate.

No person shall be authorized under the previously recited Act to commence an action for trespass upon his lot, unless he shall have previously presented to the Surveyor General a Certificate on oath that he has performed all the conditions required by the Act of Assembly and the present Regulations, necessary to entitle him to present possession of the lot located to him.

The Surveyor General shall prepare the necessary Forms of Petitions, Certificates, &c., to carry out the provisions of the above Act, and shall furnish them to Magistrates, Commissioners, and all other persons who may apply, in order to secure uniformity in official documents connected with the before recited Acts.

No application will be approved unless forwarded by a Commissioner or a Justice of the Peace.

7th. The religious conditions in New Brunswick are such that, wherever a man is situated, he is never any great distance from a church. In every little village throughout the province the number of church spires is a source of wonderment to the traveller who sees the country for the first time. Professor Shaler, whom I have quoted several times, in speaking of the City of St. John in this connection, says that, undoubtedly, it has the finest churches of any city of its size in the world. They are for the most part massive stone or brick structures, with tastefully designed interiors. The city is a city of church-goers. This remark applies to practically every town in the province. Throughout the country sections hardly can a few houses get together, forming a small farming centre, than a year or two will see a church spring up in their midst. The denominations to be found throughout the province are for the most part the following: Church of England, Roman Catholic, Presbyterian, Methodist, Baptist and Congregationalist. There are other denominations in small numbers. An American said of the province: "The reason you have not got Christian Scientists and Spiritualists is because the climate is not calculated to breed



Artillery Camp, Sussex, N. B.

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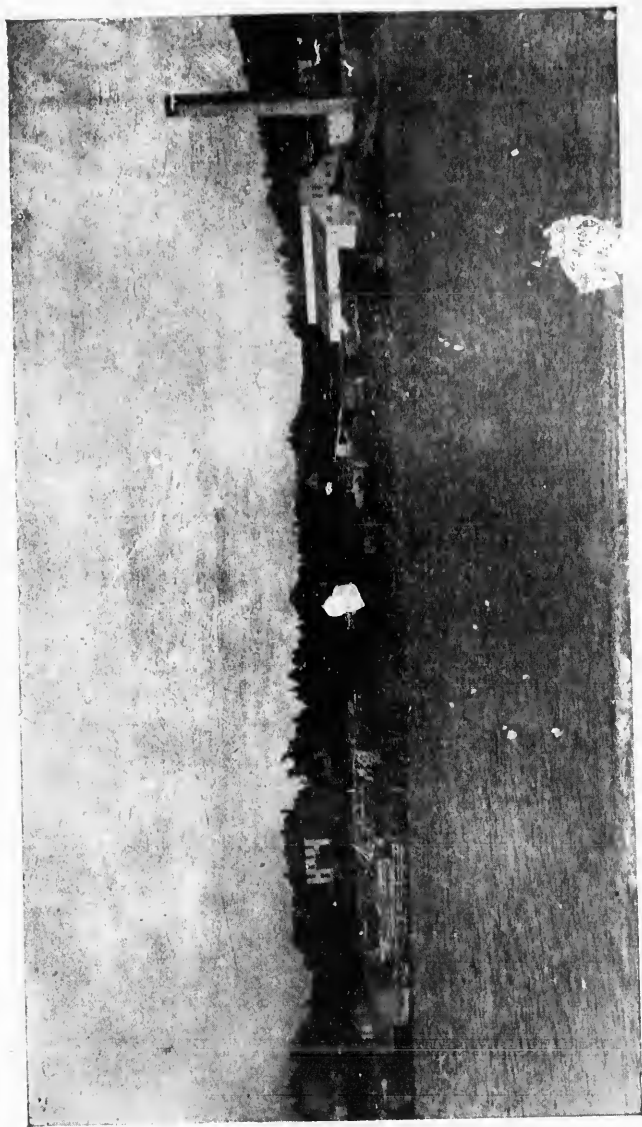
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them." There may be some truth in the remark. Many of the country churches are very fine stone structures of which the province is justified in being proud. The two classes of buildings which are the finest in every New Brunswick village are the churches and the schools, and this indicates more than anything that could be said the moral tone and the mental trend of the country as a whole.

8th. The means of transportation are unsurpassed. New Brunswick is a complicated net work of natural waterways, many of which are navigable. The value of this alone is of course, incalculable, but it fades into secondary importance when compared with the magnificent railway system through the province. There are more miles of railway in New Brunswick, when compared with the population than in any other country in the world.

The chief lines of railway are, first the Intercolonial, a portion of the great Canadian Government Railway system running between Montreal and Halifax and possessing a large number of branches. This railway enters the Province from the north at Metapedia on the Restigouche River, proceeds down the valley of the Restigouche to Campbellton, then to Dalhousie at the mouth of the river; from this point it turns to the south, and taps the whole eastern shore of the Province. Passing through the city of Moncton in Westmorland County, it proceeds to the southeast, past the towns of Dorchester and Sackville and through the country of the great marsh region at the head waters of the Bay of Fundy. It passes the Tantramar Marsh, and thence enters Cumberland County, Nova Scotia, on its way to Halifax. From Moncton one section of the line runs through Petitcodiac to St. John which is also the Atlantic terminus of the great Canadian Pacific Railway, with the exception of the trans-Siberina, the longest road operated under one management in the world. The Canadian Pacific Railway taps the whole of Central and Western Canada, bringing hundreds of thousands of tons of produce to St. John on its way to the British market. The Canadian Pacific Railway system passes through the region west of the St. John River up to Fredericton



One of the large Lumber Mills on the St. John River.

and thence operates lines on both sides of the river to Woodstock. North of this it continues through the valley of the St. John to Edmundston, the shire town of Madawaska County, where it turns north and runs through Quebec. Another branch of the Canadian Pacific Railway leaves the Province at Vanceboro, nine miles from Macadam Junction in York County, and enters the State of Maine, making a short cut through that State to Montreal. The Canada Eastern runs across the Province from Fredericton, up the valley of the Nashwaak River and down the southwest Miramichi to Chatham on the Gulf of St. Lawrence. The Gulf Shore and Caraquet Railway taps the extreme northeastern portion of the province, Gloucester County, and connects with the Intercolonial at Bathurst. Besides these there are a considerable number of smaller lines, one, the Albert Railway, connecting with the Intercolonial at Salisbury, runs to Albert in the county of that name, the Elgin branch penetrating the more western portion of the county. The New Brunswick Central runs from Norton near the Grand Lake towns, and the St. Martin's and Upham Railway runs from Hampton to the former town on the shores of the Bay of Fundy. Besides these there are others of less importance and still other lines now in process of construction. It is but necessary to examine a railway map of the province to get some conception of the facilities offered, either for passenger service or the transportation of produce.

The most important minerals found in the Province of New Brunswick are iron, copper, nickel, antimony, lead, silver, gold, manganese, bituminous coal, anthracite coal, albertite, petroleum, bituminous shales, graphite, peat, limestone, gypsum, granite, diorite; ornamental stones, such as marble, serpentine, porphyry and others in smaller quantities, freestones, millstones, grindstones, slates, clays of excellent quality for brick making, silica, infusorial earth, mineral paints and mineral springs. Besides these are found barytes, fluor, iceland spar and asbestos. The gem stones are garnets, black tommaline and amethysts. Among rare metal is found molybdenite. Referring to this, Dr. Bailey



Cantilever, C. P. R. Bridge, Saint John, N. B.

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says: "It is in scattered grains and scales, some of the latter being as large as the thumb nail." For further information on these minerals, I shall have to refer the reader to the "Mineral Resources of New Brunswick," by L. W. Bailey, Ph. D. LL. D., F. R. S. C., printed by S. E. Dawson, Ottawa, in 1899, for the Crown Land Department of New Brunswick. Copper has been found in widely spread situations but has been very little developed. There are apparently considerable deposits in the Province, one of which is now being worked near Dorchester, Westmorland County. Nickel is found in the mineral pyrrhotite in the vicinity of St Stephen in considerable quantities. Antimony has been worked to a certain extent, but, for some unaccountable reason, was given up. Relating to it Professor Bailey says:—"As to the quantity or quality of the antimony ores of Prince William, there can be but little question," Speaking of the shaft that was worked, he says: "There was also no sign of diminution in the quantity of the ore as followed in depth, but on the contrary a tendency to greater concentration, with a replacement to some extent of Stibnite by native antimony. The question of future working of the deposit is, therefore, nearly one of demand." Lead and silver in the form of galena, is found through the Province at various points, how extensively is yet to be determined. Samples that have been sent to the geological survey have been found to carry silver to the extent of 25.08 ounces to the ton of two thousand pounds. Very small quantities of gold have been discovered in the Province, but no systematic search has yet been made; and, considering the proximity of the rich gold fields of Nova Scotia which form one of the important assets of that Province, it would seem that New Brunswick must also come in for its share. Considerable deposits of manganese have been found in the Province and worked extensively. Like everything of the sort manganese will stand being developed. The bituminous coal has been found in the greatest quantity in the Grand Lake region, and is referred to under the head of Queen's County. Anthracite coal has, so far, only been discovered in limited



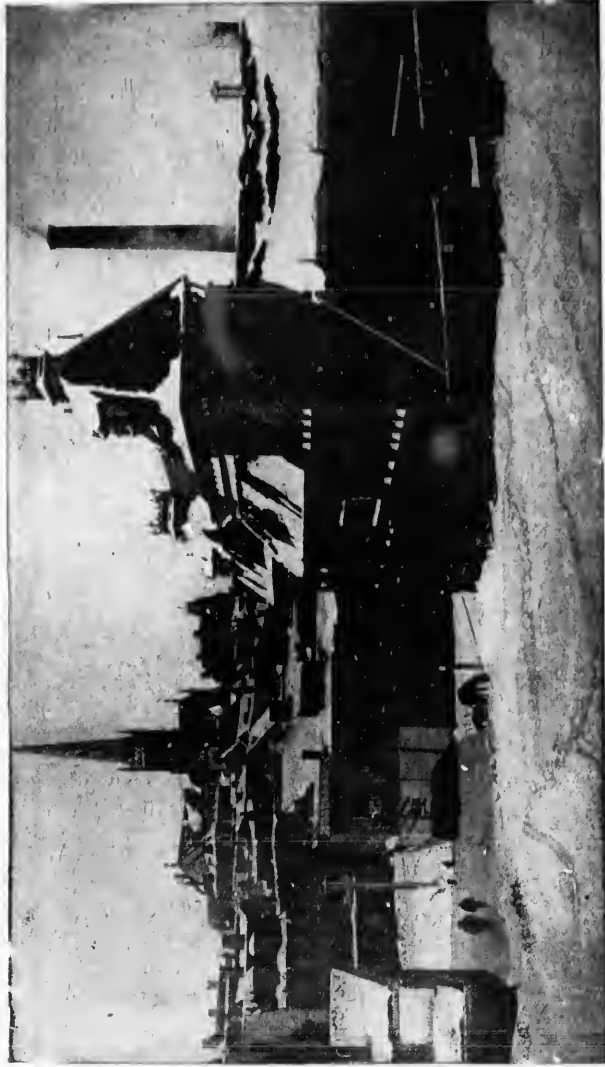
Queen Square Methodist Church, Saint John, N. B.

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quantities, chiefly in the vicinity of Lepreaux Basin, a short distance west of the line between St. John and Charlotte Counties. "Albertite" is the name given to a remarkable and peculiar mineral found in Albert County. It was a matter of a great deal of controversy as to what it should be called, whether it was a true coal or was produced through the partial distillation of petroleum. During the time that it was mined, it sold for a remarkable high price, from fifteen to twenty dollars per ton. So great was the dip, however of the seam, that before long, especially as it became of less diameter than above, it did not pay for the raising and expenditure connected with the mining. Bituminous shales are to be found in very considerable quantities, scattered through the carboniferous area, especially in the south-east part of the Province. These have been used somewhat extensively themselves, and are now acquiring an additional interest in relation to their bearing on the probability of finding petroleum in large quantities in the Province.

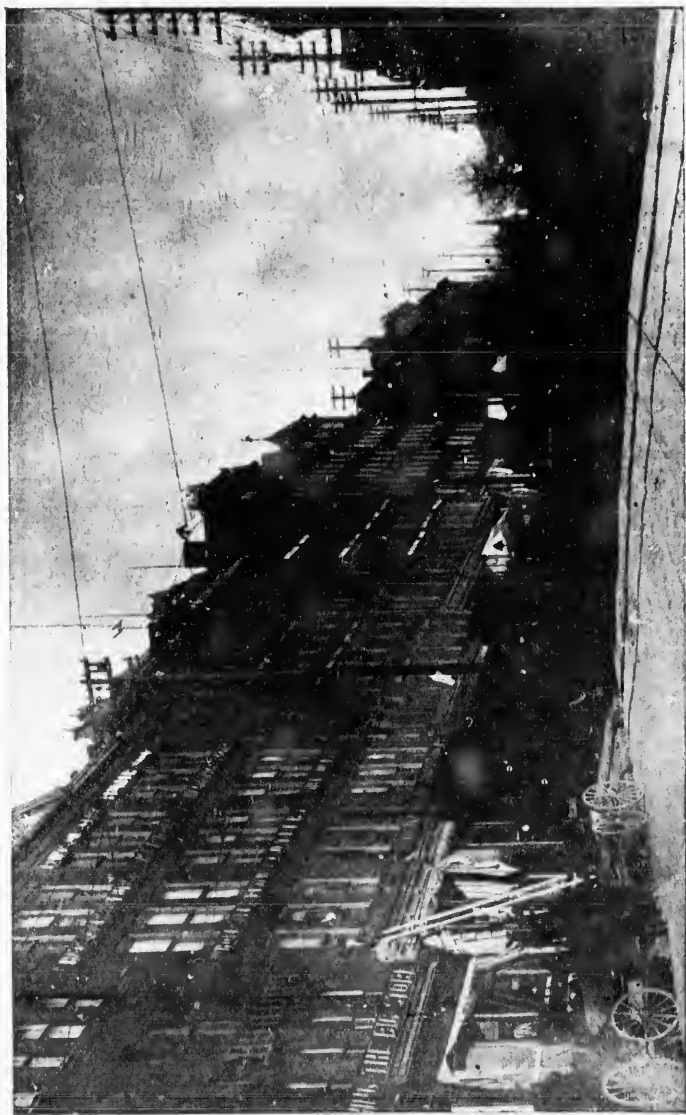
The Government has taken an interest in the matter and a company is now making a thorough exploration of the fields to discover all that can be discovered relative to the prospect of finding extensive petroleum deposits in New Brunswick. Considerable deposits of graphite occur in the province. They have not, however, been mined extensively. Peat bogs of great extent—the amount of peat being simply incalculable—may ultimately turn out of great value. The limestones throughout the province have been the basis of very considerable industries. There are a large number about the vicinity of St. John which turn out great quantities of lime. In 1895 lime to the value of \$35,709.00 was exported to the United States alone, while in 1890 the same country took the mineral to the value of \$143,292.00, this being the largest year's export up to the present. In 1881 the entire value of the amount exported was only \$1,822.00. The gypsum deposits of Hillsborough, Albert County, are very extensive, and have been operated on a large scale for a considerable number of years, forming the basis of a large, lucrative industry. No finer quality of gypsum has ever



Portion of Saint John City showing Roman Catholic Cathedral.

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been found than in this vast deposit in New Brunswick. In 1897 from Hillsborough alone was shipped to the United States 59,334 tons of the crude plaster rock. Other deposits are found throughout the province. The finest quality of freestone suitable and extensively used for the manufacture of grindstones has long been quarried on a large scale in New Bondon in Gloucester County, forming the foundation for a continuous and paying industry of great importance. There are throughout the province considerable quantities of granite and diorite. One of the finest deposits of granite is to be found at Hampstead in Queen's county. These granites are especially suited for foundations and have been thus used—as I learned from Professor Bailey's report—in the piers of the Fredericton bridge and in a considerable number of foundations of large buildings, both public and private. There are also fine deposits of granite throughout the Nerepis Valley and extending westward to St. George. The St. George granite is of a comparatively bright red colour, thus being very useful as an ornamental stone. There are also throughout the province at various points, to be found black granites. Of ornamental stones marbles of various colours are to be met with some containing serpentine of a pale green colour. There are also moderate deposits of porphyry. Throughout various sections of the province are to be found some very fine quarries of free stone, mill stone and grind stone; some of the finest free stone quarries are to be found at the head of the Bay of Fundy. One of the best of these quarries is to be found near Newcastle, Northumberland County. Among the best of all the grind stone quarries are those found at Stone Haven in Gloucester County on the shore of the Baie de Chaleur. Slate is scattered in many positions throughout the province, as is also true of clay suitable for brick making. There are considerable deposits of silica and one or two of infusorial earth. Of mineral springs, there are some very fine salt springs, at Sussex. From these a splendid quality of salt has been made for some time, much of which has been used in salting the large quantities of butter turned out in the Sussex Valley. In the



King Street, Saint John, N. B., looking up.

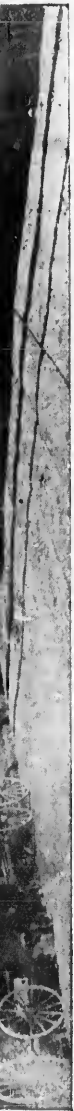
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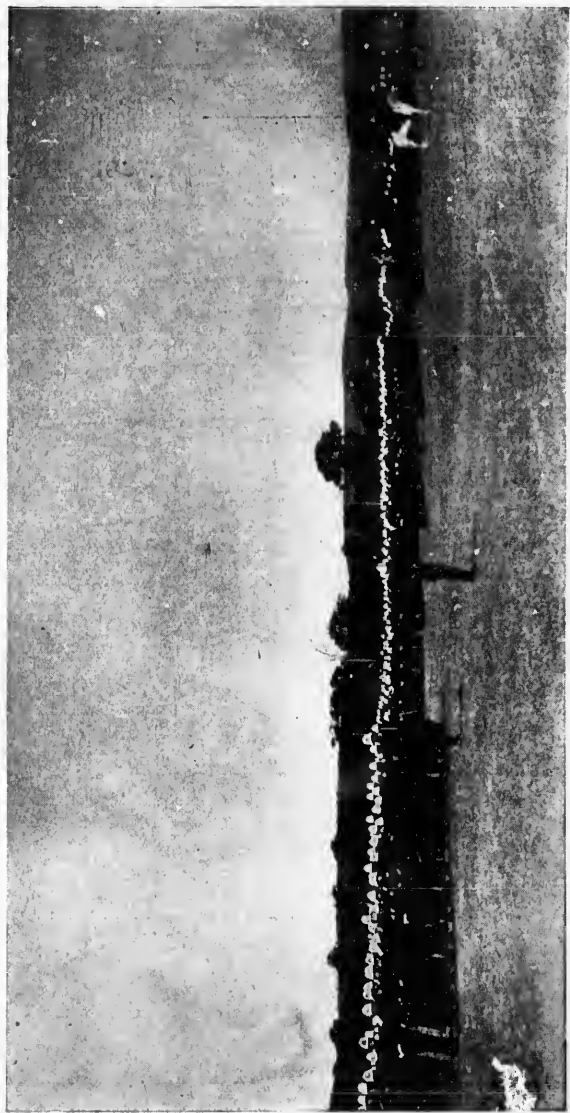
Parish of Havelock are to be found some fine mineral springs, the water from which is used in the manufacture of a variety of beverages.

NEW BRUNSWICK AS A GAME COUNTRY.

The Province of New Brunswick stands today the finest of all the accessible hunting regions on the North American continent. The big game hunting alone being very fine. The government of the province, realizing the importance of preserving the game have enacted a series of game laws, which are enforced most stringently; the result being embodied in the foregoing sentence. The practical result is that a man who goes out in the province in search of big game rarely comes back disappointed, and if he does he is almost always in a position to blame himself for it. The big game to be found in New Brunswick consists of four species: the moose, the largest and most magnificent of the deer tribe at present in existence; the caribou, an animal almost as much sought after as the moose; the Virginia deer and the American black bear. The latter is very shy and is only occasionally met with. Great numbers of moose, caribou and deer, however, are to be found throughout the province. The game law is such that no one person is allowed to shoot more than one moose, one caribou and two deer in any one season. The tendency, of course, is for the game to increase rapidly under such conditions as these, and if a man returns to civilization with his full allowance, he should be well satisfied. The moose is a magnificent animal, weighing often 1,000 pounds, standing seven feet or more in height, with an enormous palmated pair of antlers, sometimes stretching over five feet from tip to tip and weighing as much as seventy pounds. The moose are hunted in a variety of ways, the most popular and one of the most exciting being known as "calling," of which a description will be given later on. The caribou is also a magnificent specimen of the deer tribe, somewhat smaller than the moose, but often more

King Street, Saint John, N. B., looking up.





Troops at Camp, Sussex, N. B.

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difficult to obtain. Like their bigger cousin, they are very wary and extremely fleet of foot. They range over vast distances in a comparatively short time, seeming always to be on the move, and clever, indeed, is the sportsman who can always be certain of getting his caribou. The Red Deer or Virginia Deer is a beautiful little animal, the buck, like the caribou, having branching antlers. The species is extremely graceful, light limbed and fleet of foot, and generally remarkably wary. They inhabit the timber woods, often on the higher hardwood lands. The Black Bear, an animal which much resembles the goblins of fairy tales, inasmuch as he has a dreadful reputation (in books), is now found commonly only in the more uncivilized portions of the province around the wilderness lakes and mountains. He is a great sheep thief, or rather was when plentiful, and the sportsman is, indeed, lucky if he comes across a bear accidentally. No animal in New Brunswick fauna has a greater regard for his own hide, and none is more cowardly. I have yet to hear of an authentic instance of the black bear attacking anybody, except when badly wounded and cornered, and many are the amusing stories told of this shy animal as the camp fire smoke curls its way up through the dark green canopy of spruce needles overhead.

In the last few years, owing to the great number of moose, caribou and deer to be found in the province, New Brunswick has become the resort of some of the most famous sportsmen of both hemispheres. The number of moose to be found throughout the great northern section drained by the Restigouche and Miramichi Rivers, as well as by the Tobique, can only be surmised. Over and over again I have seen the muddy spots on the banks of one of the above rivers, looking as though a herd of cattle had been there day in and day out. There were moose tracks everywhere and track upon track. Occasionally the sharper trace of the deer could be followed and, here and there, the big snow-shoe like foot of the caribou had left its imprint, almost large enough to have been made by the foot of an elephant. Besides this northern section, which is the chief moose region, there is a



Snipe shooting on the interval marshes, near Gagetown, Queens County, N. B.

fine caribou and moose ground in the central eastern portion of the province south of the Miramichi River known as the Canaan Region, and a fair moose area is to be found south of Miramichi Bay, partly in Northumberland County and partly in Kent County. The red deer, however, has a much wider distribution and follows less carefully the more deeply wooded sections. It is to be found practically everywhere in the province, in some places being so common as to be a nuisance. The caribou country is practically coincident with the moose country. The former animals are especially to be found on the great barrens surrounding some of the wilderness lakes. It is not to be supposed, however, that there are a sufficient number of sportsmen who visit the province to have any appreciable effect on the quantity of big game to be found here. There is a license fee of thirty dollars for shooting big game, payable by non-residents of the province; those who are fortunate enough to reside in New Brunswick having to pay only two dollars. Everything being considered, New Brunswick stands today one of the finest big game countries in the world, and a particular advantage in connection with this is the fact that the best portions of the game area are readily accessible. There are many excellent and famous guides to be obtained, either Indians or white men, whichever the choice may be. The majority of foreign sportsmen who come to New Brunswick each season for the big game shooting are Americans. Some idea of the number who come to this province for this sport each year can be obtained from the fact that in 1899 the returns from the sales of licenses amounted to about \$7,000. Supposing that these licenses were all granted to non-residents of the province, there would then be no less than 350 sportsmen after big game in the season of 1899. Putting an outside estimate on it, it is improbable that more than 25 of these came out of the woods without something, (personally I don't know of a single one who was disappointed) but, even allowing this number, it will give a fair idea of the number of moose, caribou and deer which must roam through the fine forests of this portion of Canada. All information regarding moose

and caribou shooting in the province can be obtained, either at Saint John or Fredericton, or for that matter all necessary information can practically be gotten anywhere throughout the province. As things are, moose and caribou are evidently increasing in numbers, the new laws not having been in force for any considerable period.

Of the small game to be found in the country, first in importance ranks the Canada Goose. Closely following him is the *Branta Bernicla*, a cousin, of somewhat smaller proportions, esteemed by Sir Gaspard Le Marchaud, at one time Governor of Prince Edward Island, the finest of all the goose family from a gastronomic point of view.

Following these in importance may be ranked the various members of the duck family, which swarm on the rivers, lakes and shores of the Province in their proper seasons, headed by the world-famed dusky duck, one of the mallard family, the king of all the Canadian game ducks. Next in importance rank the blue winged and green winged teal. These beautiful little birds, the fastest flying of all the typical game ducks and having the most delicious flavor, in my opinion, superior to that of the much vaunted canvas back, are to be found often with the black duck in the inland waters and especially in the marshy lakes throughout the whole Province. There are a great number of sea birds, and among these many excellent game ducks which it would take a book to describe. These come down in vast quantities every autumn from their breeding places and spend a considerable period along the shores of the Gulf of Saint Lawrence and the Bay of Fundy in their journey towards their southern winter home, and again in the spring on their return journey they are shot in great numbers. One of the most interesting methods of obtaining these birds in the spring is employed both on the Bay of Fundy and Gulf Coasts. This is in the use of so-called gun-boats or goose-boats, painted to represent blocks of ice and moved about by revolving paddles worked from within by the sportsmen. The number of sea ducks to be found in the Gulf of Saint Lawrence, or around the head waters of the Bay of Fundy, in the spring



Nicholas Lolar, Malicete Indian guide, with grilse,
Restigouche River.

and fall, can only be realized by sailing through those waters; any attempt at description would seem like nothing but an exaggeration. (For description of brant and goose shooting, see Gloucester County).

The most prominent of the game birds to be found along the shore are the Golden and Black Bellied Plover, and various types of Sandpipers and the Yellow legs, together with Turnstones, Sanderlings and occasional Godwit and a moderate number of Curlew. Of these the finest game birds are the two species of Plover mentioned. Formerly these were found in very great quantities in the province, but of latter years they have almost entirely disappeared, until within the last year or two when they have re-appeared in moderate numbers. Down in the autumn, with the first northerly wind, they come, alighting along the sea shore and in old pasture fields not far from the water and excellent sport is to be obtained among them. The sport, however, is now very uncertain and not to be counted on. The greatest numbers of these birds are now to be found around the head waters of the Bay of Fundy, where miles upon miles of flats, furnishing great quantities of food, are laid bare with every receding tide. Around these extreme head-waters of the Bay are to be found, however, greater numbers of small shore birds, Sandpipers, etc., during the fall migration, than, as far as I can learn occur elsewhere in the world. I have spent between two and three weeks in a camp near the largest of the feeding grounds, studying these birds from an ornithological point of view and endeavoring to obtain photographs of the immense flocks which feed on the bare mud flats. As the tide rises the birds are forced up towards the land; the distance between high and low water mark decreases from between one and three miles down to the width of an ordinary beach, perhaps twenty yards. Into this space are compressed the vast numbers of birds which, when the tide was low were scattered every few yards over the whole area of flats, where the best class of food was to be found. The result is that, at high water, the flocks are simply enormous, and, though the birds are only a few inches in length, the-



Running the Dawsonville Rapids, the worst on the Restigouche River.

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flocks can be seen at a distance of three or four miles. From various calculations which I made carefully during the latter part of the summer of 1898, I am safe in saying that many of these flocks contain between eight and ten thousand birds. A shot from a single barrel of a ten bore gun has killed as many as one hundred and twenty. These little birds shortly after their arrival at the fine feeding ground on the Bay of Fundy become as fat as butter and are very delicious, indeed, when properly cooked, being equal to the best plover. Another somewhat larger bird that visits the head waters of the bay in large numbers, though not with the absolute regularity that do the Sandpipers, is the Jacksnipe. Some seasons this bird, which frequents the marshes of dyke land, is found in great numbers.

Turning our attention to land birds which may be considered under the head of game, we have also here an interesting list, including the American Ruffed Grouse, locally known as the Birch Partridge, the Canada Grouse, whose local soubriquet is the Spruce Partridge, the American Woodcock, a smaller bird than its English cousin, but which gets up from a birch cover with the same whirring whiz, and goes thundering over the tops of the alders so quickly that it seems impossible to bring him down; and last, but by no means least, except in size, the Wilson's Snipe. The birch partridge (so called) is found throughout the province in every situation where a grouse can conveniently get, from a vegetable garden to the centre of some wilderness area, thirty miles from a house. It is a fine looking bird of excellent flavor and a hard flier. The spruce partridge is to be found generally in low lands, especially where covered by a heavy growth of spruce. This Canada grouse is a smaller bird than the last, and compared with it a poor game bird. It is not in the least shy and seems to look upon a man as a sort of animated stump, hardly worth stepping out of the way of. I have stood at my horse's head on a wood road and shot five of these birds with a revolver, hardly moving from my tracks, and I am not a particularly good revolver shot either. That peculiar and erratic bird, the American



Nicholas Lolaf, Malicete Indian, spearing salmon with canoe pole.

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Woodcock, is to be found in small numbers throughout suitable covers in different parts of the province. A man may consider himself very fortunate, if he gets four or five brace of these birds, though some seasons they are much more plentiful than usual. The Wilson's Snipe is to be found in a great variety of places through New Brunswick. Among the best of these are various sections of the river valleys on the marshy portion of the intervals (see Queen's County) and around certain lake regions, as, for instance, the Joliceur Lakes at the head of the Tantramar Marsh. This is supposed to be the finest snipe ground in the province. Sometimes as many as fifty brace of birds have been obtained in a day, though this is a very extraordinary kill. There are a considerable number of other game birds, which lack of space forbids my mentioning, among them are the Bittern, the Scaup Duck, the Golden Eye Duck and a variety of others. Those mentioned, however, are the chief game birds of New Brunswick. The accounts given are from personal experience and correct in as far as they go.

The most important of the game fish of the Province of New Brunswick are the Salmon, (*Salmo salar*) and the various varieties of trout, call them what you will (*Salmo fontinalis* trutta, &c.). These fish are too well known to need any description. Excellent salmon fishing can be obtained in a number of streams, while splendid sport is to be gotten on the Restigouche, Nepisiquit, Tobique and other of the more famous salmon rivers. Portions of these rivers are leased by the Government and on these leased portions it is difficult to obtain permits for salmon fishing. There are long stretches, however, which may be fished by any angler not belonging to the clubs who lease the other pools, and here fine sport may be obtained. With trout, however, the case is very different; they swarm in every stream, river and lake and unsurpassed trout fishing is to be obtained in the season. Permits may be gotten for trout fishing, even in the leased portions of the salmon streams. These are generally to be obtained from a gentleman in charge of the interests of the various clubs. As far as trout fishing is concerned, however,



Mallicete Canoe; birch bark, on Restigouche River, Indian Guide and Hunter.

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this is a unnecessary formality, as throughout the whole Province stretches mile upon mile of the finest trout water, stream and lake. The Green River in Madawaska County, the upper stretches of the Restigouche, the smaller streams of the Miramichi, Trout Lake near the South-west Miramichi, the Canaan River, and a host of others. Wherever you may be in the Province, it is necessary to go but a very few miles to enjoy the best sport. In the Northern Rivers the trout run to a very large size, specimens having been taken quite frequently up to between six and seven pounds. A trout weighing from three to four pounds is not uncommon, some streams furnishing fish that run but little below this weight as a rule, while fish from a pound to two pounds and a half can be obtained in many sections of the Province. The supply is unlimited and the area so great that such a contingency as being necessarily interfered with by other fishermen is unknown. A canoe cruise in search of the speckled beauties on any of the lovely streams flowing through the Province when taken in the early summer when everything is wild flowers and green leaves, not however, without the other invariable accompaniments of summer, the black fly and festive mosquito, is indeed an experience which will be thoroughly enjoyed and never fade from the memory of the sportsman or the lover of nature as long as life remains. A little publication giving the best regions for big game, birds and fishing in the Province is published by the Provincial Government and is entitled, "Gun and Rod in New Brunswick." This pamphlet can be obtained for the asking and will give much more information than one can attempt to embody in a work of this type.

ST. JOHN.

The City of St. John, the winter port of Canada, lies on a magnificent harbour on the north shore of the Bay of Fundy, at the mouth of the noble St. John River. It is a city of about 50,000 inhabitants, notable in a variety of ways.



The Inlet of the 4th Digdeguash Lake, York County. Fine pickerel fishing waters.

It is situated on a rocky foundation, the original city lying on a point which stretches out into the harbour. On the east of this point lies Courtney Bay, an extensive but shallow head-water, while to the west, where flows in the river, lies the harbour proper, one of the finest in the world. With deep water everywhere capable of floating the largest vessels at all times of the tide, with a wharf area rapidly increasing, the position of St. John, regarding its harbour facilities, is an enviable one.

As the purpose of this work has been to explore the natural rather than the artificial resources of the province, I shall not attempt to occupy space in giving a description of the city itself; this would necessitate considerable time and much thought if the description was to do justice to this beautiful city.

As one approaches the harbour of St. John, there is not a single dangerous reef or badly placed bar to render navigation difficult. Steamer captains who have never before been in the port, proceed with perfect confidence without a pilot even in thick weather, and this can be said of very few ports in the world. As one sails into the port, on one of those absolutely clear summer days, for which the province is noted, the sight that presents itself is indeed a beautiful one. Before the entrance to the harbour mouth is reached, the shores of the Bay of Fundy are seen stretching away in both directions, rising to considerable heights on the north. The one thing that impresses a person with an eye to things military is the ease with which St. John could be strongly fortified. It simply presents a series of natural fortifications of the most improved modern type, outside the harbour, really, the two head-lands which with Partridge Island between, form the mouth, cross from busy Fort Dufferin on the left, and Red Head on the right; both high commanding banks, ideally situated for mounting heavy guns. Fort Dufferin at present mounts a few guns of rather antiquated design, which are necessarily not particularly serviceable, except for target practice. Between these two and a little further up the harbour lies Partridge Island, with the situated



Camp about 2 Miles below Chain of Rocks, Restigouche River, looking down stream. ;

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light-house and fog whistle. Here is another situation which, from a military point of view, commands the mouth of the harbour. Again some distance further up the harbour, away over the houses of West St. John on a high ridge stands the Martello Tower, marking an ideal situation for another battery, which could rock the harbour from mouth to head, and the bay out for many miles. Here also one or two antiquated guns are mounted, which like the others could be of little service. On the extreme end of the point on which the city is built, which reaches down nearly two-thirds the length of the harbour, lies another ancient battery on Battery Point, a low-lying point which would offer itself well for the placing of disappearing guns. Away at the head of the harbour on a high limestone ridge lies Fort Howe with a few more of the same old type of guns found in the other positions. The last two command to perfection the channels on both sides of Partridge Island. All these batteries are practically worthless, but the possibilities regarding the fortification of St. John are unsurpassed.

But to return to the impressions that present themselves to one not looking at the city from a military point of view: Before reaching Partridge Island on the left rise the green grassy slopes leading up to Fort Dufferin where floats the Union Jack as staunchly supported here as elsewhere in the empire, while the west of the left across the broad mouth of Courtney Bay, rise the brilliant, brownish red banks of Red Head, and beyond to the north on both sides of the harbor rise the numerous spires, great brick chimneys and prominent grain elevators that indicate the position of the city of St. John.

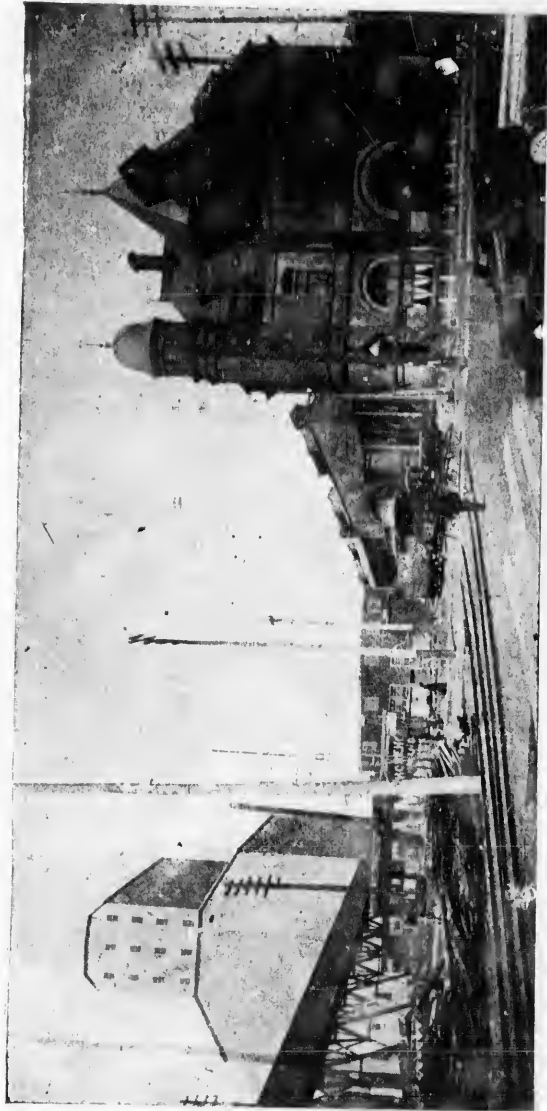
As we proceed up stream, the full appreciation of the beauties of the situation come home to us. On the left stretches that part of the city known as West St. John, while on the right from the battery back to where Reed's Castle stands out from among the trees on the top of Mount Pleasant, lies the city proper. The most prominent objects on the left or western shore are the great grain elevators at Sand Point, the Atlantic terminus of the Canadian Pacific



Canadian Pacific Railway System Winter Terminus, Saint John, N. B.

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Railway. These elevators are capable of holding no less than a million bushel and stand in the center of a fine set of steamboat berths; below them on each side stretch the long, flat freight sheds, while along the wharves lie steamers of various lines carrying produce for the most part to Great Britain. Wharf after wharf succeeds this terminus on the left bank, and as we proceed further up the harbour, we pass steamers and sailing vessels from every port anchored in mid stream. The majority of them show the well known funnels of the prominent English firms. Beside them lie scows carrying thousands of feet of lumber which is rapidly being loaded on the right bank; almost opposite the Sand Point terminal lies the lower terminal of the Intercolonial Railway of Canada; the main terminal lying near the head of the harbour where is situated the great grain elevator, recently put up by the Dominion Government. Along the whole east shore of the harbor, and around to the north lie the chief wharves of the port at which are also to be found steamers and sailing vessels. In the vicinity of Reed's Point are situated the termini of various coastal lines of steamers, some running across the Bay to the adjoining province of Nova Scotia, and some south along the coast to American ports, notably Boston. The International Steamship Company operates a line of wooden paddle steamers and one wooden single screw boat, the St. Croix, between St. John and Boston. This company has been long in existence and has done a large carrying trade always. Within the last few years the Dominion Atlantic Railway Company which originally ran their boats between Boston and Yarmouth, Nova Scotia, have now put boats on two lines running out of St. John; the St. John and Digby, Nova Scotia, route, and the St. John and Boston. The steamers put on by this company are a credit to the country. They are very much the finest boats in the coastal service on the western hemisphere. They are all twenty knot boats and are fitted up superbly. Between St. John and Digby runs the Prince Rupert, a paddle steamer that "swings a wickeder wheel" than any paddle boat running around the coast of the continent, and does the



Intercolonial Grain Elevator and Passenger Depot, Saint John, N. B.

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forty-two miles from St. John to Digby in a little over two hours. Among the various boats which have been put on the Boston route by this company are the Prince Edward, Prince George and the Prince Arthur. These are magnificent twin screw steamers of which the province is proud and justly so; no finer boats have ever been turned out of British ship-yards and the service in which these play such an important part is rapidly increasing.

The City of St. John as such, is partly on account of its commanding situation and partly because of the many fine buildings, most imposing as one enters the harbour. Far down on the Battery Point is situated the large Exhibition building where each year are held international exhibitions, and half way up the water front in the city proper on the East side of the harbour stands the fine stone Custom House, unsurpassed by any building on the Continent devoted to the same purpose. One is immediately struck with the number of church spires to be seen on both sides of the harbour. The city has the credit of having the finest churches of any city in the world of its size. They are, for the most part, fine stone or brick structures of excellent design and tasteful decoration. Among the finest are Centenary Church, commanding the highest position of the city; one of the best examples of ecclesiastical architecture on the Continent. The leading Church of England of the city, from whose tall spire rings out a beautiful set of chimes, is another of the edifices to be proud of. The Roman Catholic Cathedral, facing on Richmond Street, the seat of the Bishop of the diocese of St. John, is a handsome structure, like the first two, constructed of freestone and situated on a prominent ridge some distance back from the water. Besides these there are many other notable edifices.

The business streets are broad and well cared for, paved and presenting a most modern appearance. In 1877 St. John was swept by a great fire, and from its ashes arose a new city; new in ideals, new in plan and still more new in appearance. The first was an old-fashioned town of wooden structures, the second, as it exists today is a modern,

flourishing, thriving, progressive city, with electric cars, gas and electric light and possessing in a word, every advantage to be found in any moderate sized city.

To give any idea of the export trade of St. John, would occupy more space than I can afford, but all varieties of produce are shipped in great quantities. To give a faint conception of the great lumber trade carried on at St. John, let me give the number of superficial feet of deals and so forth exported for the three years, 1895, 1896, 1897, and this includes only those exported to transatlantic ports, a considerable quantity having gone in a coastward direction. In 1895 there were exported to transatlantic ports 129,426,948 superficial feet; in 1896, this had gone up to 168,059,970, while in 1897, the amount had increased to 245,539,358, making St. John one of the largest shipping ports in the world. The transportation of this lumber to St. John is rendered easy by the thoroughness with which the Intercolonial Railway and Canadian Pacific Railway tap various portions of the Province. This is usually true in the case of hard-wood, large quantities of which are shipped by the rail; the various water ways have much to do with the ease with which spruce lumber reaches the city. In the immediate vicinity are many points of interest to the traveller; one of these is the remarkable reversible falls found at the mouth of the river. Here the water rushes through a narrow gorge out into the harbour which lies on the Bay of Fundy, and is effected by its high tides. The tide in the Bay of Fundy rises higher than the lower levels of the River St. John, the result being that, though at low water, the stream rushes outward through the gorge; at high water it rushes almost as fearlessly inward, rendering a passage from harbour to harbour impossible at this period in the tide. Vessels can pass through readily, however, at slack water. This is but one of the many points of unusual interest to the traveller to be found in the vicinity of St. John.



Saint John Pulp Company's Pulp Mill, Mispec, Saint John, N. B.

THE KENNEBECASIS VALLEY.

The Kennebecasis River is a very remarkable back-water, emptying into the St. John River but a short distance from the city of St. John itself. It opens in on the east side of the above mentioned river, flowing down from a northeasterly direction, its head-waters coming from a ridge down the other or northeast side of which flows the Petitcodiac River system to the head-waters of the Bay of Fundy. The valley of the last mentioned river, on account of the high tide of the head waters of the Bay of Fundy, shows a great deal of dike-land formation, while the former river, which is, in comparison, very little affected by the tides, shows none of the long silted prairies we found in the other river valley. It is hardly just to call the Kennebecasis a river in the strict sense of the word; it is rather a drowned valley into which a few small streams flow. Though only some eighty miles in length to its head-waters, near its mouth it is, in places, three miles or more in width, and attains a depth of nearly two hundred feet. Its shores near the mouth, especially on the north side, are high and rugged and wonderfully picturesque. It is dotted with islands, some of them several square miles in area, and forms a beautiful basin for boating and aquatic sports generally. There are courses that can be marked out along the lower stretches of this so-called river, which it would be hard to equal in the world, for shell racing.

One of the most beautiful sails in New Brunswick, is to take a steamer from St. John and spend the day winding in and out through the Kennebecasis until Hampton is reached, which is only twenty miles from St. John by rail. A few miles from St. John, after crossing the boundary into Kings county, Rothesay and Riverside, two beautiful little stations situated on the shores of the Kennebecasis are reached. Though only twenty minutes ride from the city, these places are both situated on the great inland basin and are rapidly becoming the favorite summer resort of people living in the city.



Exhibit of Grain, Saint John Exhibition.

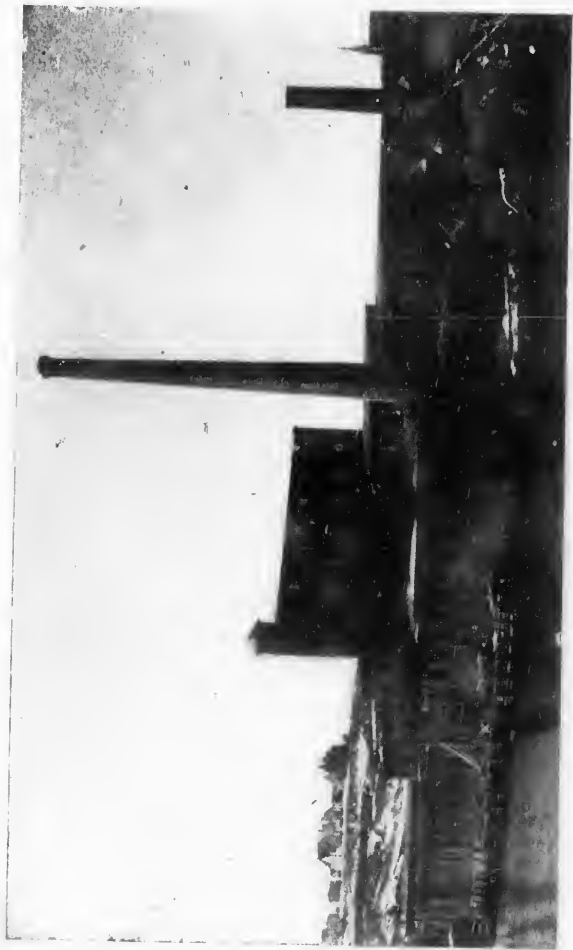
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As we proceed up the valley, several stations are passed of which the names sound rather peculiarly to ears unaccustomed to them. Quispamsis and Nauwigewaak are two which come under this classification.

One has but to travel fifteen or twenty miles along the Intercolonial Railway in an easterly direction from St. John, to note the remarkable change that comes over the country. By the time that Nauwigewaak is reached, the Laurentian and Cambrian systems have disappeared with their lime quarries and quaint lime kilns, and the rugged scenery of the lower Kennebecasis has been replaced by as typical first-class farming land as can be found anywhere. The railway follows the course of the river, and, as one travels through the country near harvest time, on every hand over the gradually sloping hills stretch away fields of grain, with here and there the green patch where some root crop shows to advantage. The railway itself winds along the edge of the beautiful interval land found throughout the whole of the upper portion of the valley of the river, as is also the case around all the lower tributaries and inlets of both this stream and the main St. John. Along the valley of the latter river the interval land is one of the chief sources of wealth to the farmers. The greater portion of this interval land, wherever found throughout the province, is practically self-sustaining, as is the case with the marshes influenced by the tides of the Bay of Fundy. In the latter instance, however, the tide is the agency through which the natural manuring is carried on, while in the case of the intervals, the floods which deposit the ever-renewed fertile coating, as surely as the spring comes round, are caused by the rapid melting of the snows under the influence of the warm spring sunlight; the result being that every river is swollen and muddy, and rushing down from above overflows the great stretches of alluvial soil below, and there moves so slowly as to deposit the soil which it has cut from the steeper banks of the river valley far up stream.

Though the upland in the Kennebecasis valley is of excellent quality, it does not equal that of Carleton County,



Cushing Sulphite Pulp Mill, Lancaster, Saint John, N. B.

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or that great undeveloped stretch of Silurian land found in Madawaska, Victoria and Restigouche Counties. From Quispamsis up to the extreme head-waters of Stone's Brook, which itself is the head-water of the Kennebecasis river, the valley is wonderfully fertile, and forms one of the finest farming communities in the province.

Along the line of railway, besides the stations mentioned before are situated Lakeside, Hampton, Passakeag, Bloomfield, Norton, Apohaqui, Sussex, Plumweseep and Penobsquis. Sussex and Hampton are the two largest towns in the valley; and the former of these may be considered as typical of the finest farming sections of this portion of the province. Several secondary valleys run off from the main Kennebecasis valley; among these are the Mill Stream which connects with the Kennebecasis at Apohaqui, and Smith's Creek and Trout Creek converging to the same river at Sussex, together with several smaller and less important valleys each with its brook.

The Town of Sussex, situated on slightly rising ground on the South side of the Kennebecasis river, the stream here being but comparatively small, is as typical a farming centre, probably, as can be found anywhere in the world. From the hills on either side of the valley, the town with its white houses and numerous church spires, shows up to good advantage, nestling among the trees that here form such a beautiful feature of one of the finest landscapes of the type that can be imagined. From the Knoll, as one of the hills back of the town is called, the roads can be seen radiating in every direction; some cross the intervals, and some run over rising ground into the nearby valleys, and everywhere lined and shaded by enormous trees. Over the whole interval, wherever we look, are dotted the elms, the most prominent feature of interval scenery throughout the Province. The greater number of these trees are the American elm, a tree which attains somewhat greater height than does its British cousin, and is fully as graceful. Some of them stand alone, while others form picturesque groups, scattered apparently irregularly throughout the intervals while the course



Tug Hero Towing a Raft of Logs Down Saint John River,

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of the river itself, and every side stream, is marked by a fringe of these trees.

For the growth of hay no finer land can be found than the alluvial soil that makes these valleys what they are. The result is that there is every inducement for extensive stock-raising, both for meat supply and for dairying purposes. Unfortunately, up to the present time, but very little attention has been paid to raising either beef or mutton for the market; anything that has been attempted, having been done in a rather desultory manner, and with only moderately good results as must necessarily be the case with things of the sort attempted in a half-hearted way. Until only a very few years ago, practically the same thing could be said regarding the dairying industry. It was not until 1891 that any considerable attention was given to this industry by the Government. Before that time anything that was done, was done privately, and, as is usually the case under such conditions, was not done scientifically. The Government, then realizing the importance which the industry was ultimately to attain, took several steps, which were calculated to put the work on a better footing; as indicated elsewhere, the result was that a great number of butter and cheese factories were established, and that number is increasing with marvelous rapidity. Nowhere in the Province have progressive dairying methods been taken to more kindly than in this portion of Kings County, and, as one Sussex farmer recently said, "Sussex may be considered the Hub of the dairying industry in the Province of New Brunswick."

With the country as conveniently situated, with relation to the British market, and with the climate as ideally adapted to dairying, the possibilities of this branch of farming in the Province, as indicated from the results that have been obtained in Sussex alone, are simply enormous.

Just in the town, and liberally patronized by nearly all the farmers within easy reach, is the Provincial Dairy School. This institution, one of the finest butter and cheese factories in Canada, has done a great deal to educate the farmer to the proper methods. Every ounce of milk which is bought

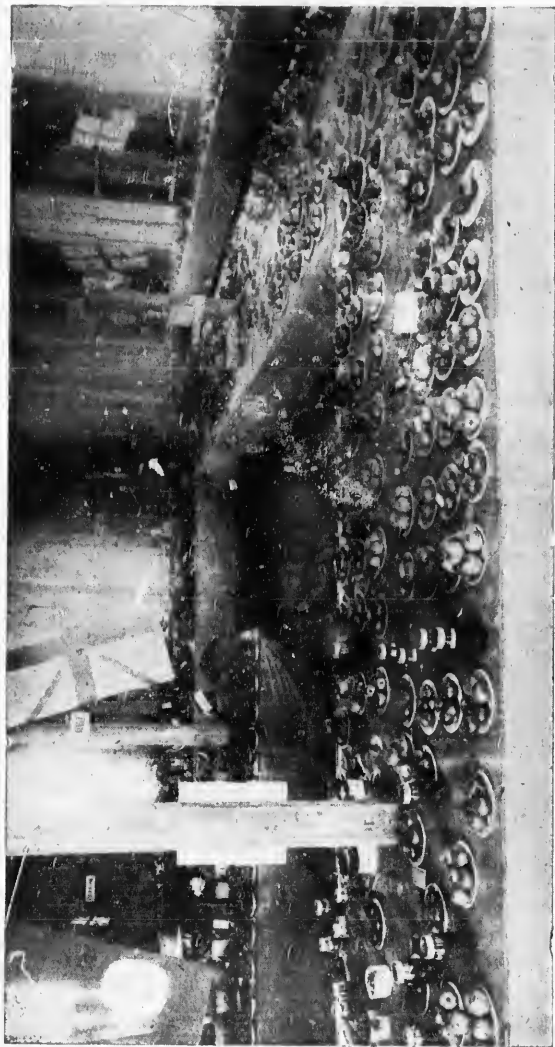


Exhibit of Fruit, Saint John Exhibition.

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is tested for the amount of butter fat it contains, and the farmer paid according to the quality of his milk.

The products which this institution turns out, under the direction of expert butter and cheese makers, are, in their class, unexcelled. Practically all supplies and implements which are needed by the farmer can be obtained in the town, the tradesman catering especially, as must necessarily be the case, to the wants of the tillers of the soil.

The town itself is improving rapidly, many of the wooden buildings in the business section being replaced by brick or stone structures. The dwelling houses, however, are practically all of wood, as is the case so frequently in New Brunswick, the cause of which is the cheapness of that material.

Another aid to the farmer is the "Co-operative Farmer" a newspaper published in Sussex, and devoted to the interests of farming in the Province.

To form any idea of the really splendid quality of the farm lands in this vicinity, it will be necessary to drive some distance both up and down the main valley, and also into some of the side valleys. The drive leaving Sussex and starting across the interval in a westerly direction, is one which will soon help one to get a good conception of the quality of farms throughout the valley. No sooner is the town left behind, though no strict line of demarkation except the legal one exists, than the interval stretches away for miles down river, bounded on each side by the gentle slope of the hills which, as far as can be seen, are almost fully under cultivation. The road leads to the river and finally crosses it at a picturesque point, several fine farms being met with before the river is reached. Immediately on crossing the bridge, a solid looking brick house is reached, with a cluster of barns, and all shaded by big elms and willows. Mr Jesse Prescott, the gentleman who owns the farm on which this house is situated keeps between fifty and sixty milch cows, this being one of the largest herds in this part of the country, and bringing in a very considerable income to their owner. Another excellent farm as we drive



Milch Cows on pasture farm of Mr. H. T. Hays, Sussex, N. B.

down the valley, directly abuts on this, and beyond this another, and so on, without the interruption of any uncleared area for many miles. The farms are all comparatively large in this section, varying from perhaps eighty acres to five or six hundred or larger.

Naturally the finest time of year to get a good idea of the crops, is just as the hay is being harvested, about the middle of August. From everywhere comes the sound of the mowing machine, and wherever one looks there is hay; hay standing, hay in windrows, hay in cocks. Now on the left, two mowing machines are working their way over some big field on the interval, while beyond, a tedder, driven by a small boy, goes clicking its way, sending a cloud of half-dried grass into the air behind it. Here a more experienced individual with an able horse, whose coat glistens under the influence of good feed, is using a rake, while farther on a pair of stout looking shires drag a creaking, rattling hay cart, half-filled with sweet smelling grass, into a position where more cocks are thrown on.

On the places of the less fortunate farmers, who do not possess tedders, the whole family is out, each with a fork turning over the fragrant grass that has fallen but a little while before. Here and there the stretch of hay is interrupted by a patch of twelve or fifteen acres of oats, rapidly ripening under the influence of the August sunlight, and beyond again, the more brilliant green of a dozen acres of buck-wheat shows up to advantage. On the right of the road the land rises, and farm-house after farm-house is passed as one drives along. Now a patch of carrots alternating with perhaps a few acres of turnips and these again with some other roots or vegetables, all of which seem to thrive splendidly in this natural garden. Here and there a young orchard will form a prominent feature of some farm.

Apple raising, or for that matter, fruit raising of any sort, has been very much neglected in the Kennebecasis Valley, and it is only within the last few years that this most important and lucrative branch of farming has received any attention.



Woodman's Point, Saint John River,

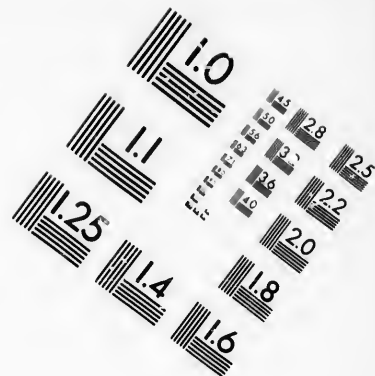
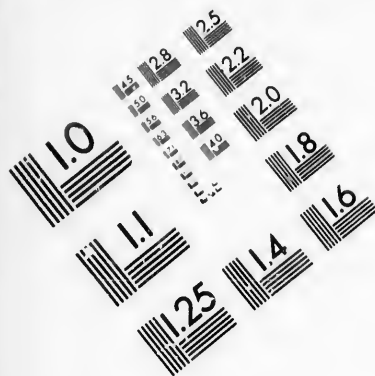
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I remember speaking not long since to Mr. Sharp, of Woodstock, Carleton County, regarding the possibilities of apple-raising throughout the region around Sussex, for that matter, throughout the valley, and he stated that, in his opinion, this portion of the county is much better adapted to raising apples in large quantities and of excellent flavor, than was the section where he has achieved his triumphs in the same line. As Mr. Sharp is the possessor of many thousands of trees, which annually produce many thousand barrels of apples, his opinion in this matter must, of necessity, have great weight. It is an axiom that nowhere in the world can finer apples be raised than in this Province, and with the unlimited market which can always be found for first-class fruit, it should become a large and paying industry, as things are now, it is a neglected one.

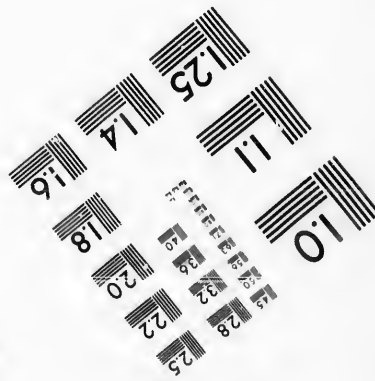
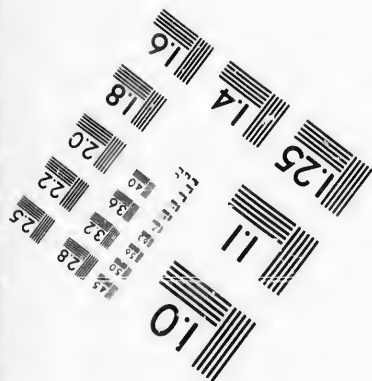
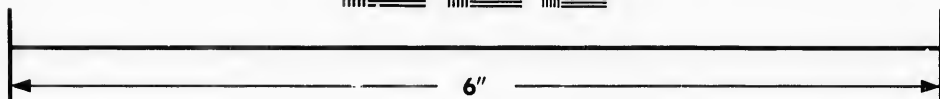
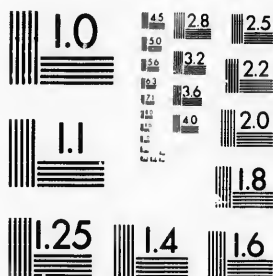
The kind of country described above is not localised, but extends through practically the whole of this valley, and the side valleys which run into it. It is to be expected that some portions of the land would not be as highly fertile as are some others, but the interval land will run very near a general average, none of the intervals showing any marked deterioration through absolute neglect. In taking the averages published by the Department of Agriculture, it must be remembered that these are the bases for the very conservative estimates of what the land is capable of doing. These averages are, of course, affected very materially by the mistakes of every careless, ignorant or unscientific farmer; these facts, of course, tending to cut the average down very considerably.

In the report of the Department of Agriculture for 1898, it was stated, for instance, that of 3837 acres of land planted in potatoes, in Kings County, the yield was 433,695 bushels, giving an average of only 113 bushels to the acre. This, of course, may be considered remarkably low. In the case of buckwheat, from 11,220 acres planted in Kings County 232,945 bushels were obtained, giving an average of 20.7 bushels to the acre; this, again may be considered very low for the County. In the case of barley, from 288 acres





**IMAGE EVALUATION
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Mr. Thomas A Peters, Deputy Commissioner of Agriculture, cutting New Brunswick wheat for the Paris Exposition, on farm of Mr. J. J. Haslam, Sussex, N. B.

planted, 5,883 bushels were obtained, an average of 20.4 to the acre. Oats, from 14,755 acres were obtained 347,041 bushels, an average of 23.5 bushels per acre. From 793 acres of wheat, were obtained 10,098 bushels, an average of only 12.7 bushels per acre, while St. John Connty gave an average of 22 bushels per acre in the same year. This average was probably due more to intelligent farming than to any other cause.

All these returns, as indicated in the report, are remarkably low, compared with what is considered a good crop by the best class of farmers. For instance, 30 bushels of wheat to the acre is considered an excellent crop, as is 60 bushels of oats, and other things in the same proportion. In the case of roots, from 800 to 1,000 bushels of turnips is not considered extraordinary, though this is decidedly above an average crop. Again, all through this portion of the country, as, for that matter, is the case with other parts of the Province, many other classes of produce for which there is an excellent and a steady market, are to a great extent, if not wholly, neglected. Take, for instance, the case of small fruits; these are neglected almost entirely. Vegetables such as salsify, Brussels sprouts, kohlrabi, chives, cabbage, cauliflower, tomatoes, parsnips, and their like are only raised in sufficient quantities for domestic use, though even the most delicate of them, with a little care mature perfectly in this favored situation. It would seem that there must be some well defined reasons for the lack of enterprise which has been exhibited in matters of the sort, and undoubtedly they are. One of them, applicable everywhere in this country as in others, is the fact that the majority of farmers have been slow to realize that, like everything else, farming is a profession in which a man needs as thorough training as in any other. Another reason is the fact that living is here so easy; a man having but to cut his hay and to sell it to eke out an existence, if such can be called living. This tended to create a *dolce far niente*, which has had too potent an influence. A third factor that may have been instrumental in damping a farmer's ideas as far as elaborate



The interval farming land of the Sussex Valley. Taken on the farm of Mr. Mark Teakles.

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work is concerned, is, that the market has, on account of the high protection in the United States to a great extent, and the comparatively limited character of the local market, not been sufficiently large to warrant operations on a more extensive scale than he had previously undertaken them. Now, however, things have changed, and the British market is virtually becoming closer every day, as finer lines of steamships are being put on the route between British ports and St. John, N. B.

The Kennebecasis valley is especially well situated for raising produce in large quantities for the British market. Through its whole length, with numerous stations, runs the Intercolonial Railway, with many trains a day passing in both directions. Sussex is but forty miles from St. John, a little over an hour's run under ordinary circumstances and including stops. This being the case, it can be readily seen that shipment of produce could nowhere be carried on more readily, but a single change being necessary after it is placed on the car.

Let us now look a little more closely at the conditions as they actually present themselves in this section of the country. Again leaving Sussex, let us drive, we will say, in an easterly direction up the valley. As soon in this case, as we strike the limits of the town, the same panorama of farms stretches before us as when driving in the opposite direction. This, however, is true irrespective of the road you take. Now we will come to a farm-house, set well back from the road and surrounded by willows, elms, butternuts and one or two other varieties of shade and ornamental trees. Here and there a few Lombardy poplars will suggest some parts of France, and again the thick, wavy-edged leaves of the oak recalls another country very much dearer to the Canadian. English and Canadian oaks here grow side by side; an elm or two, with an occasional willow will stand out in the centre of some great field of oats, that by the middle of August, is yellowing at the approach of harvest time. Beyond them, again, are fifteen or twenty acres of land, from which the hay has been cut, and which is now covered with



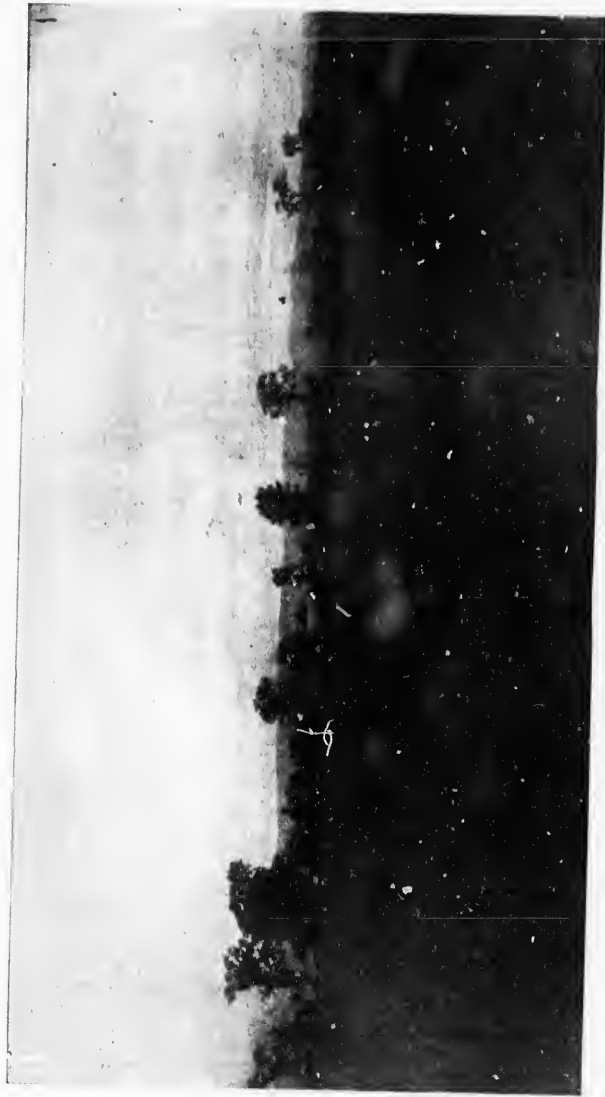
Dairy Herd on farm of Mr. Bunnell, Sussex, N. B.

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a luxuriant growth of clover after-feed; and now another farm-house, this one perched on a little eminence, and surrounded entirely by Lombardy poplars. Sloping away from its front, is a few acres of wheat, on the other side of which a field of carrots and turnips is to be seen with three or four acres of corn for the silo. Just inside the fence, and running along near the road for three or four hundred feet, lies a patch of squash and pumpkins, these part for fodder and part for domestic use. Passing these, on the day I have in mind we came to a field of oats, which showed up remarkably well, so well that I got my assistant to stand in them while I got a photograph to give some idea of their height. A few days after, when we traversed the same ground, the reaper was at work, and the oats lay thick on the ground in one part of the field, while in another, they were up in stooks. Later we came to a patch of wheat, which was especially fine, and of which I also got a photograph. The wheat of which I am now thinking, I afterwards learned, thrashed about thirty bushels to the acre, and from this patch came part of New Brunswick's contribution to the Paris exhibition.

We drive on through scenes of this sort, until, near the road, puffing white jets of steam into the clear August sunlight, we come to a cheese factory which is struggling with the products of half a thousand cows, endeavouring to get through before the lot of the next day comes in. Now, more fields of oats and then one of barley, and again, more Indian corn. We round a bend in the road and come on a comfortable looking homestead, from behind which slopes down an orchard of a thousand or more young apple trees. Some questions put to the owner, who exhibits a pardonable pride in them, showed that they were but five years old and all giving a considerable yield. Several different varieties are represented; King of Tomkins Co., New Brunswicker, and a few of the ancient favourites from the grower's point of view, but more or less worthless Ben Davis, which, as the owner said, were a great success as a selling apple, insomuch as they would keep for all time, and could be sold for a handsome price, when no other apple was obtainable. "But"



An oat crop in Sussex Valley, near Sussex, on farm of Mr. T. G. Hunter.

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he said, "personally I should prefer going without any; but still, if people have a taste for dried sponges dipped in a little vinegar and water, why I should be the last one not to allow them to have them." This was not a compliment to the Ben Davis as an eating apple, but, as the gentleman said, a few barrels of them were always a great financial success. Then there were other apples with very different reputations and also very different flavours. There were a moderate number of thriving specimens of that king of all apples, the Gravenstein, which probably a little care would succeed in raising as satisfactorily in New Brunswick as anywhere else, despite some assertions to the contrary.

From here we drove on and took a road that would ultimately lead us back to Sussex; and now comes a change of scene. From the right side of the road, stretches a field of perhaps twenty acres, from which the hay has been cut, and on which a good after-feed has been developed. Here thirty or forty cattle are eating; some lying under the big elm trees or complacently switching their tails and chewing their cuds; others are moving around to find the spots where the grass is the tenderest, and still others are standing knee-deep in a brook that flows through the field, and beneath the cool shade of some willow, are switching away the flies. The majority of them are Ayrshires, and fine looking cattle they are, with here and there a number of Holsteins and an occasional Jersey.

Probably nowhere in the world can more ideal conditions for successfully raising cattle be found than this very section that we are now studying. One of the best illustrations of this can be seen in, for instance, the quantity of maize that can be readily raised in New Brunswick.

I stopped one day near Sussex and took a picture of what I considered a typical row of fodder corn. The variety was Pierce Prolific, and the average yield, according to the proprietor of the farm, was fifteen tons per acre. This, of course makes an excellent element in first-class ensilage.

Several men, whose farms I visited, had herds of from thirty to forty milch cows, from which they would take in



Near Evandale, on River Saint John.

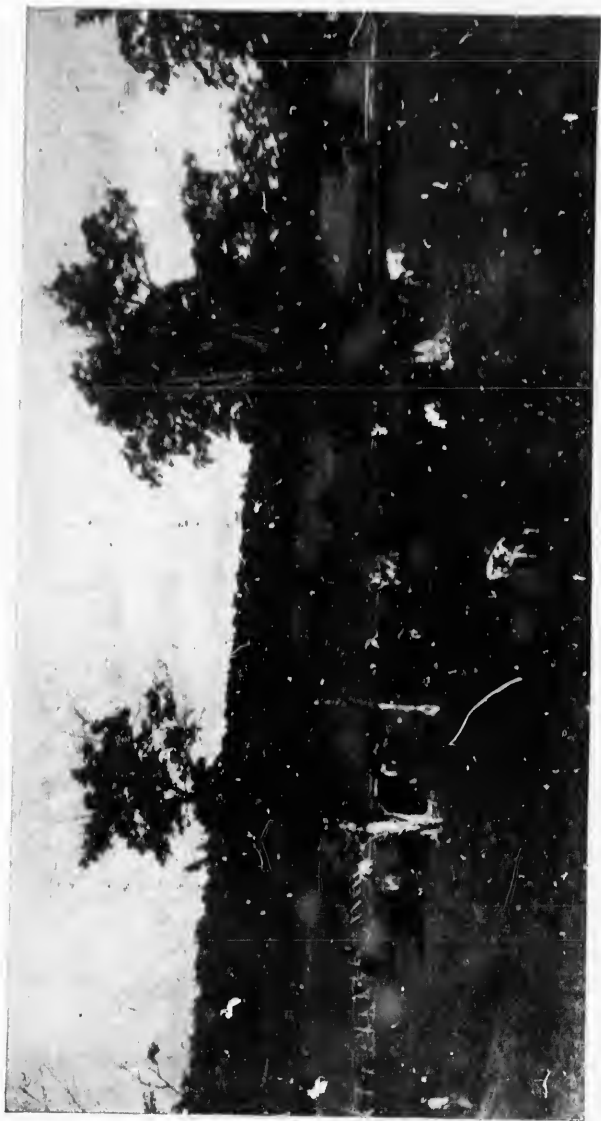
perhaps from 700 to 800 pounds of milk a day to the Provincial Dairy School.

With well-built barns, calculated to keep the cattle warm during the New Brunswick winter, which is very considerably colder than is that of England, there is no difficulty in keeping the cows in splendid condition throughout the year. It may be as well to say in passing, that very little indeed in the way of raising sheep or hogs is done in the Kennebecasis valley, though, of course, the advantages for this branch of farming can also be readily appreciated.

THE PROVINCIAL DAIRY SCHOOL.

To one who wishes to get a fair idea of the extent to which the dairy industry, in this particular section has expanded in the last few years, and also to obtain a look at some of the farmers from the surrounding country, it is only necessary to turn up at the Provincial Dairy School between daylight and sunrise on some fine summer morning. Perhaps before the first rays of the sun have shot over the uplands, clearing the land fogs out of the little valleys and lighting up the feathery elm trees, the first of the long line of waggons, which bring the milk from every direction in the surrounding country, will come clattering down the road, with five or six big cans of milk in behind, and will wheel in under the portico and up to the door where the milk is taken in and where the scales are situated; and almost simultaneously with the arrival of the first waggon, the hum of the engines inside will start, accompanied by the whiz of the separators. In a few minutes, waggons will be seen coming from every direction, and inside the Dairy School, everything will spring into activity. The big cans are passed in and weighed, and then out and into the waggon again, and the man drives around to another door to get his skim-milk and take it off home with him.

Sturdy, sun-burnt, strong looking men they are, with the healthfulness engendered of the Northern climate, with its



Dairy Herd, grade Ayrshires and Holsteins on farm of Mr. E. R. Kennedy, Kings County, N. B.

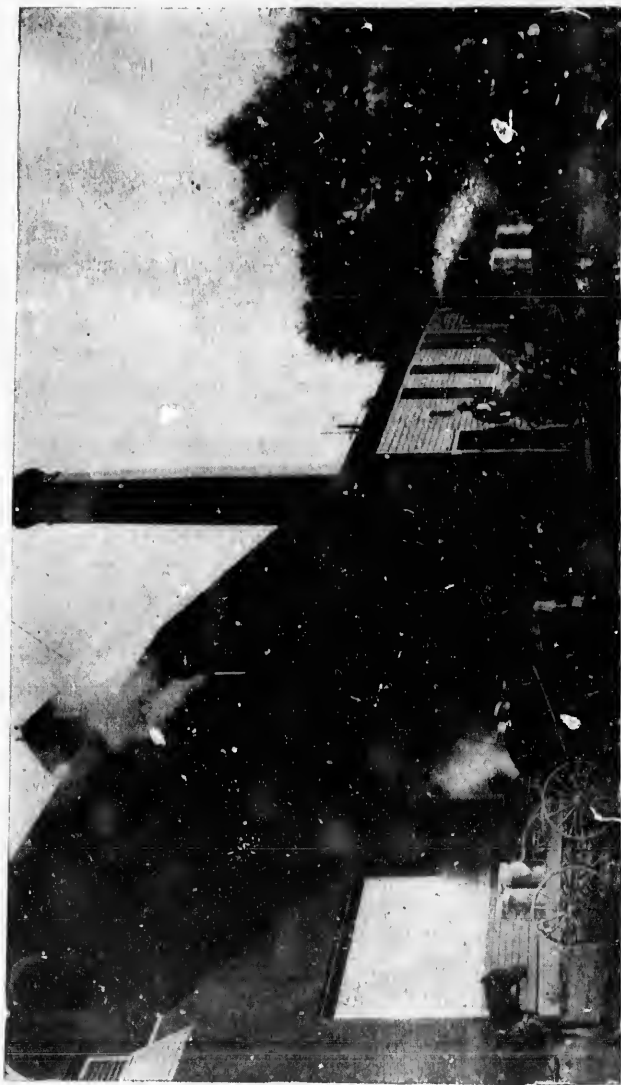
sparkling, clear, cold winters, and its summers full of freshness and free from malaria. They are unlike Americans; they are unlike Englishmen; they are a distinct type, larger than either the former or the latter, temperate, for the most part industrious, and normally God-fearing. Throughout the Maritime Provinces the farmers are hospitable, and as a rule, generous.

In a little while, as we wait, a long row of waggons turn up with their cans of milk, and their respective owners are busy conversing about crop prospects, yacht-racing, horse-racing, or any other subject of local or international interest that may be afloat. The average New Brunswick farmer is intelligent, and, I am thankful to say, becoming more so as time goes on and that rapidly. He is a great newspaper reader, and takes a keen interest in things both across the water and across the border, as well as in his own country.

In a little time the row of waggons extends three-quarters of the way around the building, covers part of the spacious yard in front of the factory, and the last arrivals occupy positions in the procession which reaches well out into the street beyond. By this time the early birds are getting their cans filled with skim-milk, and are starting again on their way towards home, with the sun hardly half an hour up. Finally, by between eight and nine o'clock the last team is gone, the milk is all skimmed and the creamery is running full blast, with jets of steam puffing out of different orifices, from the churns, and so forth.

To give some idea of a representative New Brunswick factory, I herewith give a few selected portions from the description given of the Provincial Dairy School, in the report of the Department of Agriculture of the Province for 1898. Since then such extensive changes and alterations have been made, that the description no longer applies, for in the interim a cheese-making plant has been installed, and the capacity of the factory generally, very much increased:

"In the winter of 1893-94 a few young men visited the Dominion Winter Dairy Station in Sussex, for the purpose of getting some insight into the factory butter-making business, then being introduced in the



Provincial Dairy School at Sussex, N. B. Waiting for skim-milk at back of building.

Maritime Provinces. The following winter there was a further demand for information, and Prof. J. W. Robertson, Dominion Dairy Commissioner, arranged that instruction should be given in the Sussex factory during a portion of March and April, 1895. The instructors were,— J. E. Hopkins, W. W. Hubbard and L. A. Zufelt, all of the Dominion Dairy staff. Some fifty students attended the school.

"In 1896 the school was again re-opened with the same instructors and Messrs. John Robertson and Harvey Mitchell of the Provincial Dairy Department. The Provincial Government also encouraged the attendance of students from outside of Kings County, by paying half of their travelling expenses. This year the number of students increased somewhat on the year before.

"In 1898 a more extended course was arranged, and as the butter-making business, upon the central creamery plan, was in charge of Mr. H. Mitchell of the Provincial Department of Agriculture, Mr. Mitchell took charge of the school, and was assisted by Mr. J. E. Hopkins of the Dominion Department of Agriculture, and Messrs. J. F. Tilley and L. C. Daigle, Provincial Dairy Superintendents; Mr. W. W. Hubbard, editor of the "Co-operative Farmer," also gave a course of lectures upon Animal Husbandry.

"During this time the school has been held in a building which was not at all suited to the purpose, and it was felt each year by the instructors that some change should be made. This change came about through the action of the patrons of the factory, who felt that they would prefer to run their factory business on the co-operative plan, with a building and plant of their own.

"The suggestion that the Provincial Government should erect the Dairy School Building was warmly seconded by the Hon. C. H. LaBillois, Commissioner of Agriculture, and the Government invited tenders for the erection of a suitable building.

"When the Provincial Government agreed to erect the building, the associated patrons, under the name of "The Sussex Cheese and Butter Company," agreed to provide a site for it and a suitable plant, and now we have, in the combined property at Sussex, the building which is equipped with an up-to-date plant.

"The building is a neat wooden erection with a covered drive-way thirteen feet in width over the milk-receiving platforms, a veranda on the end facing the road, and an ice house, 18 x 18 feet at the back end. The ground floor of the building covers a surface of 55 x 75 feet, the main building being 35 x 75 with a lean-to on the east side, in which the boiler and engine and butter-making machinery are located. Cold storage is fitted up in accordance with the specifications supplied by the Dominion Department of Agriculture. Refrigeration is accomplished by the galvanized cylinder and ice and salt method.



Part of Interior of Provincial Dairy School and Central Creamery at Sussex, N. B.

"On the first floor is a lecture room and a large cheese-curing room with a hoist for lifting cheese from the making room below. The building is steam-heated and finished in natural wood throughout. The floor in the making room is of best quality rifted spruce and cannot splinter. The walls and ceilings are of clear spruce sheathing and finished with oil and varnish. There are roomy wash-rooms and closets, and no effort has been spared to make the building a model of its kind. Steam is furnished by a thirty horse-power boiler, and power from a ten horse-power engine. The churns and butter-workers are of the best makes. A 3,000 pound Alpha DeLaval Separator skims the milk, never leaving enough fat to be read on the special skim-milk bottles of the Babcock test.

"The cheese-making outfit is now being installed and will be of sufficient capacity to accommodate 20,000 pounds of milk per day. The drainage system from the factory is very complete; a main sewer of vitrified pipe with various branches, conveys all the waste into the centre of the swiftly-flowing Wards Creek."

The above description will apply fairly well to the larger of the butter and cheese factories throughout the Province and all, on account of the interest taken in them by the Provincial Government, are rapidly increasing in efficiency.

In 1897 the number of factories to be found throughout the Province was 49, while in 1898 the number had risen to 55. In the former year there were 1,209 farmers taking milk to these factories, while in 1898 the number of patrons had increased to 1,569, an increase of 360 in the single year. The quantity of milk rose from 11,280,067 to 15,838,042 pounds, an increase of 4,557,995 pounds in the same time. The quantity of cheese increased from 1,107,281 pounds to 1,540,418 pounds, an increase of 433,137 pounds in the year. The value of the cheese manufactured in 1897 was \$99,655.29, the value of that manufactured in 1898 was \$127,284.48, an increase in the value for that year of \$27,420.19 or about £5,000 sterling. This is a considerable increase for what may be considered a new industry. In 1898 the creamery at Sussex had 75 patrons and consumed 1,425,621 pounds of milk, and manufactured 146,322 pounds of cheese, using an average of 9.7 pounds of milk to each pound of cheese manufactured. The cheese sold at 8 cents (about 4d) per pound.



Part of Interior of Provincial Dairy School and Central Creamery at Sussex, N. B.

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Twenty two miles farther down the Kennebecasis valley is situated the town of Hampton, the Shiretown of Kings County, only 20 miles from St. John. This is also a favoured situation for first-class farms. The railroad here passes a mile or so from the Kennebecasis river, on the shores of which the older portion of Hampton village is situated. Immediately below Hampton, the Kennebecasis suddenly widens out into a beautiful sheet of water with marshy shores, known as Darling's Lake, which flows around a considerable sized island of the same name. Running down on the north side of the river, are a series of picturesque elevations known as the Norton Hills. The most prominent is Pikwaaket mountain, a rather noticeable elevation, which, however, hardly deserves the rather pretentious name which has been given it.

The view from the top of the mountain, looking in a north-westerly direction over the village of Hampton, the Kennebecasis as it winds through the interval, Darling Lake and Island, and the numerous little islets which cluster around the bigger one, and then across to the hills, at the base of which runs the Intercolonial Railway is undoubtedly, one of the most beautiful in this part of the Province. From your feet stretch fine looking farms both up and down stream. They are farms, which, as in the case of Sussex ones, are in excellent state of cultivation, and nearly all have a considerable acreage of interval.

Hampton is very conveniently situated with relation to St. John, both as a local market and a shipping port, being about half way between that city and Sussex. The regions surrounding this village, however, are far less developed than is the case in Sussex, though, as in all other parts of the Province, the development is now going forward rapidly. One advantage that Hampton has is the fact that it is connected with St. John by a navigable river, the Kennebecasis being navigable from this point down. When looking down over the valley from the top of Pikwaaket Mountain, in company with the Deputy Commissioner of Agriculture, Mr. Thos. A. Peters, I remember his remarking that it would be



Field of Wheat on Farm of Mr. E. R. Kennedy, Sussex, N. B.

hard to find a more ideally situated sheep-farm than Darling's Island, with its large area, fertile soil, short distance from the railway and inaccessibility as far as dogs are concerned.

Hampton is the seat of several important industries, one of which is the Ossekeag Stamping Company Ltd., which manufactures stamped metal goods in large quantities. There is also situated here, Flewelling's Match Factory which does a very considerable business, and is beautifully situated on the bank of the river. The village itself is indeed very beautiful ; its situation being almost ideal. Here are many of the Summer homes of wealthy St. John people, while one man comes all the way from Paris to spend his Summers in this delightful situation.

This description, as so far given, has, as before mentioned in connection with other portions of the Province, been merely intended to give an idea of the typical appearance, quality and a simple outline of the resources of the Kennebecasis valley. The two towns which have been chosen, and of which these very short descriptions have been given, were simply so chosen on account of their being the largest farming communities in this valley, and also because lack of time prevented my even visiting other sections of the valley, which, I have no doubt are fully as fine and perhaps much finer than the sections described.

Norton is a very considerable village, and the other stations, mentioned earlier, are progressing rapidly. Time and space have not suffered me to even leave the main line of railway. There are various branch lines which strike off from the main Intercolonial railway at different points along its route: From Hampton the St. Martin's and Upham railway runs to the town of St. Martin's on the shores of the Bay of Fundy in St. John County. Another line from Norton, the New Brunswick Central, runs north through the northern part of Kings, and opens up the towns and settlements as far north as Grand Lake in Queens, and new lines are being added constantly.

Some distance south of Sussex is situated Markhamville, where is located a considerable deposit of bog manganese.



Crop of Fodder Corn, Pierce's Prolific, on Farm of Mr. A. T. Hays, Sussex, N. B

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which has been somewhat extensively mined, while in the northern part of the country is situated the village of Havellock, famous for its mineral springs, as, for that matter, is Sussex itself. Among other stations and villages may be mentioned Waterford near the extreme eastern boundary of the country, and still farther east, Mechanics Settlement, while north of Apohaqui, in the Mill Stream Valley, is situated Berwick. Directly south of this portion of Kings County which we have been discussing, lying between it and the sea, stretches, as a narrow strip, for the most part heavily timbered and ending abruptly in cliffs three, four and five hundred feet in height, that face dark and forbidding out on the wonderful bay, lies the eastern section of St. John County, a section chiefly valuable, for the present, for what timber is to be found on it. From some indications which have never been exhaustively worked out, it would seem very probable that this section of St. John County must turn out mineral deposits of considerable richness. No exception to the rule that holds in other portions of the Province, this country is traversed with a great number of rivers and streams, the largest of these being the Big Salmon River, all of whose sources lie in Kings County. Another is the Little Salmon River, and there are many others of less importance.

One thing that may be said, however, of that long, narrow stretch of St. John County, extending from the city eastward to the boundary of Albert County, is the fact that, in its numerous lakes and streams, excellent fishing can be obtained; the trout fishing throughout this region being, in many cases, very fine indeed. The largest of the lakes in the county is Loch Lomond, some four miles in length. This is one of a system of three lakes, the other two being smaller. Otter Lake is another of the larger lakes in the county. Ball's Lake, but a few miles from the city, being about the same size. These with some of the wilderness lakes, have, for a long time, furnished excellent fishing, and those in the eastern portion of the county are very little troubled by the angler.



Haying in Sussex Valley on Interval land. Taken on Farm of Mr. David Aiton.

THE ST. JOHN RIVER VALLEY AND THE VALLEYS OF ITS TRIBUTARIES.

Among the sections of New Brunswick that I have already spoken of is the eastern slope, comprising a very considerable area of land, throughout which the farming varies but little in quality and method; the Bay of Fundy region, comprising all that portion affected directly by the abnormally high tides of this remarkable body of water, the Kennebecasis Valley, including the magnificent farming section around Sussex and Hampton and the other smaller towns of the valley and finally the St. John river region. This latter, greater than all the others in area and of a wonderful fertility is, perhaps, the most prominent feature, either from a physiographical or agricultural standpoint, that the province possesses. The St. John River, taking its rise in the State of Maine and flowing through nearly half a thousand miles of a beautiful territory, has a large number of tributaries. There are but few large or very important tributaries. The St. Francis, Fish River and Madawaska drain great lake regions along its upper waters, as is also the case with the Aroostock, running from the State of Maine and opening in on the west bank of the Saint John River in Victoria County. But a short distance below the Aroostock the Tobique—the most famous salmon stream of this portion of the Province, flowing through Victoria County from the northeast, the greater portion of its length being in that County—meets the St. John but a short distance above the town of Andover, the shire town of the county. Andover and its immediate vicinity embodies almost an ideal situation for an up river farming country. The intervals are not as large as further down stream. They are, however remarkably fertile, and the up-land in this region is full, fine as that further south in the well-developed County of Carleton, and further north, where the magnificent silurian



Pumpkins and Carrots on Farm of Mr. H. T. Hays, Sussex, N. B.

area sweeps through Madawaska, northern Victoria and Restigouche. No other river of importance, unless the Meduxnakeag which flows in from the western side at Woodstock in Carleton County can be considered such, is to be found, until at Fredericton we come to the mouth of the Nashwaak, a considerable stream flowing in from a northerly direction and draining the northern portion of the County of York. Fourteen miles below Fredericton, in Sunbury County, the beautiful little river of Oromocto, enters almost directly from the south, and at its mouth is situated the shiretown of the County, a village of that name. In Queen's County, some forty odd miles from the mouth of the St. John, the Grand Lake system empties into the river through a little thoroughfare known as the Jemseg. The Jemseg hardly deserves the name of river. There is but little outflow from it, its head waters not being very considerable. The largest of all the tributaries of Grand Lake is the Salmon River, flowing north-eastward from its sources in the absolute wilderness of the western part of Kent County. The Canaan River, arising in Westmorland, broadens out into the long lake-like expansion of the Washademoak which flows into St. John five or six miles below the Jemseg. This, like the last tributary flows from a north-easterly direction, as is also the case of the next one, if it can be called such, namely, the Belleisle. The Belleisle is hardly more than a lake-like expansion of the river, rather in the nature of a back-water, and for this reason has generally been known as a bay. The last of the important tributaries connects with the main river about four miles above the city. This is the Kennebecasis, the peculiar stream to which I have already referred. All the tributaries from the Grand Lake to the mouth of the river are really lake-like expansions, in and out of which the tide ebbs and flows, the current hardly seeming to move faster in one direction than in the other. Beginning with St. John, the river flows through and drains to a certain extent, the following counties: St. John, Kings, Queens, Sunbury, York, Carleton, Victoria and Madawaska. Leaving the magnificent harbour of St. John and going over to the



Farmers getting Skim-milk from Provincial Dairy School at Sussex, N B.

river port, known as Indiantown, a steamer can be taken, during the season the river is open, up to Fredericton, eighty-four miles above St. John. Fredericton is situated in York County and is the capital of the Province. In the spring and early summer, when the river is in flood, small steamers run between Fredericton and Woodstock, sixty miles further up stream. Through the latter portion of the summer, however, and during the autumn these steamers have to be generally discontinued, on account of the low water in the river. The sail from St. John to Fredericton is, indeed, a very beautiful one; the scenery constantly changing, both as to type and variety. The geographical formation in the region of St. John is Laurentian and Cambrian, and just above the city the river runs between comparatively high cliffs of gray and white limestone. Below and around Indiantown are situated the large lumber mills that cut the greater part of the millions of feet of lumber which are shipped from St. John, and for which the logs come down, some of them, almost the whole length of the St. John River. As soon as you are free of the smoke from the dump piles of these mills, the first portion of the river has its chance to impress you. The Lime Kilns are situated practically everywhere and in apparently the most inaccessible positions. Many feet below them are their loading wharves, at each of which a wood boat or schooner is generally lying. After one or two sharp bends the stream straightens out, and the land becomes somewhat lower on each bank, ending in a rather abrupt cliff at the mouth of the Kennebecasis. The sharp headland on the right bank of the river is known as the Boar's Back. Just opposite the mouth of the latter river lies a great expansion of the main stream, known as Grand Bay. The scene is one of sparkling blue waters, vast rafts of logs, which are continually boomed up in Grand Bay, of sharp cliffs close at hand, and of rolling hills beyond, with here and there a lumber mill of some kind, with its puffing white steam showing up to advantage against the green foliage. To the right, one can look far up the Kennebecasis and in the distance catch a glimpse of Long Island, the largest island in that beautiful bay. A little



Flewelling's Match Factory, Hampton, N. B.

above this, also on the right bank opens out the mouth of the Milkish, just north of Kennebecasis Island. On the southern side of Grand Bay, nestling among the dark green spruces, stands out a typical St. John River Light House. This is the Green Head light. The river throughout is well supplied with these lights, rendering navigation extremely easy at any time during day or night. Again, above the great expansion at the mouth of the Kennebecasis, the river narrows, until only about one mile in width, where on the right at Sandy Point is situated another light, this time a little white structure set far up on a steel tower. From here the village of Westfield, one of the favorite watering places of this portion of the Province, is plainly visible on the left bank of the river. Just at Westfield enters a small and unimportant tributary of the St. John, which has long been famous as a canoeing river. The Nerepis, the stream in question is a beautiful little creek with intervals on each side, throughout the valley of which runs the Canadian Pacific Railway. At Westfield the river takes a sharp turn to the right, running practically at right angles to its former course. Its direction or flow is here south-west, and its course is absolutely straight for nineteen miles. This is the famous Long Reach, equalled by only one or two rivers in the world. The sail up this reach is, indeed, a very beautiful one. The steamer now approaches one bank and now the other, as village after village is passed. Now, she swings in comparatively close to a little wharf and is met by a boat bringing out perhaps one or two passengers. Then she bears away into mid-stream again, passes an occasional island, where a few head of cattle or sheep are pasturing, and the channel again swings to the right of that bank. On either side are rolling hills, some of them attaining a considerable elevation. Near the head of the "Reach," on the left side of the channel is situated the "Mistake", a false channel which ends blindly, the long tongue of land which encloses it being the first typical St. John River interval land that is met with on the journey up stream. Just opposite the head of the "Mistake" the beautiful Belleisle Bay opens to the view, and here is found the



Mud Scows on Saint John River.

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first of the interval islands. Throughout the whole lower portion of the St. John there is a great deal of very valuable interval land in the form of river islands. It is not to be supposed that there is any great expansion of the river where these island are found, a narrow channel, as a rule, flowing on each side of them.

As we proceed up stream the first of these interval islands of any importance that we meet with is "Spoon Island," just after crossing the border into Queens County. This is a long low-lying piece of interval of alluvial formation roughly horse-shoe shaped, with the mouth of the bay down river. Around the shores, as is usually the case, both on the main land and on these islands, is a heavy growth of elms and willows. On each side of the river stretches the interval and then the gradual slope of the lower uplands, finally ending in considerable hills. As we proceed up river, however, these hills become lower and lower, until by the time the mouth of the Washademoak is reached the country as far as the eye can see is comparatively flat and rapidly becoming typical of the Grand Lake region. Above Spoon Island is the largest of the river islands, "Long Island" by name, situated near the little village of Wickham; its entire length is four miles. Just at the head of Long Island, on the west bank of the river, the steamer calls at the mouth of the Otnabog Lake, an expansion of a little river of that name. Opposite this is another horse-shoe shaped island, Lower Musquash, and just above this point Upper Musquash Island is situated. Without exception, the soil of which these islands are composed is of the finest quality. It is practically all self-sustaining interval, flooding every spring and fall and needing no further manuring. Two and a half miles above the head of Upper Musquash Island the mouth of Gagetown Creek is situated, a short distance above Fox Town. Gagetown, which can be seen from the river, is the shiretown of Queens County. The steamer does not run up to the town, but is met by a large row boat, capable of taking all passengers and baggage, while the boat proceeds on her way up river. Directly across Grimross Neck from Gagetown on the other



Provincial Dairy School at Sussex, N. B. Teams Waiting to Deliver Milk.

side of the St. John River, the Jemseg, the outlet of Grand Lake, flows in. This whole region is a magnificent agricultural section, and the portion of the river between this point and Upper Gagetown, eight miles above, has long been famed for the splendid black duck and snipe shooting which can here be obtained.

Though the land is flat, the scenery throughout this part of the river, far from being uninteresting, is absolutely beautiful. Nowhere do elms attain a more perfect growth than along this section of the St. John. Now on one bank will be seen a little village nestling among gigantic willows, then on the other side some insignificant streamlet will flow in, its course to be traced through the intervals by the mass of foliage that hides it entirely from view. As the steamer rounds some bend, the long, low, sandy point of some interval island will show itself and offer alternate channels which are generally taken on different days. The extent of some of the islands is surprising, the level interval covered uniformly with its heavy, waving crop of hay, stretching three, four and sometimes five miles, without any rising ground, and dotted with the omnipresent elm. The steamer may have chosen one of the narrower channels and have proceeded, perhaps, half or three-quarters of a mile, when ahead is seen one of the peculiar low-lying paddle tugs struggling with an enormous raft of logs, and the passenger boat is forced to turn back and seek another path. Then again, a wood-boat loaded ten or twelve feet up the mast, until only a few feet of the bow and stern portions of the rail are visible, is seen slowly working her way up stream. An occasional scow, sloop rigged, is seen on her way to St. John with produce, the greater part of which, however, is carried down by steamers. The village of Upper Gagetown stretches along for some distance on the west bank of the river, and three miles above it is Mauger's Island, in Sunbury County, just opposite which on the right bank is situated one of the most beautiful of all the river villages, Sheffield. Four miles above this and on the same side of the river, is Maugerville, directly opposite Middle Island.



Divisional Staff at Camp Sussex, N. B.

The splendid quality of the land in these islands has had much to do with the positions which the villages were ultimately to occupy. Still, a few miles further up and the Oromocto is reached, where at the mouth of the river lies the shiretown of Sunbury County, with its quaint, Indian name, made famous many times in prose and verse.

The character of the river above this changes somewhat; the hills rising a little higher as we proceed, and the intervals decreasing in extent. The stream runs practically straight for some eight miles in this direction, when the corporation booms, with their long row of piers, come in sight. Opposite them on the left bank of the river are two large lumber mills, and two miles above this can be seen Fredericton, the capital of the Province, its spires and domes showing above a perfect bed of foliage. Just opposite the town the Nashwaak river flows into the St. John. Above Fredericton a large number of islands are again encountered, the channel, as it winds between them, being shallow and in places hardly floating the light-draft steamers that are used in the service along the upper portion of the river. Throughout this region practically everything is cleared, there being excellent farms on both sides of the river. Somewhat further up, however, we again come to heavily wooded regions which alternate with moderate-sized cleared areas through the western portion of York County.

As must necessarily be the case, the character of the river throughout its upper stretches becomes very much altered. The volume of the stream is much smaller, the result being that the intervals are but small in area and become more and more widely separated, until by the time that Andover in Victoria County is reached there are only isolated patches of interval land. To offset this disadvantage, however, the upland throughout this section, as has been reiterated in the course of this description, improves very much in quality, the land over-lying the upper silurian formation which extends across the border and goes to make up the greater portion of the finest farming section in the New England States—Aroostook County, Maine. New



Heavy Oat Crop on Farm of Mr. Joseph T. Barnes, Sussex, N. B.

Brunswick has, however, by far the greater amount of silurian land in this region.

To describe, with a little more detail, the counties along the valley of the St. John River:—Kings County and eastern St. John County have been outlined already, especially that portion of Kings embodied in the Kennebecasis Valley. Running parallel with the Kennebecasis, but a few miles north of it, is the Long Reach, of which Belleisle Bay is a continuation. The region between these two valleys—that is the main St. John River Valley and the Kennebecasis—is but of moderate elevation, and the upland, even in this region, is of comparatively good quality. As has always been the case throughout the Province, wherever interval land was to be found, the more elevated soil has to a great extent been neglected, on account of the abundance of wonderfully rich soil in the river bottoms. Simply because this higher land is not cleared for the most part is no indication that it has been found unfertile, in the ordinary sense of the term. It is simply an indication that there is a tremendous area of wonderfully fertile land in close proximity to it. Wherever this is the case the highlands suffer. This is not an unmixed advantage, inasmuch as the tendency has been for the population to spread in the search of this extraordinary fertile river bottom, the distribution having been carried on, so that considerable wooded areas have been left throughout the Province, even through the most closely settled farming districts. The advantage of this is, of course, almost incalculable, as wood for building purposes and for fuel can be found practically everywhere, and the farmer in the most favoured farming districts has but to spend the time and labour necessary to collect his own fuel for the winter, very often being able to supply his needs from the higher portions of his own farm.

Throughout the Province the majority of River Valley farms are cleared along the river fronts and for some distance back, the extreme back portion of the lot being allowed to remain in wood. The quality of this wood varies of course, with the section and the soil. In some cases the



Engineers—Camp Sussex.

trees will consist of various species of hardwood, maple, birch, beach, ash, butternut and so forth. In others there will be a considerable sprinkling of spruce, hemlock and fir, while in other situations the forest area will consist entirely of ever-greens, with, perhaps, occasional birch or maple. Not only do many of the farmers possess all the firewood necessary for their own use, but, especially in the case of larger farms, there may be a considerable growth of very useful timber. Nowhere in the world is wood for either building purposes or fuel more readily obtained than is the case in this favoured portion of Eastern Canada. The more important towns and villages of Kings County, have been mentioned before. (See Kennebecasis Valley.)

QUEENS COUNTY.

The County of Queens, which abuts directly on Kings to the north-west—though in certain respects it resembles the former County—has some decided points of difference. Queens County may be roughly said to consist of the basin of Grand and Washademoak Lakes, and part of the St. John River Valley. The land is very much lower, as a whole than in Kings County, especially around Grand Lake, where there are no considerable elevations. As mentioned in the general description of the St. John River, Grand Lake may be considered a great back-water of that stream. Every flood that flows down the main river, rushes in through the Jemseg and causes the Grand Lake to overflow its thousands of acres of interval land. During the spring, the whole neck of land between Grand Lake and the main St. John river, and for that matter, the very extensive intervals on the opposite side of the stream, are overflowed, and from Gagetown one may look across miles and miles of open water, dotted here and there with the elms that are struggling to keep their hold in the face of the spring freshet. Throughout this low-land region the entire face of the country, as far as the intervals are concerned, is changed during these



A Heavy Wheat Crop in the Sussex Valley on Farm of Mr. J. J. Haslam.

floods. So thorough are the familiar land-marks obliterated for the time being that even people familiar with the country have great difficulty in recognizing the real channel of the river. The lake itself is about thirty miles in length. Near its head are situated one or two small towns, while a considerable number of moderate sized settlements and villages are to be found along its banks. It varies in width from four to between six and seven miles, and into it flow numerous small creeks and brooks. Its main tributary, Salmon River, is a stream of considerable size, running into Salmon Bay, which itself flows into the north-east arm of the lake. Were it not for the great fertility of the surrounding land and the luxuriance of growth which clothes every part of it with elms, the scenery would be rather uninteresting, but, as it is, a sail through Grand Lake by steamer, which connects the towns along the lake with St. John, is one of unusual interest. Around the head of the lake very considerable deposits of coal have been discovered, though not worked very extensively; the greater part of the mineral extracted, is shipped to St. John by water.

The houses of Gagetown, the shiretown of Queens County, on the shores of the so-called Gagetown Creek, peep out from the midst of a perfect forest of wild and ornamental trees. The surrounding country may be taken as typical of the farming lands of New Brunswick. Gagetown vies with Sussex, in its importance as an agricultural centre. It labours under the disadvantage, however, of not being on the line of railway, the Canadian Pacific running a considerable distance (nearly twenty miles) to the west of the town. A branch of the railway, following up the St. John River Valley from Westfield to Fredericton, has long been agitated and it now seems that in a short time there will be seen the plans promulgated which will make the greatest difference imaginable in the prosperity of this section of the country. Immediately around Gagetown are situated what may be said to be the finest typical River Valley farms in the Province of New Brunswick, not that there is any difference between the fertility of these farms and those of the Sussex Valley;



Glimpse of Camp Sussex, N. B.

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but simply from the fact that the farms in this region are larger in area as a rule. This is the only point in their favour.

Let me describe a farm which is situated here that will serve for the whole St. John River:—The place is owned by Mr. J. Sherman Peters. The upland rises back of the town of Gagetown itself and contains about one hundred acres in all. The greater part of this is under careful cultivation, and some of the finest crops of grain that I have seen on any uplands in the Province I saw here. Directly across Gagetown Creek—though, as this stream can accommodate the largest river steamers, it would be dignified with the title of a river in any country with less elaborate water-ways—is situated the interval portion of the farm, seven hundred acres in area. It might seem to one unacquainted with the country that there would be but little variety in this part of the farm. This is not, however, the case. Part of the land is rather high interval and does not flood in the spring. Another portion is what is here called "marsh land," which is hardly dry at any time of the year and grows only the coarser qualities of hay. The elms are everywhere. On the higher land is to be found nearly one hundred acres of first class hardwood of several varieties. Through the centre of the interval a beautiful little stream, known as the "Mount Creek," winds its way, sometimes almost entirely hidden by the trees that arch over it, and sometimes broadening out into a comparatively wide shoal lagoon. This is the home of the black duck and teal. On the marshes on either side of the Mount Creek, Wilson's snipe, who fly just as erratically as do their English cousins and are just as fine game birds, are often found in considerable quantities; and at the very centre of the interval near the head of the creek is situated a peculiar hill, unlike anything found in other portions of the St. John River Valley. This is known as the "Mount," and, rising to a height of some ninety odd feet, covers an area of about forty-five acres. It is clothed on one side with a thick growth of maple, birch and beach. Near the top is to be found a heavy under-growth of sumach. The western side of the mount is cleared, and near the centre



A Street In Gagetown.

of the clearing, shaded by towering butternut trees are the remains of a peculiarly constructed and evidently very old stone dwelling. The stones are set in a coarse mortar, without having been altered from their original form. The walls are tremendously thick and the foundations solidly built. Unlike most cases of the sort, there is not a single word of tradition as to whom the house was originally built by, or when, it having been in apparently the same condition as long as the proverbial "oldest inhabitant" can recollect. From here there is indeed a beautiful view. Upon every side of the Mount stretch acre after acre of interval. In front is the creek, on the other side of which is an extensive snipe marsh. The slopes of the hill itself are now planted partly with young apple trees which are flourishing under the influence of the favourable soil. To the north-west of the house is a grove of linden, and from the western base of the hill stretches a great field of oats which, when I saw them, were yellowing under the influence of the September sun-light. I was told by the proprietor that one portion of the interval of very considerable area that lay just to the east of the Mount, averaged over thirty bushels of wheat to the acre, and this must be considered a splendid yield anywhere. Though over sixty head of cattle were pasturing on different portions of the interval on the day on which I visited it, I did not see one of them, the pastures being so cut off from the surrounding portions of the farm by the rows of elms and willows. Beyond the oat field again lay a stretch of nine or ten acres of buckwheat; and I must say that both the oats and the buckwheat were magnificent crops, the former being undoubtedly the finest example that I have seen in the Province. I afterwards learned from Mr. Peters that one portion of the area threshed over sixty bushels to the acre, the whole patch yielding over seven hundred bushels. The buckwheat also gave an extraordinary heavy yield, though I find I have no notes with regard to the exact quantity. When one considers that a farm of the type and size of this one can be bought in New Brunswick for twelve thousand dollars at the outside—



Oats in Stook, Gaġetown,

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which would hardly be the equivalent of its annual rental in Great Britain—some conception can be formed of the chances that are open to farmers who understand their business and have a moderate amount of capital to help them.

Another one of the excellent farms of Gagetown is that of Mr. T. H. Hall, situated just to the south of the village but a few rods from the centre of the town. The interval in this case is not on Grimross Neck across the Gagetown Creek, as is the case with Mr. Peters' farm, but abuts directly on the upland. The house is most delightfully situated in a perfect forest of hardwood trees on a little knoll. On its sides which slope down toward the interval near the house is a first-class vegetable garden and north of this a fine and healthy looking young orchard. What has been said of Kings County with regard to fruit growing may also be said of this portion of the St. John River valley. The conditions are practically perfect. The soil seems to present every advantage for fruit growing, and the only reason that it has not been carried on more extensively seems to be the fact that there has been an absolute lack of enterprise in the matter. At Woodstock, where Mr. Sharp's orchard is situated, the country does not present the same advantages as do these lower stretches of the St. John River and its tributaries. It cannot be predicted too strongly that fruit raising in these valleys must always be one of the most lucrative pursuits that a practical farmer can take up. In any orchard that I have seen which has had even a moderate amount of care, the trees in every case compare most favorably with those in the world famous Annapolis Valley of Nova Scotia; and, though I should not go so far as to say that the conditions are better (whatever I may personally believe), I still think that the Kennebecasis and St. John River Valley present as fine conditions for apple growing as can be found in the world. When I visited Mr. Hall's farm he was just in the midst of harvesting his oats, and I may say it would be difficult anywhere to find oats grown to more perfect maturity or under better conditions. The crop was an extraordinarily heavy one; and, from what the proprietor



Loading Oats on Farm of Mr. Hall, Gagetown.

said, seemed to have been obtained without any great effort. The land was, of course, intelligently worked, as Mr. Hall is a graduate of the Agricultural College at Guelph; but no extraordinary amount of fertilizer or manure of any sort was used; the simple fact of proper attention being paid to the proper rotation of crops was what Mr. Hall had to thank above everything for his success in the year that I visited him. The upland grain fields were without steep rises and sloped gradually down to the usual row of elms and willows along the shores of Gagetown Creek. The southern portion of the farm consists entirely of interval; the quality very much resembling, of course, that of Mr. Peters' farm. Probably nowhere throughout the river valley can finer trees be found than on this farm; one elm I remember especially. It stretched far above the tops of the others, developing into long, curving, feathery plumes. The whole lower part of the tree up to a height of, perhaps, twenty-five feet was completely over-grown with a mass of wild grape vines. The base of the trunk was entirely hidden by the dense foliage and brilliant red fruit of the wild plum, while on one side clustered a perfect mass of choke cherries, every one of these extra growths being indicative of the quality of the interval soil.

On the edge of Mr. Hall's interval is situated the Gagetown Light, at the western end of a ferry which runs from here across to another of the finest farms in this portion of the country—that of Mr. Scovil. This farm contains approximately one thousand acres, a great quantity of which is interval, and, like others in the district is famed, not only intelligently, but scientifically. It is an education in the possibilities of New Brunswick agriculture to visit these farms; and, were they situated on a line of railway, the owners working them with a moderate amount of capital should not only be extremely well to do, as is the case at present, but wealthy. To give still one more instance of a Gagetown farm; that of Mr. Thomas Henry Gilbert is situated about two and a half miles above the village at a point where the creek runs very close to the St. John River. Here the Government have cut



The Saint John River at the Mouth of Gagatown Creek.

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a channel through from the main river to Gagetown Creek, so that steamers in their passage up or down river, may, if necessary, take the Gagetown route down through the creek, instead of going by the main river. The upland of Mr. Gilbert's farm is situated on the mainland, his interval, as in the case of Mr. Peter's, being on the upper portion of Grimross Neck. The whole of this neck (some three and a half miles in length and about two miles in width, all of the finest interval land) was formerly a portion of the old Gilbert farm, but was necessarily too extensive to be worked satisfactorily by any one family. The farm now is sufficiently large for all practical purposes, the upland is of as good quality as the others, as is also the case with the interval. When I visited Mr. Gilbert, buckwheat threshing was in full swing. A horse tread furnished the power for the threshing; piles of reddish straw were lying about; the dust from the carrier flew in clouds around the barnyard; team after team drove in piled with buckwheat, cut but a little while, and five or six men were busy looking after the grain and getting it in bags and tied up. Mr. Gilbert himself is an excellent specimen of a New Brunswick farmer and a member of an old English family who have been prominent in the farming annals of New Brunswick almost ever since New Brunswick was. He is a man not afraid of work personally, which is a necessary quality for any successful farmer in this country, and he has an ultimate faith in the country itself. It would be hard to find a more typical New Brunswick farming scene than this, so I took a photograph of it, of which a reproduction is shown. There is an air of prosperity over the whole; the children—sturdy-looking little chaps being well dressed and taking an evident interest in the operations. The hay crop was so heavy during that year that the barns were not capable of holding it, and a very considerable amount had to be stacked on different portions of the interval. On account of these intervals overflowing, the stacks are always built upon floors which are raised three or four feet above the ground, so that the water as it comes down in the spring will get no chance to injure the hay. If these stacks



The Mouth of Gagetown Creek.

are covered, the hay undergoes but little deterioration. The village of Gagetown itself is not particularly impressive, as far as its buildings, public buildings and stores are concerned, they for the most part being small wooden structures. Practically everything, however, that is required by the farmer can be obtained in the village; this town, as is the case with Sussex catering especially to the agricultural class. The dwellings of Gagetown, however, are above the average, being for the most part large and roomy and beautifully situated. With one or two exceptions, they are built of wood.

The coal deposits in the vicinity of Grand Lake have been mentioned before. Just how extensive these deposits are is not yet thoroughly known. The fields have been partially explored by boring, and in different sections have been mined quite extensively, but always rather carelessly and unscientifically. Dr. L. W. Bailey, in his report on the mineral resources of the Province (S. E. Dawson, Ottawa, 1899, printed for the Department of the Crown Lands of New Brunswick) says, "There can be but little doubt that, among the minerals, of New Brunswick, bituminous coal was one of the first to attract attention, its mode of appearance, ready recognition and obvious utility alike contributing to that result. It is probable that the first discoveries were made at Grand Lake, and from the beds of that vicinity coal would appear to have been obtained in small quantities as early as 1782, but it was not until sixty years later, through the explorations of Dr. Abraham Gesner that the full extent of the areas occupied by coal-bearing rocks were made known. Between the year 1839 and 1841 in addition to the recognition of limited areas of such rocks near the coast styled by him the Chignecto Bay Coal Formation and the Westmorland Coal Field ascertained that a large part of the central counties, including the whole of Sunbury and Kent, with large portions of Queens, York, Northumberland and Gloucester, were underlain by rocks of the same age. These general conclusions were subsequently fully verified, especially by the work of the Geological Survey.



Head of Spoon Island, Saint John River.

“With the recognition, however, of the fact that they
“have large superficies, owing to the extreme horizontality
“of the beds, the formation had in all probability but little
“thickness, and in direct contrast to the extravagant views
“of Dr. Gesner, the coal seems of inconsiderable amount.
“The coal mines of Grand Lake are situated on its northern
“side, and about its eastern extremity, mainly in the vicin-
“ity of Newcastle River, on the Salmon River in Chipman
“and about the lower part of Coal Creek; the entire extent
“of the Newcastle Basin, being estimated at about one
“hundred square miles. The country has an average eleva-
“tion of not more than fifty feet above the lake, while the
“surface of all is not far from the sea level. The country,
“except where cut by water courses, is also nearly flat, with
“a drift covering varying from a few inches to 30 or 40 feet.
“The lake is navigated by steamers and small sailing vessels,
“the distance from Newcastle to St. John by water being
“forty-five miles, and from Chipman to the same part about
“fifty-two miles. Chipman is now connected by the
“Central Railway with the Intercolonial Railway at
“Norton, a distance of forty-four miles. The means for
“the removal of the product of the mines to the
“market are, therefore, ample. The development of the
“mines has been very slow, indeed, throughout their entire
“history there has been almost a total lack of combined and
“persistent effort. For many years the removal of coal was
“effected in the most desultory way, each farmer upon whose
“land the seam was exposed, devoting a portion of his winter
“labor to getting out what was needed for his own use, or
“simply hauling a load on sleds to Fredericton.” To get
“some definite idea of the amount of coal to be found in these
“fields, the geological survey finally took up the matter and
“made a series of borings, the result being that they deter-
“mined that the basin was comparatively shallow, with the
“maximum depth not exceeding six hundred feet. On making
“some calculations as to the quantity of coal to be found
“there, they have estimated that in the Newcastle basin alone
“there are about 22,135,449 tons, or if the associated areas of



Buckwheat in Swathe in Burton, on Farm of H. A. Brooks, Esq.

Salmon Creek and Coal Creek be included—about which the information is less conclusive—the total will be nearly 155 million tons, of this it is probable that from one hundred thousand to one hundred and twenty-five thousand tons have already been removed. The coal is of excellent quality. On account of the shallowness of the basin and the proximity of the mineral to the surface, it can be very readily worked. This coal field should be thoroughly developed.

I have before mentioned that this region was a famous duck and snipe shooting ground. Let me give a day's experience of snipe shooting on the intervals at the mouth of the Jemseg River just across the St. John from the village itself. In company with Mr. Sherman Peters and his son, Oliver, I started from Gagetown on the fifteenth day of September in a canoe, one of the narrow Malicete type, so plentiful on the St. John River. We started with the intention of paddling up the Grand Lake to shoot ducks and, as a consequence, had but a few shells containing snipe shot. The day was absolutely clear, and, unless one has experienced a September day in eastern Canada, no description can give any conception of the beauties of the country and the bracing quality of the air during this time of the year. It was almost perfectly calm, the maples on each side of Gagetown Creek had begun to turn to the gorgeous hues characteristic of a week or two later, and, as we paddled along, everything was reflected in the perfectly still, clear water. After rounding the point of Grimross Neck we met a slight breeze that came clear and fresh from the west-northwest. This, however, only added an additional zest to paddling. We landed to examine a marsh, where a stray black duck might have dropped in, and when we again returned to the river, the breeze had freshened considerably, enabling us to put up a little three-cornered sail and with one paddle down as a lee-board we started for the mouth of the Jemseg, three-quarters of a mile distant. Sailing in a Malicete canoe is an experience which, unless you have plenty of ballast has a tendency to cause you to dream for several nights of endeavouring to sit comfortably on a log which is floating freely in the water. A



Mouth of Oromocto River and Part of Village of Oromocto.

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little care, however, is all that is necessary and the species of danger makes the process far more interesting. Even with the ridiculously small sail the little bark slipped and splashed along through the ripples as if propelled by some impalpable force and in a very short time we had entered into the shelter of the river bank again. As we rounded a bend, only a hundred yards or so upstream the black smoke stack of the "May Queen," one of the pretty little white paddle steamers running from the Grand Lake ports to St John, hove in sight winding hither and thither through the interval. A few minutes after and she bore down on us, kicking up a swell that caused us to get as near shore as possible, if we wished to keep dry. With a waving of hats and handkerchiefs, she swept past and down to the pier at Jemseg, the last port of call before Gagetown. Hardly had she passed us a hundred yards when came the sharp call "Mark right" and a flock of seven teal came whistling down across our bow. Oliver had his gun in an instant and, as they hissed past at eighty miles an hour, he fired. Three birds out of the flock dropped hardly a yard apart. The rest wheeled and swept back up river. The water was low and a few hundred yards upstream a marsh which is usually covered, or at least very wet, was bare. Into this two or three snipe pitched, and we decided to rout them out before proceeding upstream on our duck-shooting expedition.

We paddled as far into the coarse grass as possible and stepped out into the soft, sticky mud; shell bags were adjusted, the last glance given to the guns and we were ready for business. The point on which we landed, on account of the little creek running across its base, had become a marshy island not over 150 yards in length and at its widest part probably 100 across. We formed a line twenty or thirty paces apart and moved ahead. Hardly had we gone twenty feet before a pair of birds sprang into the air. They were fresh and not overfat and, with a couple of squawks, they wheeled away, curling and twisting, as only Wilson's snipe can do, for a few yards. I fired and missed, and immediately following my shot came two in rapid succession.

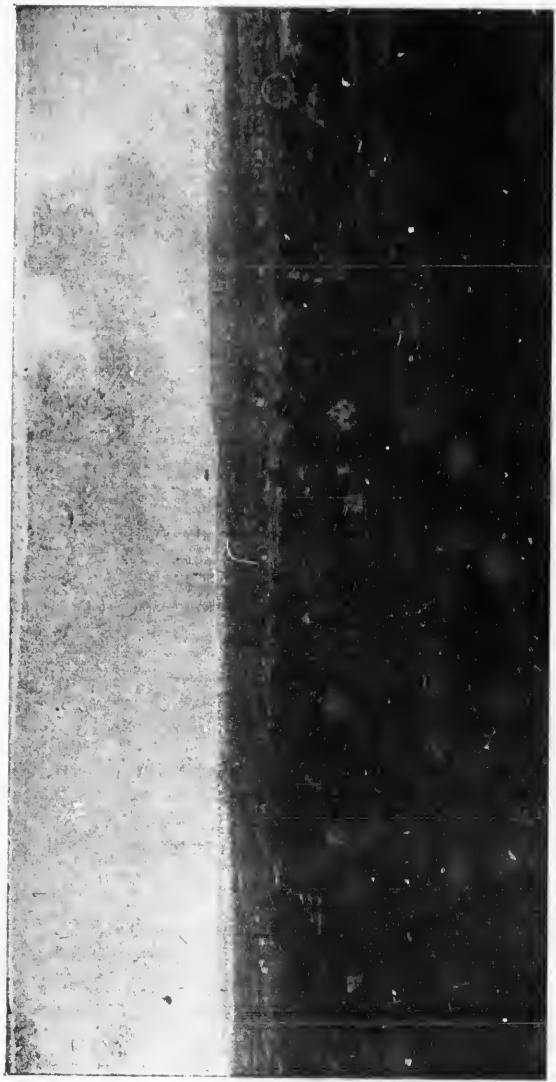


Post Office, Frederickton, N. J.

Oliver had "wiped my eye" and scored a double—pretty good start. Almost immediately three more birds jumped, and Mr Peters and I again succeeded in scoring misses. A second after, and Oliver got his third bird. While I was engaged in trying to calculate whether I ever knew how to shoot, a Virginia Rail got up and lumbered away. Then, the thrill came back and with it the "know how" which had apparently forsaken me. Simultaneously with my success came a more marked one, for Mr. Peters managed to get two birds, and for a time the fun went fast and furious. All that was necessary was to walk to one end of the point and then back again. In the meantime a sufficient number of birds had dropped in to keep us busy. We shot but a little while, sufficiently long, however, to spoil our chances of getting to the point we wished to reach on Grand Lake that day. We counted heads and in the two hours and a half, only part of which we were shooting, we had gotten three teal, one Virginia Rail and twenty-five Wilson's Snipe; and, as we paddled back in the afternoon, it was with that sense of intense satisfaction known to no one but the sportsman after a day's hunt of this sort.

This instance, however, gives no conception of the capabilities of this section of the Country for small game. The following day Mr. Peters, with a shell bag properly stocked with a hundred rounds of No. 9 shot, went over the same ground we had covered and obtained no less than forty-eight snipe alone. One of the favorite methods of shooting black duck near Gagetown, is to secrete yourself in the wild grass at the edge of one of the numerous marshes in which the birds spend the night, flying in from the main river a little after sundown and continuing to come in until dark. The last part of the work, owing to the darkness, is rather uncertain, but this only adds to the sport. A good dog is necessary, if all the birds are to be obtained.

Eight miles above Gagetown is the village of Upper Gagetown on the same side of the river. The little town is situated on a considerable slope, from the upper parts of which one can look eastward over the main St. John River



Part of Fredericton, N. B., from top of University of New Brunswick.

across the intervening neck of land and then far across the glittering waters of Grand Lake, while a little further up stream can be seen Maquapit Lake, connected with the former larger body of water by a thoroughfare. The intervals at Upper Gagetown are not so extensive on the same side of the river as at Gagetown proper, but across the stream there is a tremendous extent of this low-lying fertile land. Upper Gagetown is, perhaps, the ideal situation on the lower St. John River for black duck shooting. From here it is a drive of but a mile or two up river to the boundary between Queens and Sunbury Counties. One result of the lowness of the land, which is the general rule throughout these two counties, is found in the fact that a very much smaller stream is capable of cutting its way into the under-lying formation sufficiently deep and sufficiently rapid to establish a very much more extensive area of interval land along its course than would be the case in a section where the general surface of the land is higher. This, of course, is a great advantage, inasmuch as some streams which in certain portions of the country would be too small to carry any interval land with them, here flow through very considerable stretches of it, and, no matter how fertile the upland may be, for certain branches of farming, the interval is always to be preferred. First-class fishing can be found throughout Queens County, the Canaan and Salmon River having long been famous as trout streams; but it is hardly necessary to dwell on this point when speaking of a county that has such a net work of natural water-ways, as is the case with this. Throughout the eastern section, between the Canaan and Salmon Rivers is an excellent bag game country. Mr. W. K. Reynolds in "Rod and Gun" in New Brunswick, speaking of this region, says: "The Canaan takes its rise in Westmorland County and flows through Queens County, until it reaches its outlet at Washademoak Lake. On the northern side of it, chiefly in Queens County, but including also a portion of Westmorland and Kent, is what is known as the Canaan Moose Region. This may be said to include a tract of country about thirty miles in length from east to



Interval Land at Fredericton Junction, N. B., on the Oromocto River.

west and with an average width of about half that distance from north to south. This does not include the Salmon River District, which lies to the north. The Canaan region is one of the best in New Brunswick for moose, and it is to some extent a caribou country as well. It has never been hunted to such a degree as to injure it and is very easily reached from St. John." The woodlands through Queens County abound in partridge (so called), this name throughout the Province usually referring to one of two species of grouse which are found here.

SUNBURY COUNTY.

The long, narrow County of Sunbury, abutting directly on the northeast side of Queens County, is cut a little south of the centre by the St. John River. Though it possesses a considerable number of streams, it cannot approach the elaborate water-ways of the sister county. Much that has been said of Queens County—in fact everything that has been said regarding the farming capabilities—will apply to Sunbury. The county is not as well developed as is Queens in some respects, nor is the southern portion as fertile, but in all the region about the St. John River and along the Oromocto the same conditions obtain as in Queens.

According to Mr. Lugin, the county contains 656 thousand acres. It was the intervals in the region of Mougerville and Sheffield that first attracted the English settlers that came from the New England States to find their homes in the Provinces. Both these little towns situated on the right bank of the river resemble in their general features the vicinity of Gagetown in Queens County. Everywhere stretch the same magnificent intervals and river islands. Quantities of produce await the steamer on her way to St. John, and, as she swings into the wharf at Mougerville or at Sheffield, it is usually crowded with farmers, each with his team load of produce which he is sending to the city market.

If we take the steamer from Fredericton some fine autumn morning, generally about the 8th or 9th of September,



Steamer Wharf at Upper Sheffield—Waiting for the Steamer.

by the time we have reached Maugerville and Sheffield there will be a considerable quantity of produce already on board. As the steamer ties up at the wharf at Maugerville, however, the sight is one to gladden the heart of anyone interested in agriculture. The whole wharf is crowded with barrels and boxes. Here a box of tomatoes of the newer varieties, unlike the old, seam-creased enormous affairs that were the former prize winners, shows up to advantage; here an enormous crate containing cabbages, each one large enough to feed an entire family, and beside it a few half-bushel baskets, each containing four or five enormous turnips; then bunches of Mangel Wurtzels, and beside these a pile of large carrots tied up in bunches. These are, of course, the pick of the vegetables, and are on their way to the St. John Exhibition. On one part of the wharf will be spread a piece of burlap, on top of which will be heaped up different varieties of rhubarb carefully cut and tied. An endless number of baskets of fine looking potatoes will vie with similar baskets of beets in the public notice, and in still another place will be seen a few barrels, each containing two or three, or sometimes only one, enormous pumpkin, Hubbard squash, vegetable marrows and enormous cucumbers will be jumbled together, while a few steps beyond, half a dozen baskets of onions will claim their share of attention, and then the grains. The grain in bags and grain in sheaves, and single stacks of grain fastened carefully to show the size of head and length of straw. The prizes at the International Exhibition are keenly striven for, the farmers making keen efforts to win. Pictures taken at the International Exhibition, of the exhibit of grain and vegetables, illustrates the magnificent success which can be obtained in the Province of New Brunswick.

YORK COUNTY.

The next County, as one proceeds up river is that of York. This, one of the largest counties in the Province, covers no less than 2,278,000 acres. It is bounded on the



Log Club House on Digdeguash Lakes.

north-west by Carleton County, on the west by the State of Maine (one of the United States), on the south by Charlotte County, on the south-east by Sunbury County and on the north-east and north by the County of Northumberland. The St. John River runs through the county somewhat south of the centre, the most important branches being the Keswick River and the Nashwaak. The south-west branch of the Miramichi River runs through the northern portion of the county, and through this whole region there are splendid hunting and fishing. The south part of the county abounds in lakes, one portion of the boundary between York County and the State of Maine being a continuous lake-like expansion of the St. Croix River. The Magaguadavic lake is the largest of the York County lakes, with Oromocto before mentioned almost equal to its size. Other lakes are Davidson Lake and Lake George, drained by the Pokiok River, Big Cranberry Lake, which can be reached by the Canadian Pacific Railway, as is also the case with Magaguadavic, the Digdeguash (or Digde waters, as they are locally called) consisting of a chain of lakes emptying into the St. Croix River, Skiff Lake, the Eel Lakes, emptying by the Eel River into St. John; Bolton Lake and a host of smaller ones too numerous to even think of. These lakes, without exception, afford good angling, nearly all of them having considerable numbers of trout. To get some conception of the type of lake found in this part of York County, in early September of 1899 I visited the second Digdeguash Lake. This lake locally known as the Wauklehagen, is situated in a portion of York County which is utterly valueless from an agricultural point of view. This particular section is what is technically known as a Glacial Moraine. Huge boulders which have been torn from the surrounding formations not far distant by the action of the ice are strewn everywhere, the soil finding its lodgement between them. The lakes occupy positions among these enormous boulders, the shores being almost entirely made up of them and the surface being dotted with islands, some of them only large enough to support one or two spruce trees, some of them of considerable extent and



A. Black Bass Jump, Digdeguash Lakes,

others again nothing but single rocks. The whole series of lakes are stocked with pickeral, which furnish excellent sport to the angler who is fond of trolling. McAdam Junction with the Maritime headquarters and repair shops of the Canadian Pacific Railway is situated between three-quarters of a mile from the foot of Skowheggan Lake. With this exception, there are no settlements in the immediate vicinity. The woods are wild and rugged, and the same boulder formation is found everywhere. Along the shores of the lake the Red Deer often comes out in the evening to drink, and many of this beautiful species have been obtained by simply waiting at some favorite spot. Anywhere through these lakes a man should have no difficulty in getting four or five dozen pickeral in a day, if he goes properly equipped. The scenery, though of an awful type, is delightful, the rocky shores adding a picturesqueness to these water-ways that is peculiarly their own.

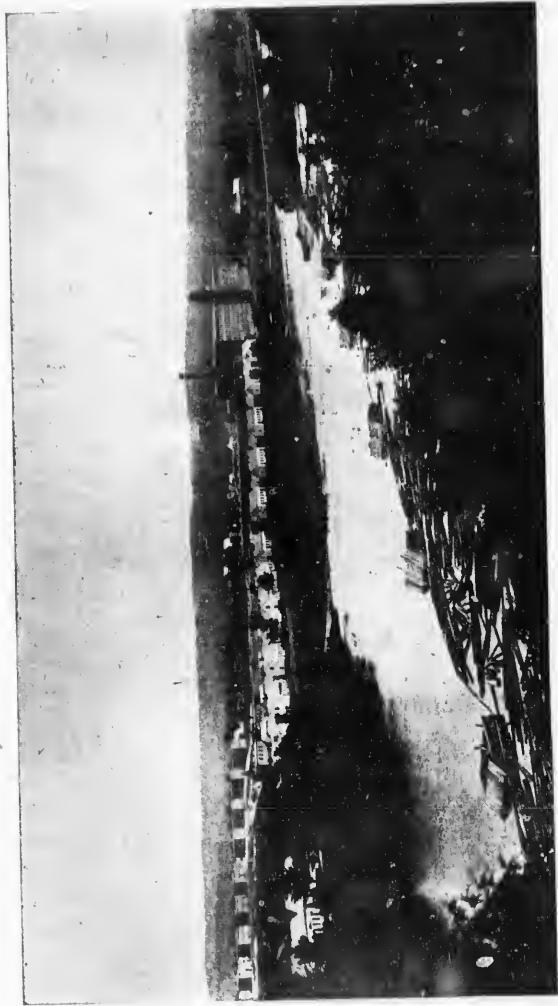
The chief farming section of York County stretches along the valley of the main St. John River. When I say the chief farming section, I mean the section which has up to the present been most thoroughly developed. Through the other portions of the county, however, is soil well adapted for farming which only waits for settlement. All that has been said about farming in Queens and Sunbury County applies to York County. The western portion of the county shows up considerable amounts of granite, the greater part of the boulders which I mentioned in the southern and western portion being of this stone. The salt belt covers the greater part of Western York, the boundary of the carboniferous system running approximately north-east and south-west through the centre of the county, to the south-east being carboniferous and to the north-west the silt belt. Along the St. John River Valley in the immediate vicinity of Fredericton, especially up river, are some splendidly developed farms, and some of these would make almost ideal farms for men who had a little capital and were fond of farming. They are near the railway and have every advantage that interval farms can have. The city of Fredericton,



On Fourth Digdeguash Lake,

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the capital of the Province, is situated on the left bank of the St. John River on a high interval about four and a half miles from the boundary between York and Sunbury. Beyond the city rise University and Brick Hills, from which magnificent views can be obtained. Every street, either in the business or resident sections is lined on both sides with all varieties of shade and ornamental trees, and from the top of the University the city looks more like a forest than a town. The view from the tower of this building is one that, once seen, will never be forgotten. I saw it for the first time but a short while before sunset. Up river the valley can be traced for a considerable distance. Looking in a north-westerly direction can be seen the mouth of the Nashwaaksis, while to the eastward lies the mouth of the Nashwaak, with scows of lumber, all ready to be towed down to St. John. In the distance across the river and a mile or so of country, lies Marysville, where is situated the cotton factory of Alexander Gibson, the lumber king of New Brunswick. Directly across the river lies the town of Gibson itself. Down the valley of the Nashwaak comes the Canada Eastern Railway, owned and operated by Mr. Gibson, which runs from Fredericton in an easterly direction to the Gulf Shore of New Brunswick at Chatham. Up the valley of the main St. John, can be traced the New Brunswick Railway leased and operated at present by the Canadian Pacific Railway Co., while at your feet runs the Fredericton branch of the great Canadian Pacific Railway system. As is usually the case in Maritime Province towns, church steeples are among the most prominent features. Away off to the eastward of the river bank looms up the dome of the Provincial Parliament Building and close beside it the tall spire of the Church of England Cathedral. The See of the Bishop of Fredericton, at present the Right Reverend H. Tully Kingdon. Fredericton has about eight thousand inhabitants and up to the present has not been the site of any very considerable manufacturing industries. The streets are well laid out at right angles to each other, there is an attractive park, the dwellings are pretty, though for the most part not pretentious;



Part of Marysville, York Co., N. B.

the business streets are convenient and the stores and hotels excellent. The town stands today, in most respects the prettiest in the Maritime Provinces. The St. John River here is spanned by two bridges, one—the main highway bridge—to St. Mary's, a wooden structure—and the other a steel railway bridge, connecting the Canadian Pacific Railway on the west bank with the Canada Eastern on the east bank of the river. Instead of the unattractive water fronts, so often found in river towns and cities, at Fredericton, especially along the lower and upper parts of the town, a very considerable space is left between the streets and the water, this forming a broad, grassy esplanade, shaded with enormous elms, giving the city from the water front a much more attractive appearance than it would otherwise possess. One of the prettiest sights imaginable which I had the good luck to see in the latter part of the summer of 1899, was the arrival of the Kennebecasis Yacht Squadron, with headquarters at St. John, in front of the Club House at Fredericton, during their annual cruise for the season. The boats straggled in one after another, their white sail gleaming in the setting sun, until the whole western bank of the river was lined with them. In a little while as the darkness increased, all were illuminated, and the sight was an extremely pretty one. "The Parliament building is a large free stone structure of handsome design recently built to supply the place of the one destroyed by fire," says Mr. Lugin in his hand book for the Province. The building was built in the early eighties.

Fredericton is the centre of a very extensive lumber industry, the working centre being Marysville on the Nashwaak River. Here Mr. Gibson has extensive saw mills and a large cotton factory. The lumber as it is sawed, is loaded on scows and towed down the St. John River. The greater portion of the logs come down the Nashwaak from the regions around its head waters, though a good deal also comes down the main St. John River to these mills.



Victoria Hospital, Fredericton, N. B.,

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CARLETON COUNTY.

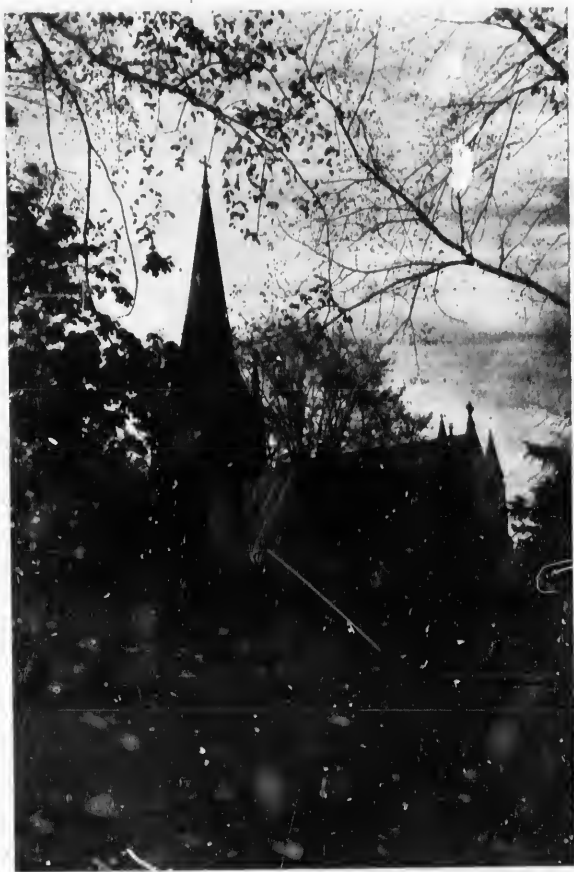
The next County to be considered is that of Carleton. It has an area of 788,200 acres. Carleton County has but very little interval land when compared with the Counties of the Lower St. John, but is without doubt the finest upland farming County so far developed in the Province. There may be single farms throughout other portions of the Province that are finer than any which can be found in Carleton County, but nowhere do we find the continuous stretch of carefully cultivated farming land to be found here. Woodstock on the west bank of the St. John River and at the mouth of Meduxnakeag, a little stream emptying in opposite Bull's Island, is the commercial centre of the County and is situated in the southern portion of it. The finest farming land or at any rate the best developed farming land is to be found on the west side of the river. No better idea of the capabilities of this county can be obtained than by driving from Woodstock to Centreville, a distance of a little over twenty miles in an almost northerly direction. In this county we come directly under the influence of the most southerly portion of that great Upper Silurian fertile belt which spans the north of the Province. Moderate sized, thriving settlements are everywhere. One fine morning in October—October the 10th—I left Woodstock to drive to Centreville. The road runs along the St. John River for a distance of three miles to the town of Upper Woodstock passing on the way the famous orchards and nurseries owned by Mr. Sharp which will be described elsewhere more at length. From Upper Woodstock the road stretches inland in a northwesterly direction, and the first village which we come to is Jacksonville. Unlike other portions of the province we did not, in driving along this road, come to any uncleared areas of any considerable extent. There are farms everywhere, some of them well worked, some moderately well worked, but on the whole the results obtained are creditable. The soil is in



Queens Street, Fredericton, N. B.

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every respect satisfactory. It is not as free of stones as is the soil further north, but the stones are not sufficiently large to be troublesome; all can be readily picked from the field. The amount of stone varies considerable with the districts; some being almost entirely free of it. As we drive over a ridge beyond Jacksontown, the panorama that spreads before us is an impressive one, as we look in a northwesterly direction. Here and there are scattered small villages, close at hand is a considerable group of houses with well built barns, substantial looking outbuildings, a windmill on nearly every roof and considerable quantities of stock. On one side is a neatly painted school house and beyond, in one of the smallest villages, two or three church spires can be seen. There is a general air of prosperity over the whole country side. In the distance on either side of the road one can get a very fair conception of the large area of the same quality of land which has yet to be brought into cultivation. Away to the northwest looms up Mars Hill in the State of Maine, and far on the western horizon can be seen the peculiar obtuse, slanting cone of Mount Katahdin, fifty-two feet in height, which can be seen from the top of Squaw Cap on the other side of the province. Practically all the grain is cut, though here and there a small patch remains. As you drive along you see first on one side of the road and then on the other moderate sized areas of roots. On the day in question turnip pilling seemed to be the order all along the route, and great piles of these vegetables were to be seen. More occasionally a considerable pile of mangels or beets were in evidence. Nearly every household had its flock of turkeys, there sometimes being between thirty and forty birds in a group. These wandered over the fields from which the grain had been cut, and gleaned more thoroughly than anything human could have done; the result being satisfactory both to the turkeys and their owners. Where an occasional bird would wander across the road was to be found in almost every case a considerable flock of ducks and sometimes of geese, while in one field that I noticed all four species of poultry were mingled, ducks, geese, hens and



Cathedral, Fredericton, York County, N. B.

turkeys. The farm houses throughout Carleton County are as a rule, better constructed and finer in appearance than in any other portion of the Province. They are painted neatly and the house itself always seems favoured, the out-buildings coming in for their share of the beautifier. This, though a small matter from an ultra-practical point of view, makes a very considerable difference in the appearance of a typical section of farming country. Stock raising is not carried on throughout this part of the country as it should be, the same tendency being noticeable here as elsewhere; that is the tendency to raise hay and other farm produce and sell it rather than using it directly on their farm in the production of stock, either for dairy or meat production. Beyond Jacksonville, lies Jacksontown, then Farmerston and beyond that again Lakeville. Eight miles beyond Lakeville lies the village of Centreville. Centreville is nothing more or less than a farming country. It is not a manufacturing village, and it caters to the farmers alone. Its stores are excellent, and the stock consists of practically everything that can be of service to the farmer. The houses are neat and, in some cases pretty, and the whole effect is pleasing. To the southwest rises a hill to a considerable elevation and from this point of vantage can be obtained a view of as pretty a stretch of farm land as can be found anywhere in the world. Centreville is situated about eight miles from Florenceville on the line of railway which runs up the main St. John River. At Florenceville there is an excellent local market and a more extensive market at Woodstock, twenty miles down stream. Throughout this whole section of the county agricultural progress is the order of the day, and the man who can be said to farm unintelligently is the exception and not the rule. To this fact more than to anything else does Carleton County owe its supremacy as an upland farming county. Before visiting the section I had known to a great extent what to expect, but it is impossible to form an accurate conception of any district of the sort without actually seeing it. The surface of the country is very correctly described when it is said to be undulating.



Fall Plowing on Farm of L. R. Margison, Centreville, Carleton Co., N. B.

Very often the undulations are hardly more than sufficient for drainage while in other cases there are considerable hills. Very seldom, however, is the land so steep as to be extraordinarily dry and make its cultivation with machinery a matter of difficulty. Every advantage in the way of farm machinery that is supplied by the modern market is taken up in Carleton County. The farms have a large area and pay well. The Savings Bank show handsome credits to a large number of farmers. The more you see of the county, the more you are impressed with the fact that farming after all when properly conducted is the basis of the solid financial condition of a country, whatever its other resources may be. One of the best proofs of the general satisfaction with themselves and the rest of the world felt by the farmers in Carleton County is the difficulty which is generally experienced in buying a farm at anything like a reasonable price. Of course, there are the usual accidental circumstances that may lead up to the sale of the finest farms, but farming lands cannot be obtained in any great quantity readily. As I before said, however, there are large areas directly contiguous to those already settled which are still to be developed. Though there is very little Crown Land remaining, undeveloped land can be obtained very cheaply and in a matter of five or six years can be brought to a perfect state of cultivation. Nowhere has the Government Policy of encouragement to agriculture met with more favorable response than here and even the river valleys with their thousands upon thousands of acres of interval land, or Westmorland and Albert Counties with their immense stretches of dyke lands, have to struggle to keep up the records established in the County of Carleton. Nowhere are the annual fairs held in the different counties more generously patronized or generously attended than is the one held at Woodstock. These annual fairs tend also to the rapid advancement in farming; the Government Dairy Experts acting as the judges in the case of Dairy Products. Northern Centreville, and at moderate distances are scattered other smaller villages, each one a secondary farming country in itself. An instance of this



Centreville, Carleton County, N. B. A Farming Centre.

type of place is Tracy's Mills, a couple of miles north of Centreville, while in a southwesterly direction, Long Settlement is another. When I visited Centreville, fall plowing was in full swing through the surrounding country. Two or sometimes three plows would follow each other over some big rolling field, and it was necessary but to notice the way in which the plows run to become convinced of the class of soil.

Apple Raising in Carleton County.

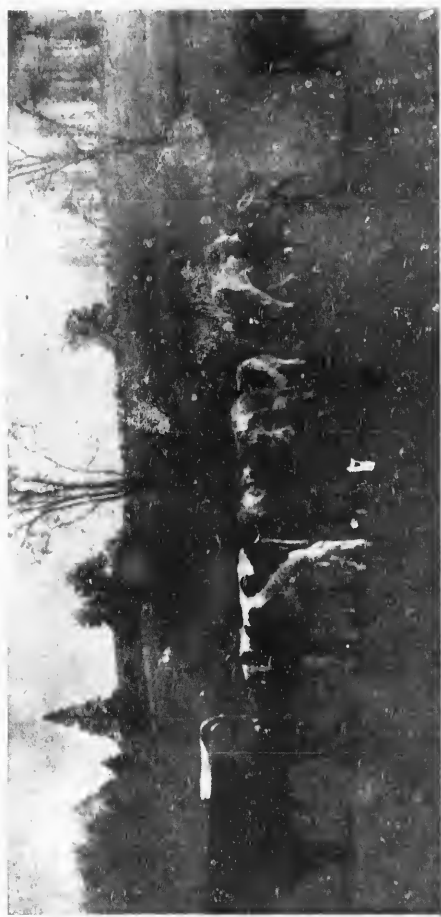
Under this heading I wish to refer to the famous Sharp Orchard in Woodstock. The orchard in question is situated out of town a short distance up river. I visited it on October the ninth after the last of the apples had been gathered. It lies on the westerly slope and the orchard and nursery together cover in all something over one hundred acres. Mr. Sharp, the proprietor of this orchard, has raised apples in New Brunswick for a great many years and has studied the peculiarities of the climate and this subject most carefully. Thus he is in a position to speak authoritatively regarding the possibilities and prospects of fruit raising in the Province. A hundred-acre farm is nothing to be despised, but a hundred acre orchard is really an enormous affair. To give some idea of it, Mr. Sharp informed me that personally each season he pruned about one hundred miles of trees. Each acre of this will yield about one hundred barrels of apples on the poorest years and each good year two hundred, the good and poor years alternating. This may be considered a steady yield, giving an average of one hundred and fifty barrels of apples per acre per year. The varieties which Mr. Sharp raises are the "Crimson Beauty," "The Wealthy," and "The New Brunswick." He also raises a few "Famuse." The "Crimson Beauty" is a hybrid originated by Mr. Sharp. It is the result of a cross between the "Famuse" and "The New Brunswick." He has succeeded in getting all the qualities of the "Famuse" with the hardiness and keeping qualities of "The New Brunswick." The hybrids



A Typical Carleton County Farm House.

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are remarkably productive and very showy, but according to Mr. Sharp, lacked quality as far as flavour was concerned. In the season of 1899, Mr. Sharp raised 1,700 barrels of "Crimson Beauties," 800 barrels of "Wealthies," and 1,300 barrels of "New Brunswicks." Of these he informs me that he got \$3.00 a barrel at the orchard for the "Crimson Beauties," without having to pay any cartage or freights. All the "Wealthies" were sold for \$1.50 a barrel at the orchard, and the highest price received for No. 1 "Wealthies" was \$2.25. The "New Brunswick" apples brought something over \$1.00 a barrel. A considerable portion of Mr. Sharp's land is in nursery. In the season of 1899 he had no less than 80,000 trees in one lot and 70,000 in another in his nursery. Of fruit bearing trees in the orchard proper there are about seventy acres now, carrying three hundred trees per acre, giving a total of 21,000 trees. When asked about the expenditure connected with maintaining an orchard of this sort, Mr. Sharp gave us the following particulars:— The expenses for the cultivation alone amounts to about \$300.00 a year, it costs \$100.00 to spray the trees, this spraying being done to keep away the codling moth and canker worm. He could not tell me accurately what the manure cost. Two men besides himself were required to do the work until the time came for gathering fruit, when sixty hands were needed. Often it is difficult to get a sufficient number of men at this season, in 1899 only thirty-five being procurable. Pruning costs \$50.00 a year for a few years, and then that expense terminates. Each season it costs fifty cents a barrel to get the fruit picked and packed and taken to the station. Mr. Sharp is most enthusiastic about New Brunswick as a country for fruit raising. He says that nowhere are the blossoms hurt less frequently by the frost than here. "Summer bursts on us so suddenly," he says, "that the frosts have no time to injure the blossoms, the weather being comparatively warm before they are developed. I have been fifty years raising apples in New Brunswick and I have never lost a crop. Among the many advantages which the Maritime Provinces present, the frequent showers



On a Carleton County Farm in October.

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are not the least important. Between the Gulf of St. Lawrence and the Atlantic frequent showers are the rule throughout the growing season. I remember," said Mr. Sharp, "visiting the Eastern and Middle United States a few summers ago. There was a great drought and everything was burned and dried out. When I returned to the St. John River Valley it seemed greener by contrast than I had ever seen it before. There is nearly twice the sunshine in this country than is to be found in England. Why," he continued, "when I started here with the intention of raising apples, it was not believed that apples could be raised at all in the country and not a single barrel had been raised here. Now, they are cheaper here than anywhere in the world and I have seen all this change in only one lifetime, and I do not believe that this section is nearly as well adapted to apple raising as is the Sussex Valley. I have proven this by sending some of my trees and seeds of some others to General Williams at Sussex. When I visited that section a few years later the markets of the vicinity were supplied almost entirely with apples raised from these same seeds and trees and came from General Williams' orchard. They were finer than my own, proving that the valley could raise better apples and a greater quantity than I could here."

The shiretown of Carleton County is Woodstock, situated about sixty miles above Fredericton on the left side of the St. John River at the mouth of the Meduxnakeag. Woodstock is a progressive and fine looking town. Sloping down to the river, is the site of several manufacturing industries and necessarily a great farming country. Its public buildings are a credit to the place and there are many fine residences. It is situated about fifteen miles from the town of Houlton, in Maine, and lies on the Canadian Pacific Railway. There are two methods of reaching Woodstock from Fredericton, independent of the river route. One is along that portion of the New Brunswick Railway now operated by the Canadian Pacific Railway which runs up the Keswick Valley on the east side of the St. John River and from Newburg Junction to Woodstock. The other is via McAdam Junction and



Camp, Above Gounomitz on Restigouche River. A Typical Moose Hunter's Camp in October,

through the town of Dubec in Carleton County, this line running on the west side of the Saint John River. From Woodstock there are railway lines practically in four directions, one running up the Saint John River, one to the eastward and down the Keswick Valley towards Fredericton and thence down river, one westward into Maine and the fourth almost directly southward through southern and western York County to McAdam Junction, from where lines leading to the United States and different parts of New Brunswick can be connected with. From this it can be seen that Woodstock is well situated as far as its transportation facilities are concerned. But three miles northeast of the town of Woodstock lie the best beds of iron ore yet discovered in the Province; these are generally known as the Woodstock Haematite Bed. To quote from Dr. Easley's report on the mineral resources of New Brunswick:—

“As soon as at Jacksontown and vicinity the ore beds are quite numerous having a thickness ranging from one foot to sixteen feet and are conformable to the inclosing slates which usually dip northwesterly at an angle of eighty-five degrees, though in places much contorted. Individual beds, however, when followed are found to exhibit notable variation in width in places. They contain considerable quantities of manganese which also often gives a black color to the slates, while occasionally green stainings indicate the presence of copper. The average of analysis of ore from Iron Ore Hill made by Mr. John Mitchell of London, and quoted by Dr. Eells, gave:—Metallic iron, 35.593 per cent; sulphuric acid, .723 per cent.; phosphoric acid, 1.298 per cent.

The first attempts to utilize the Jacksontown ores was made in 1848, when a blast furnace was erected by the Woodstock Charcoal and Iron Co. upon the bank of the St. John River, a short distance above Upper Woodstock, and about two miles and a half from the ore beds. Ore was obtained by the ordinary process of quarrying, and according to information supplied to the writer by the manager, Mr. Norris Best, was charged as follows:—Ore, 1,350 lbs.; lime stone, 70 lbs.; charcoal, 20 lbs. According to statements



Andover, from the opposite side of St. John River—Looking up River.

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quoted by Dr. Harrington, 3.33 tons of ore and 126 bushels of charcoal were required to make a ton of pig iron. Charcoal (in 1865) costing seven cents a bushel.

"There were ten charcoal kilns, having an average capacity of seven-fifty cords of wood and a production of twenty-eight hundred and two bushels of coal. The quantity of ore used was on an average three tons to the ton of pig, and the cost at the furnace \$1.20 per ton."

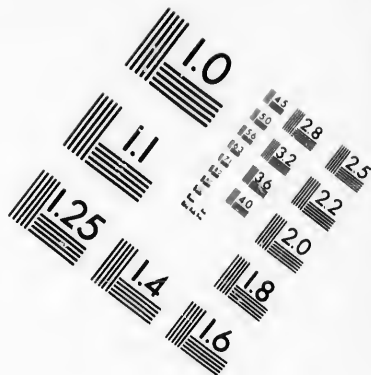
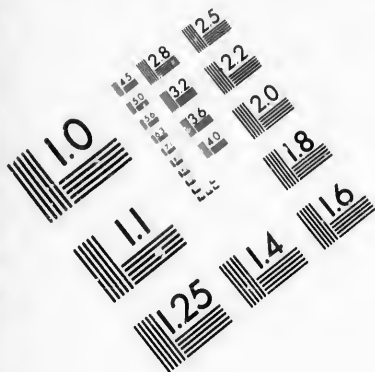
For some reason or other, probably for lack of funds, the company which was operating these mines ceased to exist and iron smelting at Woodstock is, as Dr. Bailey says, a thing of the past. It was stated that on account of the high percentage of phosphorous, the iron was often found to be brittle or cold-short to a degree which detracted very much from its value.

"On the other hand", says Dr. Bailey, "it is difficult to reconcile this deficiency with the statements given as to experiments made in England with armoured plates constructed of Woodstock iron, which, according to a paper by Mr. William Fairbain, F. R. S., published in the Artisan, had a resistance in excess of that of any other plate when tested, of tensile strength in tons per square inch of 24.80. It is also to be observed that the presence of phosphorous is not now the serious objection to the use of iron ores that it formerly was. There seems no reason why these mines should not be taken up by some enterprising company and be worked thoroughly."

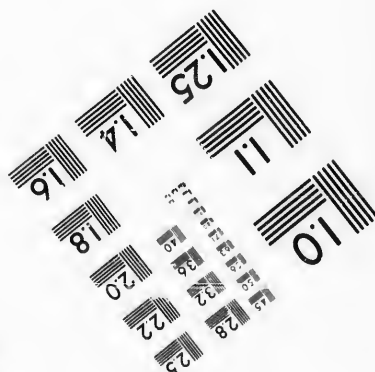
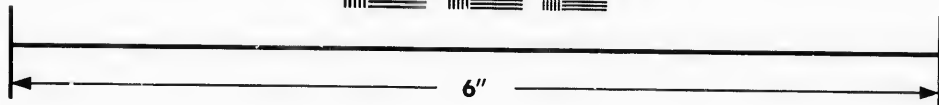
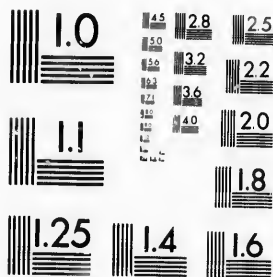
VICTORIA COUNTY.

Victoria County lying on the north of Carleton, is bounded on the west by Madawaska County and Aroostook County, Maine, on the east by Northumberland and the northern extremity of York Counties, and on the north by Restigouche County. There is no reason why this fine county, comprising one million three hundred and twenty-four thousand two hundred acres, should not be in every



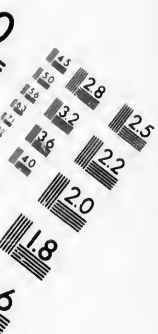


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Lumber Gang of Nickson & Burt, out Building Camp on Restigouche River,

respect as fine a farming county as is Carleton. This it undoubtedly is, the only difference being that the latter county is far better developed. Every portion of Victoria which has been settled has indicated the excellent quality of its soil much of which overlies the upper silurian formation. The county contains several centres of population which were originally (so called) colonies. Considerable numbers of people were brought to the county and established practically in the wilderness, the results that they have achieved showing how successful men can be in a new country, even when they arrive in an almost indigent condition. To quote from Mr. Lugrin's hand-book regarding one of these colonies:—

“The Kincardine Colony is situated in the southern part of Victoria County. It was founded in 1873 by colonists from Scotland. The land was not well chosen, a large part of it being very rough and not such as ought to have been used in an experiment, such as this colony was. But the selection was in accordance with the wishes of the organizer of the colony who was not a resident of New Brunswick. The soil, however, is very fertile. During the first year the settlers had many discouragements and disadvantages, due in part to the unfulfilment of the promises made in the prospectus of the colony; promises which were not warranted by the prospectus of the colony; promises which were not warranted by the agreement that the Provincial Government made. But these difficulties were soon overcome, and the two sections of the colony, Stone Haven and Kintore, are now in a very prosperous condition. Four years after the founding of the colony, Mr. David Burns, J. P., one of the settlers, writing to the Government said:—
 “In May, 1873, in passing through the brushed out track where the road is now built (at morning sunrise) our vision was limited to a few yards by the density of the forest. The only sound then to be heard were the screaming of the owl, the snarling bark of the fox and occasionally the indescribable grunt or whistle of the dreaded bear; but May, 1877, shows a different state of matters. In passing along the



Getting Dinner on Portage Road from St. Leonards to Mouth of Wagan River,

Kincardine Road now, the rays of the sun are peeping through the tree tops on the Watson Flat. On each side of the road with few exceptions we have a clearance extending back from two to four hundred yards. The houses also show signs of change and improvement. The buildings that have been added show that the requirements of live stock have been attended to. The sounds now heard are the bleating of sheep and the lowing of cattle, the bark of the watch dog, the crowing of the chanticleer and amorous cooing of the house dove, and we also see the neat little garden, both for use and ornament, forming part of the homestead of the free, independent farmer. Five years ago we were preparing to leave the home of our forefathers and our dear native land that we might obtain such a home as I have described with a sort of semi-prophetic hope, balanced by a doubt as to the attainment of the wish, but the ceaseless stream of time has rolled on and what was then our fondest hope and dearest wish is now an accomplished fact. Our homes are our own, and, if as yet there are no luxuries, there is comfort, and with many, when the harvest is over they will have a year's provision in, so what some have reached will soon be reached by all.'

"This colony has made great progress since Mr. Burns' letter was written. It is provided with its school houses and highways. The increase in the value of the settlement in the year 1876 is stated by the colonists themselves to be over \$15,000.00."

This was published in 1876 and since that time tremendous changes have come about. The settlement would not now be recognized by its founders as the later years have seen a much more rapid progress, proportionately, than in the case of the former years. Another prominent 'colony' in Victoria County is the New Denmark Settlement. To this place a considerable number of Danes were brought and proved excellent settlers. The tract contained in all 17,200 acres. It is all upland. The first settlement, was made in 1872, according to Mr. Lugrin, by a party of emigrants from Copenhagen, Denmark, the majority of whom were not



Black Spruce on Restigouche River.

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farmers. It is hard to find anywhere in the Province now a much better farming section than this settlement, and Mr. Lugin in finishing his remarks on it, says there is room in Victoria County for thousands of such farms as those in New Denmark. This remark holds good today. Andover the shiretown of Victoria County, is situated on the west bank of the St. John River, on the Canadian Pacific Railway. The river curves around the village, which lies on an extensive interval with farms stretching in every direction from the edge of the village. Opposite Andover is situated the little town of Perth, behind which rises a considerable hill. The view from the upper slopes of this hill looking up the river St. John, with Andover winding around its banks, and Perth, at your feet, is as beautiful as any in the Province, and one of the finest of its type I have ever seen. I climbed the hill on the morning of October the 12th, in 1899, and took some pictures of the surrounding country. The day was typical of October in eastern Canada. There was a white glare of clear sunshine and not a cloud in the sky. There was a feeling of keenness in the air and the hills showed clear for thirty miles. Up river the valley of the Tobique could be traced and its mouth seen on the right bank a mile or two above. The houses and stores of Andover are built, I think, without exception of wood, and for the most part painted white. The interval stretches behind them and then the hills rising beyond, all in a splendid condition of cultivation wherever cleared. When I arrived in Andover the annual county fair was in progress, and teams were in from all over the country. I watched them as they passed the pretty little hotel, now a cart in which were huddled a group of fine looking sheep would pass followed by the owner, usually accompanied by his entire family in a wagon of no mean dimensions; then, an express wagon, in which were several good sized crates, each containing some choice specimens of poultry; behind this again some slick, carefully-groomed cattle, for the most part Shorthornes, Ayrshires and Holsteins with an occasional Jersey, and still later a fine looking pair of draught horses, gaily decorated with ribbons, would



A Camping Scene.

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tramp past, to be followed in short by equally fine looking horses of a very different type. Even in Woodstock, which is noted for its annual fair, there is not more interest taken than in this delightful little river village. There is more good natured rivalry in the matter of the prizes in Victoria County and in the Andover Fair than I have ever seen elsewhere, but it must not be supposed that stock is the only thing exhibited; other farm products come in for their share of attention and among other things particularly fine butter was to be found at this show. Mr. Tilley, the Government Dairy expert who was there judging the butter, told me that I should be surprised beyond measure if I realized the extent of the improvement in butter-making throughout the country as exhibited in these fairs in the few years since the introduction of the Dairy Schools and lectures on dairying.

Andover is one of the finest centres from which to start on a big game hunt in the province. It is readily reached from St. John by rail. A portion of the trip, can, however, be made by river as a diversion, if the sportsman so wishes. The most prominent physiographical feature of the county is the Tobique River, lying almost entirely in it and draining practically the whole county. The stream empties in on the east side of the St. John River about two miles above Perth. The land here is quite high on both sides of the stream and the scenery is extremely picturesque. At the mouth of the Tobique is situated the largest settlement of Malicite Indians in this part of the country. Many of these Indians are famous guides and hunters, and I have never had better men in the woods than two which I obtained here and took through the Restigouche region with me. If these two men were types of the Malicites in this village, then I don't wish to see any harder workers. They were willing to work from any time in the morning until practically any time the next morning and did everything with a cheerfulness that made them, independent of their capabilities—valuable companions in a wilderness trip.

The Indian Nation, opposite Campbellton, where dwell five hundred or so Micmacs, and this village at the mouth of

the beautiful Tobique River, are the two largest Indian Settlements now in the Province. There are many expert guides and hunters in both of these villages, as is also the case with a little Indian Village opposite Fredericton. There is nothing that the New Brunswick Indian of today more thoroughly delights in than guiding the sportsman through the deeper wilderness where the big game roams. The Tobique River I have mentioned several times through this work. Along the lower stretches, up past Plaster Rocks, lies a very fine farming country and one which is being most rapidly developed. Beyond this, the river becomes more and more a wilderness stream, until finally we reach the Sisson Brook region, a lake of the same being in the centre of a fine deer and moose country. Beyond Nictau the river breaks into four branches. The right hand branch of the Tobique flows in from the southeast and into it flows the Serpentine with a thousand twists and turns draining Serpentine Lake. The Serpentine is a picturesque stream with several sharp rapids. One of my Indians mentioned, with considerable pride, that he went down the worst rapid on the Serpentine in a canoe alone. The Mamozekel, a small stream, flows into Nictau from the northeast, from the west and northwest comes Sisson Brook, and from the north the Little Tobique River, really deserving the title of the Main Tobique River, flows from the Nictor Lake and the Bald Mountain hunting region. There can be no more delightful hunting trip than to start from Andover, with capable Indians and birch bark canoe, and work your way up the Tobique to the lake regions, where you are in the centre of what I have repeatedly spoken of as New Brunswick's finest big game country. On the day that I reached Andover I had been there but a little while, when down the St. John two canoes could be seen approaching, and I was informed that two Americans had gone up only two days before, intending to try Sisson Lake only for deer. They had delayed some time on the way, until, as I afterwards discovered, one of the men suddenly remembered that he had an engagement in New York—only three days after it came to his mind—which



Lumber Gang Working on Restigouche River—Dinner-time.

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it was absolutely imperative that he should keep, and the race began down the Tobique. In the canoes which we saw approaching were the two men in question, and the Indian had when they stepped ashore and began to quietly unload the canoes and prepare the baggage for shipment by train, which was to leave in half an hour later, been paddling no less than twenty-four hours continuously. They seemed to make no more of it than if they had been out for a little afternoon's exercise. All night long they had come down the lower stretches of the Tobique, seeming to know by instinct just where to go under all circumstances. The result was that they did arrive in time for the New Yorker to catch the train which would enable him to keep his engagement.

The descriptions which I have given to other salmon streams in the province will apply roughly to the Tobique, though this is a somewhat different type of stream, as far as its physical features are concerned, especially throughout the lower stretches. It is, undoubtedly the finest stream fishing that empties into the St. John River system, and from it and its tributaries have been taken many a gamey salmon and fresh run of sea trout. In the eastern county all along Tobique Lake, are Muddy Lake and Gulquac. These latter are seldom visited and are in a splendid hunting ground. Just west of them rise the two wilderness peaks known as Twin Mountains. Just before coming to the boundary at Madawaska, on the course up river, one comes to the beautiful Grand Falls of the St. John. At the Grand Falls the river falls over a ridge 58 feet in height into a gorge somewhat over a mile in length, down through which the water rushes and foams. The scenery here is magnificent, there being no more beautiful falls of the type and size on the continent. The St. John River above this point forms the boundary line between New Brunswick and State of Maine. The valley is more beautiful here, from a scenic point of view, than anywhere else along its entire course. The railway runs through the valley, never leaving the river any distance, until Edmundston, the shiretown of Madawaska is reached, and the view from the train, especially



A Street in Newcastle, N. B.

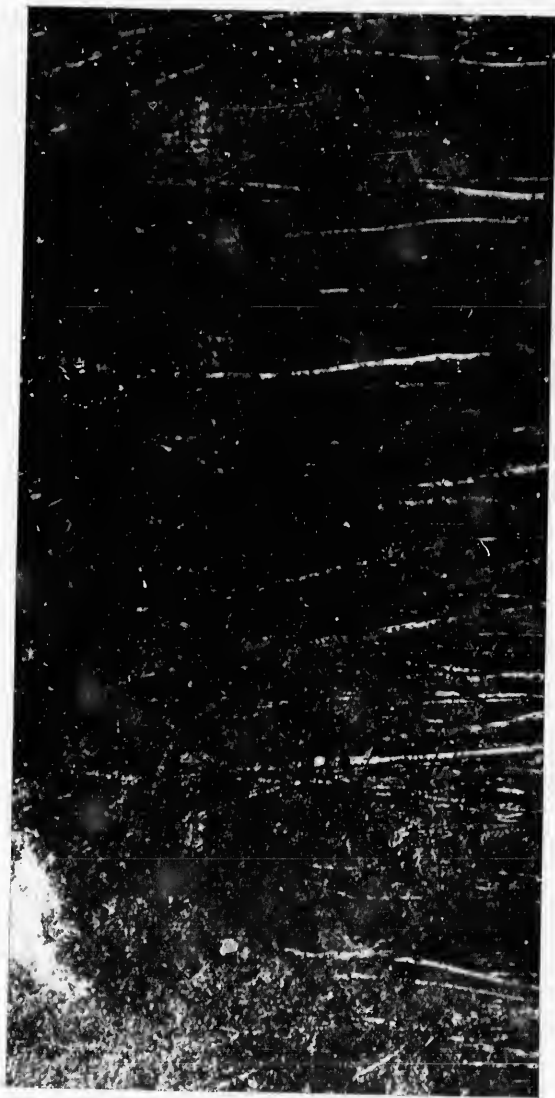
ly above the Green River in the St. Basil district, is probably finer than at any one point along its course. I have given a somewhat more detailed account of this portion of the country as a whole, in the description of the trip from St. Leonards Station to the mouth of the Wagon River, and thence down the Restigouche to Campbellton.

**CAUAL DESCRIPTION OF THE RESTIGOUCHE RIVER,
FROM THE MOUTH OF THE WAGAN RIVER
TO CAMPBELLTON,**

INCLUDING ALSO A DESCRIPTION OF THE COUNTRY TRAVERSED
BY THE PORTAGE ROAD, FROM ST. LEONARDS STATION TO
THE MOUTH OF THE WAGAN RIVER.

In a trip of this kind, unless the intention is to "go it alone," the prime requisite is a first-class man, be he Indian or white man, and this, fortunately, I was able to fill very well through the agency of Mr. Perley, of Andover, who seemed to be thoroughly confident that he could fit me out with two first-class Indians.

After arriving at the comfortable little hotel at Andover in an outfit calculated to strike terror to the hearts of the inhabitants of that beautiful little river village, and spending a night with Mr. Perley, the Indians on the following morning, turned up for inspection. One, half Indian, half French, Tom Moulton by name, was a lithe, active man, rather tall, about 25 years of age, who is one of the most expert stream drivers in that part of the country. The other, Nickolas Lolar, who, I afterwards learned, was the uncle of the former Indian, was, practically, a full-blooded Malicete, with small, deep-sunken eyes, high cheek bones and a firm well cut mouth. The latter gentleman turned up resplendent in a pair of dress shoes and a bright red necktie, which set off, to good advantage, the remains of what had originally been a somewhat highly-coloured fancy vest. Mr. Perley introduced me to him in a few well-chosen words, and asked the



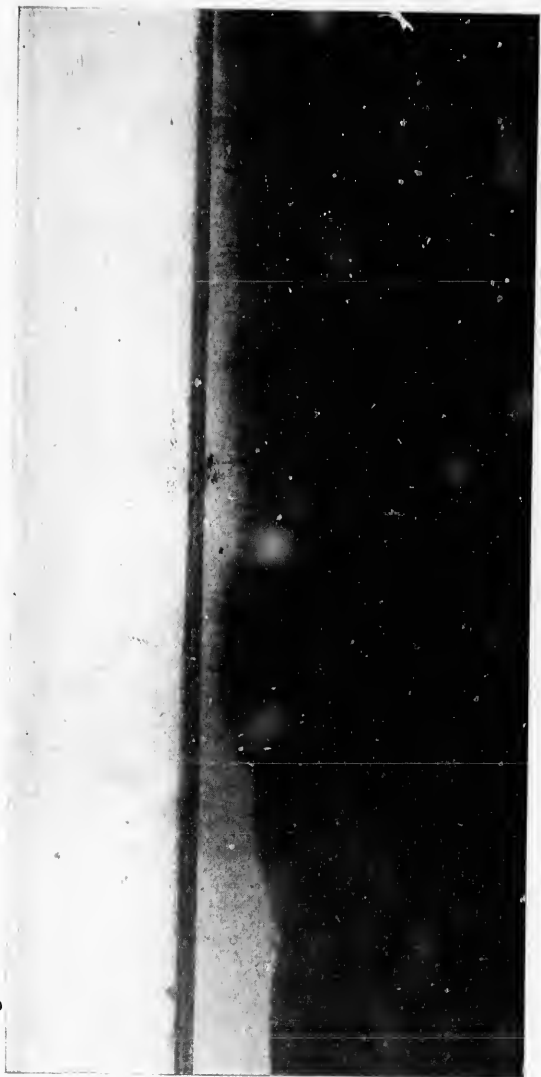
A White Birch Grove near Newcastle, N. B.

elder of the two men what he thought of me. "Guess 'e do all right," then turning to me, "Good day!" Now was my chance to ingratiate myself, so, instead of returning the somewhat curt English salutation, I replied "Wala gis kut," which is, being interpreted, "It is a fine day."

After making what preliminary arrangements were necessary, we parted, they to get their canoes in condition, and I to buy frying-pans and a few other trivial things that were forgotten, as is usually the case when taking a twelve days' trip in the wilderness.

The next morning found us on the C. P. R. going north where the Indians met us at Aroostook Junction. The party then consisted of, first and most important, Nickolas Lolar, Malicete Indian, by profession, guide and hunter, of the mouth of the Tobique, Victoria County. Second, and more or less subject to the first, Tom Moulton, Malicete Indian, more or less; also, by profession, guide and hunter; adding to his other good points, his facility as a cook, the equal of whom I have never seen in the wilderness. Third, Mr. Maurice D. Coll, at that time engaged in assisting me in some photographic and other work. Fourth, myself, profession, not exactly known—tendency towards scientific and natural history work; among other peculiarities, possessing an excellent appetite. We took 125 pounds of provisions and this dwindled away somewhat rapidly.

On the evening of Friday, Oct. 13, we reached St. Leonards Station, and piled on the station platform an assortment of baggage that attracted the natives for some $1\frac{1}{2}$ miles around, and caused them to stand in open-mouthed wonder, until the same was removed to what was to be our first camping round, as we preferred our own treatment to what might happen us in a St. Leonards hotel. This baggage consisted of two canoes, one canvas and one birch-bark, two rifles, the aforementioned 120 pounds of grub; one Derby, Abercrombie & Co's waterproof tent, 10x10; one Primus stove with a one gallon can of kerosene oil for use in the same; four sleeping bags; one of the commonest type of red leather valises that had seen better



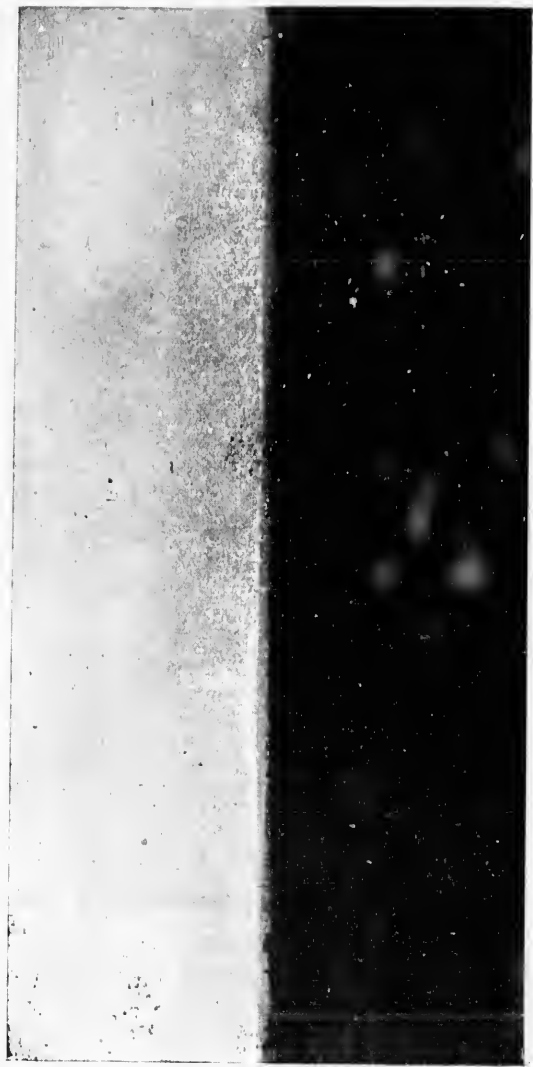
Tantramar Marsh and River.

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days, and contained among other things, changes of under-clothing for the leader of the expedition, a peculiarly constructed lantern; a considerable number of photographic plates which were to assist in immortalising the trip; sundry bags of smoking and chewing tobacco of a quality especially adapted to Malicete Indians; some pieces of red flannel, connected with thought of accident to the photographic lantern; a considerable amount of duffle that would find no service in civilization; and last, but by no means least, the wonderful instrument which kept everything with a delicious smell of kerosene oil around it, the photographic lantern itself. Besides all these things, were several rather bulky looking canvas bags, that contained an assortment of woollen clothes for the rest of the party, calculated to stand the most severe weather; and, also a box containing the always essential cooking utensils. Finally, the most important of all, the large camera, resplendent in a sole leather case, upon which was lavished the care of every member of the expedition, and which was found to require so much nursing as to be finally known as the "infernal machine." Add to all this that most wonderful of all mechanical contortionists, the photographic tripod, and even the uninitiated readers will say that this outfit was not the easiest in the world to transport through 26 miles of woods, over a rough portage road, and then, down 120 miles of river by canoes, through more wilderness to civilization again.

No sooner had I got on to the platform, than I was confronted by a short, stout gentleman, with a peculiarly shaped slouched hat that had evidently seen several winters, with the interrogation "Goin' to Restigouche?" on my replying in the affirmative, he intimated that his name was Akerly and it was his especial prerogative to see that people of my type reached that beautiful river. After a short period of bargaining, we decided that \$10 for the trip, including the transportation of the above-mentioned canoes and baggage, would be a fair amount, and that Mr. Akerly was to turn up next morning at daylight, with a good strong pair of horses and a portage waggon—a peculiar, rather narrow and very



Haying on the Tantramar Marsh.

heavily-built waggon especially adapted to the portage roads.

As it was then getting dark, it remained but to find a suitable camping ground and test the capabilities of Mr. Moulton as a genius of the frying-pan. After a short hunt, the necessary place was found, which, though not ideally situated, afforded convenient access to the village—too convenient as we found somewhat later—. No sooner had the Indians, with the marvellous dexterity of the good men of their class, got the tents up and their share of the dunnage transported from the station, and then got the culinary operations in full swing, then the population of St. Leonards Station turned out *en bloc* to visit our camp and inspect the contents and occupants. The majority of them spoke no English, and, as our French was not of the most fluent type, the conversation sometimes lagged so decidedly as to create silences which were almost painful, or rather would have been if the Indians had not filled in the gaps by admonitions to small French boys, in a language which both seemed to understand, to keep their feet out of the sugar and not to walk all over the sleeping bags; coupled with gentle requests to one young lady to kindly get up off the butter, which she had been sitting on some five minutes before discovered. This butter the leader of the expedition finally had to rescue with a few well-chosen French words, recollected from his college course, and ended by depositing the same, after it had been pressed back into approximately its original shape, in a wooden box, from which it was not subsequently removed during the expedition, except as required for use.

After a time, as the night grew older, we received less attention, and finally we were able to crawl into our sleeping bags, and enjoy the first night out doors under the genial influence of a blazing fire, the material for which the Indians had collected beforehand.

St Leonards Station is a small village on the upper St. John River, in Madawaska County. The St. John here forms the boundry line between the Province of New Brunswick and the State of Maine in the United States. St.



A Stretch of the Tantramar Dykelands.

Leonards is situated directly opposite the American town of Van Buren in the above state. Throughout this section of the river there are no intervals of any extent, but the river runs between comparatively high banks. Not far above the village is the Grand River, emptying into the St. John on the eastern or New Brunswick side, while some distance farther up, the Green River flows in on the same bank. Both of these streams are almost wholly within Madawaska County, and down them, in the spring, especially in the case of the latter river, come great drives of logs to the St. John, to join the millions of feet that come down the main St. John River, from the State of Maine. Still farther up is the Madawaska River, which drains Lake Temiscouata and several other wilderness lakes in the Province of Quebec. All through this region is a great deer, moose and caribou country, while in the region of Lake Temiscouata, and especially of the Squatook, one of the most famous of the other wilderness lakes. The black bear, now becoming much rarer than formerly in the eastern provinces of Canada, is to be found in considerable numbers. Dr. Philip Cox mentions the Squatook Lake as the region where the black bear is probably more plentiful than elsewhere in this vicinity.

Edmundston, the shiretown of Madawaska County, is a small town situated at the mouth of the Madawaska river. The land in this region, namely in the western portion of Madawaska County, and extending across the St. John river into Aroostook County, Maine, is a continuation of that great silurian belt which extends across Madawaska, Northern Victoria and Restigouche Counties, and which, comprising several million acres, forms the finest upland for farming purposes in the Province of New Brunswick. A large amount of this land, about a million acres, is owned by the New Brunswick Railway Co. Though the land is of the finest quality, but very little of it has, as yet, been developed, the greater part still being in magnificent timber. In the last few years, however, farming has made tremendous strides in the County of Madawaska. Where only a year or two ago, one cheese and butter factory found it so difficult



Maritime Penitentiary at Dorchester, N. B.

to keep in operation, that thoughts of closing were actually entertained, now after the Provincial Government has sent lecturers through the district, and promulgated farmers' institute meetings, several of these invaluable institutions are in active operation, and farming in Madawaska, as elsewhere in the Province, is taking strides which show that the eyes of the farmer are being opened to the possibilities brought about by new methods and new conditions.

The beauties of the St. John river and its wilderness tributaries, in this region are peculiar to the region itself. The land, without being mountainous, is to a great extent high, especially farther back in the county, with a few rather sharp hills. The uncivilized districts are most heavily wooded with a great preponderance of spruce, as in other parts of the Province but here and there, fine tracts of hardwood, which will be described later, are to be found.

But to return to the expedition:—On the morning following our reception of the St. Leonardites, in fact before a trace of daylight, the Indians were astir, had fanned the fire into new life, and had breakfast under way, before the other members of the camp thoroughly realized that they had been asleep.

It was as beautiful an October morning as one could wish to see; clear, cool and bracing, with hardly a trace of a breeze to waft the sound of the sheep bells from the adjoining hills. The only sign of life was the occasional high white pillar of smoke, as it flowed slowly upward from the chimney of some early riser.

The breakfast was a New Brunswick one throughout: Dunn's bacon, a St. John County product; baked beans, grown and canned in Carleton County; brown-bread, made by some mystic but highly successful formula, by Mr. Moulton, from wheat that had found its way from King's County almost 200 miles south, with a quart of milk which had been the spontaneous donation of one of the French girls, who had visited us the evening before. The offering was made through the mediation of a small brother, whose absence of English was fully as fluent as was ours of French,



Dorchester Marsh, looking toward Shepody Bay.

and who led us to understand that, though we were perfectly welcome to the milk, he wanted to take the pitcher back with him.

The French, in this part of the country, differ somewhat from those of the more Southern and Eastern parts of the Province; not in appearance, but in being somewhat more careful with regard to whom they place their faith in at first sight. This is a natural result from their close proximity to their friends across the river.

Breakfast was hardly finished, before, with a cracking of whips and a rattling of chains, the portage waggon, accompanied by Mr. Akerly, with a considerable retinue of young people which he afterwards informed me, was the minority of his family, and a small minority at that, hove in sight around the bend of the road. It was a matter of but a little time to get the tent down, and the dunnage packed. It took somewhat longer, however, to get the canoes lashed in place on the portage waggon. The canvas one, being the heavier and stronger, was placed below on a bed of hay, while the birch-bark was inverted over it, and lashed securely in place.

By the time that this was finished, and the outfit carefully packed to withstand the vicissitudes to which it would be subjected in going through a lumber portage road in the Autumn, the sun was well above the horizon, and we had to be on the move if we expected to reach the Restigouche River by nightfall. Mr. Akerly very kindly offered to drive the white men of the party as far as the carriage could be taken about ten miles; the rest of the distance we should, of course, have to go on foot, which was anything but a trial in such magnificent weather. After adding a few more cans of baked beans to the commissariat—this precaution we observed after noting the amount eaten at breakfast and making a few lightning calculations on the probable result—we started on our morning drive.

There had been no frost during the night, and everything looked as fresh and green as in spring. The sun shone with a perfect glare and lighted up the river as it



Barley and Boy—both Westmorland County products.

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wound in and out among the hills. The road continued up the St. John river for some miles, and then, turning to the right, plunged away towards the wilderness and the Restigouche. Hill after hill was surmounted, the land everywhere showing the excellent quality of the soil, until finally, we arrived at the last house before entering the wilderness itself. This was a peculiar structure made of squared logs, and containing a French family, which was sufficiently large to fill a house of at least four times its size. The only live stock in sight was the ubiquitous razor-backed pig, who is never fed but allowed to shift for himself. This he does most efficiently, turning up so much land by the roadside, in his struggle for existence, that one might suppose the Government road machine had been paying a visit to the district.

When taking a picture of the house, the family took positions at points of vantage, where they could witness the operations through clinks and cracks, without any danger of being involved in the outcome, whatever that might be.

A short time after our arrival, a still further contingent of apparently the same family, turned up in a two-wheeled affair, drawn by a pair of steers, which arrived at the rate of about one mile an hour, and took some time to stop. This is a very popular type of conveyance among the French families in this section of the country, it having the advantage of carrying, with equal facility, a load of hay or an entire family, with only two or three authentic instances of run-aways to its discredit.

We had not long to wait for the outfit, and it turned up with the remaining members of the party riding the birch-bark canoe bareback, which is no light feat if undertaken over rough roads.

A hundred yards beyond this the woods began, and here we had to take our leave of Mr. Akerly, whose son was to drive us through to the Restigouche. From this on, the only member of the party who could ride, was young Akerly, and he, undoubtedly, would have much preferred walking.

The first part of the road led through a dense growth of moderate sized soft-wood, chiefly black and red spruce, with



Memramcook Valley and River at Upper Dorchester.

an occasional fir; somewhat further on, a few hemlocks could be found, and still farther, the road continued rising somewhat rapidly, until it was comparatively dry. From here, for the next hour or so, our path lay through the most magnificent hardwood, with only an occasional spruce swamp where the portage was almost impassible on account of the mud.

About two hours after leaving the last house, we came to a first-class brook; as, by this time, we had appetites which boded ill for the 120 pounds of provisions, we decided to have dinner. The horses were unhitched and fed, and we, in a short time, were enjoying a dinner which the Indians had prepared in a seemingly marvellously short time. The day was as clear and bright as a day in June; the maples flamed scarlet and gold, and even the sombre green of the spruce was lighted up by the sunshine, which seems to have a peculiar whitish glare at this time in the Autumn.

In a short half-hour, dinner was over, the cooking utensils packed, the horses hitched, and with the tinkling of the big bells always carried by horses on the portage, we were up and at it again. We had thought that the road, before dinner was had, but our experience after that meal, showed us that it was but a slight introduction to what was to follow. We had six hours ahead of us in which to make twelve miles to the Restigouche river, and this seemed a great deal of time, but, with a few stoppages we had made, when an occasional picture was to be taken, we found that we had all we could do to reach the river bank before night-fall. After passing the brook—where we had dinner—which wound its way off in the direction of the Grand River, we mounted a high ridge, and passed through the finest hardwood land that it has ever been my good fortune to see. On every hand giant trees, now almost denuded of leaves, threw a complete net-work of interlacing shadows, under the influence of the clear October sunlight; black and yellow birches, rock maples and sugar maples, and an occasional hickory, and, in the lower portions of this ridge, a scattering of ash, made up the greater portion

of this arboreal canopy. The soil was a clear, moderately heavy dark loam, almost absolutely free from stone, the upper layers of which were practically made into a compost by the thousands of tons of leaf-mold, which lay deep on every acre. There is but little undergrowth, and long vistas, which seem to belong rather to a beautiful park than to an unclaimed wilderness, stretch away on every hand. The "floor" of the wood had been clothed with multitudes of beautiful ferns, now twisted and broken and browned with the frost, but still beautiful, while here and there, brilliant green patches of Christmas fern, were in evidence.

Some portions of the road passed through practically unmixed hardwood, while along others, an occasional spruce or fir, generally of gigantic dimensions, was to be found. Though the season was a dry one, the spruce swamps, of which two or three not very extensive ones, are to be found throughout this hardwood belt, were very wet, and the portage road developed into nothing but a big ditch, through which the horses floundered with water up to their bellies, and up to the hubs of the wheels of the portage waggon. The efforts of the different members of the party to force their way through the thick growth of spruce, on either side of the road, rather than wade thigh deep through the mud and water, would form an interesting study for anyone in a position to enjoy the scene, without actually participating in it.

After leaving these swamps which furnished a rest to the horses, the road, as far as the waggon was concerned, was incomparably worse. Huge roots from birch or maple, projected across and sometimes threw one side of the waggon up so far that it seemed in imminent danger of capsizing. Once or twice, while I tried to rescue my camera from a particularly heavy shock, one of the canoes, as the waggon lurched, threw me backward 10 or 12 feet, into a young hardwood. The Indians, who were of a highly humorous disposition, enjoyed this part of the journey tremendously. At one time the front of the waggon would be high in the air, with young Akerly with one arm around the

canoe on which he was perched, as if he were trying to keep himself from sliding off the back of a mustang; the next, the front of the canoes would be down, until they almost rested on the horses' rumps, and the driver would be making wild struggles to keep from changing his seat from the canoe to the back of one of the horses. The hubs banged against trees sufficiently hard to have broken an ordinary waggon; the bells tingled and clanged, the horses struggled and pulled with all their might, for a moment or two, to overcome some obstruction, and then, as the waggon rushed down behind them, held back like Swiss jaskasses, on the edge of an Alpine precipice, buckling to again as the load was finally checked. They, like the driver, who was accustomed to such experiences remained for the most part, imperturbable and did their best in a matter-of-fact way.

The rest of the procession struggled or trudged behind, according to the nature of the ground; the Indians bringing up the rear, apparently taking a step only when it seemed convenient, and alighting in absolutely the correct spot, whether at the end of an ordinary step or of a seven or eight-foot jump. Occasionally one would make a remark to the other, which was generally concisely answered and accompanied by a laugh that was hardly louder than a white man's smile.

After about five hours of this work, we arrived at a branch road leading to a prospective camp of one of the lumber gangs, which was to work in that region during the winter. Here we found a considerable quantity of stores:—barreled salt pork, plate beef, molasses, oats for the horses, flour, and enormous quantities of that most prominent of all camp supplies—beans. Here we stopped for a few moments and examined a string of grouse, which one of the men of the gang had evidently shot; then, as there was but an hour or so of light, we pressed on so that we might cover the remaining two and a half miles before absolute darkness came on. The road from this point on was, as a whole, rather better, though there were one or two very bad places where the waggon was almost on top of the horses. Gradually we descended into spruce land again, and, at last, with

practically no indications of it, we came out upon a beautiful little brook which turned out to be the far-famed Restigouche River. Here, as we had expected, we were greeted by a gang who were out building a camp preparatory to the season's lumbering for Nickson and Burt, one of the prominent lumber operators in this part of the country.

They invited us to supper, and as it was then dark and sprinkling rain, we were only too glad to accept. The meal consisted of baked beans, as a backbone, with a large mug of tea and a slice of bread running entirely across the loaf, and about three inches in thickness—at least part of it did—This order, needless to say, was repeated several times. In a few minutes the Indians had the tent up, and the horses, picketed beside those of the lumbermen, were munching away at their oats with an enjoyment, no doubt, strongly accentuated by the consciousness of having done a day's work to be proud of. After the meal was over, we thanked our hosts and retired to our tent. By the time we arrived there the Indians, who had left somewhat sooner and less ceremoniously, had gathered enough fire boughs to make a luxuriant spring bed over the whole floor of the tent, a foot in thickness, and were stretched out on their portion of it enjoying their first smoke. As the white men of the party had not entirely severed their connection with civilization up to the present, and had a few letters to write, this work was accomplished, and they were given to young Akerly who was to take them up with him on his return journey and mail them at St. Leonards; then all but myself, after polishing up rifles and seeing that everything was in good condition, rolled into their sleeping bags, and in a time only possible after a long day's tramp through the woods in October, had passed out of remembrance of the joys and sorrows of this life, and the only indications that they were alive, for that matter that there was any life in the district, was the sonorous snores that thundered out from beneath that peculiar blanket construction which Mr. Coll termed his sleeping bag, and mingled with the persistent champ, champ, champ, as the horses ate their hay.

The threatened storm had passed off; the sky was clear, except when, now and then, a small fuzzy cloud floated across the face of the moon, and cast weird, grotesque shadows on the gleaming white tent and the restless little stream. On every side the green, conical spruces rose dark and silent, and between them both up and down stream the little river disappeared.

The nearest house was the last one we had left, a distance of some sixteen or eighteen miles to the southwest; to the north and southeast, one could travel over a hundred miles without finding any sign of civilization, and, with one or two exceptions, there were no houses to the east for that distance. It was indeed in the wilderness, and still within close touch of the most modern civilization.

The place, the surroundings and the conditions were such that would touch anyone who did not have an inherent love for the wilderness, but for one that did, that love was deepened and the appreciation increased, as it always is in scenes of this sort. Just before turning in, I heard in the distance the muffled roar of the Ruffed Grouse as it drummed to the moonlight.

The next morning was Sunday, and broke clear and bright without a cloud in the sky. The men were astir early, and our companion of the day before, after giving his horses a good feed, got underway again for St. Leonards Station. A few moments after he left, the tinkling of the bells died away in the dense spruce on the hills above.

After breakfast was over in the two camps, the lumbermen, as there was necessarily no church to attend, decided to do the next best thing, and go fishing. The apparatus, needless to say, was not elaborate, though there were one or two fish-hooks among the party. It consisted, in most cases of a piece of white twine, at the end of which was attached a bent pin. It seems horrible to sportsmen to have to say it, especially to one who has any respect for one of the gamiest of fish, the most famous of all the trouts: *Salmo fontinalis*, but the only bait which they then had at their disposal and used on that occasion, was salt pork.

After breakfast I took one of the canoes, and, with the aid of the pole, proceeded some distance up river. I took the camera with me, and, after going as far as I could, took a picture of the river where it was nothing but a narrow brook, splashing and bubbling over stones, with hardly a place where even a moderate sized trout could find his way. Farther down stream, at various pools that I passed, the lumbermen had taken up their positions, and were having sport such as before in their lives they had perhaps not even read of.

When I got within a hundred yards of camp, Nickolas caught sight of me and informed me that I had better hurry up as "der was two tree partridge was mebbe 'bout 10 feet from camp, and suppose um could shoot um pretty easy if had rifle out—dunno were catridge is." I got to camp as quickly as I could and started with the rifle, which was a .303 calibre Winchester, and in a few minutes, had got three birds; then I gave the rifle to the Indian, and he continued the hunt, bringing back three more, all of which were obtained within seventy-five yards from camp. These, as was the case with all the birds we got during the trip were Ruffed Grouse. By the time we had got the birds skinned and dressed, the hour for dinner had arrived, and, if partridge tastes well in civilization, it is a hundred times more delicious when your appetite has been whetted by life in the open air. The six partridges, among the four of us, disappeared as incidentals to a meal made up of baked beans, bacon, coffee and the other excellent things we had brought with us, and were now beginning to appreciate. Before we were through with dinner, the fishermen began to turn up. The majority of them having before this got thoroughly wet, took the easiest road home, and came splashing down through the pools and shallows of the ice cold river. Needless to say they were delighted, even the sportsmen among them had never had such sport of the kind, and some of them had strings of trout which dragged along the ground as they carried them. They were not small; possibly none of them weighing less than half a pound. They, like ourselves, would have a luxurious addition to their routine bill of fare.

Though the neighborhood was a pleasant one, as the flat-to-let advertisements in cities generally states, we decided that it would be advisable to move down stream to less civilized headquarters, and, while the Indians were getting the tent down and the duffle packed up, I got a picture of the lean-to, which was then the only habitation of the lumbermen. This was a small spruce frame covered with blankets and opening on one side, in front of which was always kept blazing a large fire. A cooking stove, which had been sent out to go into the camp, was set up alongside of a big spruce tree, with several joints of stove pipe supported by small branches, and poured its white smoke up through the dark green canopy above.

Each man's bedding consisted of a large blanket. These were the luxuries which went to make their lives happy, and if other lives were as happy proportionally as their number of luxuries increased, there would be much less grumbling in the world than at the present time. By the time I had got back to the pool in the front of the tent, the canoes were loaded. The larger of the two, owned by Lolar, containing the instruments and more extensive portion of the outfit; the smaller, the birch-bark, carrying the cooking utensils and most of the bedding. Unless one has travelled by canoe in the hands of a stalwart Indian, it is very difficult to form any idea of how absolutely comfortable one can be in such.

In this case Nickolas had fitted up a place in the centre of the canoe where there was room even for me to stretch out my entire length of six feet three inches. Under me and at my back he had arranged the tent until it was as comfortable as a divan piled with cushions. Behind me, and in the extreme bow of the canoe, was piled the dunnage, while in the stern he had left room enough for himself to stand comfortably. Everything being ready, we started on the trip down river, which as far as I am concerned, has never been equalled for pleasure. We had hardly gone forty yards before the first obstruction was reached. It was a big spruce log which had fallen across the river, and it seemed impossible for a canoe to force its way through the tangle of

branches beneath it. The Indian apparently knew better, for he went as straight at it as if there was nothing in the way, and, with a vigorous push on the pole which would have thrown a man less accustomed to a canoe into the water, suddenly ducked. The branches broke and cracked aside, and with a swish as they swung back into place, we glided out into a clear stretch of water and finally round a sharp bend where the river ran shoal, over a bed of pebbles. Here no poling could serve, so catching the pole under the thwarts, the Indian went overboard, and, walking ahead, seized the canoe by the bow and dragged the whole until in deep enough water to get in again. The birch canoe, coming behind, being somewhat more lightly laden, was more fortunate, and her skipper had less frequently to test his muscles in this way. Tom, however, had the disadvantage, which he did not seem to regard as such of not having rubber boots, while Nickolas, or Nick as he was henceforth called, though it was not a case of familiarity breeding contempt, was more fortunate in this respect.

And so we proceeded, for the most part, poling, the water not being, as a rule, over six or seven inches deep, but sometimes, again, having to resort to dragging the canoe over shoal places. To one unaccustomed to seeing the vicissitudes ordinarily gone through by the average canoe, it would have seemed impossible that these could have withstood being dragged along over the rough stony bottom of the river.

The stream itself is, in this region, as for that matter, through nearly the whole length of its course, heavily timbered on both sides. It varies in width, along the upper section, from twenty feet to perhaps twenty yards, with an occasional pool, containing perhaps eight to ten feet of water. It winds about, here and there, with a steep spruce-clad bank rising now on one side, now on the other on the convex sides of the river's current; while on the concave sides stretch away for two or three hundred feet, a little aluvial plain with a growth of lowland hard-wood. Occasionally close to the water's edge, on these flat lands, a sharp

ruffle would be heard followed by the pattering foot-falls, of a Grouse, as he started off among the dead leaves, and the Indian would cease poling, say "partridge," at the same time keeping his eye fixed on a few waving blades of dead grass and blasted ferns that marked the path of the wary bird, while he would take the rifle and step quickly overboard, leaving me to guide the canoe into a place of safety. In a few minutes he would return, usually bringing a bird with him and with the remark, "some moré fresh meat," or something equivalent, would take up his pole again.

The water of the River Restigouche is a revelation to anyone accustomed to the average type of stream: cold as ice, Summer or Winter, and clear as crystal, with hardly a trace of vegetable growth to hide the beautiful hues of the many colored pebbles that make up its bed. Its every source flows from the absolute wilderness, without a trace of civilization to pollute its waters on any of its five tributaries.

"A thread of limpid crystal,
From a thousand mountain streams."

Nowhere is the wonderful clearness of its waters as fully realized as when crossing some of the deeper pools such as are found further down the river. Every pebble can be seen, and every trout, as it glides rapidly away frightened by the shadow of the canoe; the depth of the pool not seeming more than five or six feet, when in reality it may be fifteen or eighteen in the deepest parts. Never have I seen a stream look more beautiful than did this wilderness river on that bright October morning. The sunlight had its usual Autumn brilliance, a fresh northeasterly breeze shook the tops of the majestic spruces, and occasionally sent a scurrying cat's-paw over the surface of the water in some quiet pool a hundred feet below. There was no sound except the swish of the breeze through the spruces; the gurgling or babbling of the River as it rushed over some gravelly shoal or some solitary rock that threw its nose above the surface, and the sharp clank of the steel-shod canoe pole, accompanied by the pattering of the water on the sides, as the canoe, under new impetus from the muscles of the doughty Nickolas, shot rapidly along with

the swift current. Occasionally as we would pass some deep likely-looking hole under the bank, a giant trout, which as the Indian said, "draw more water dan we do" would go rushing down stream through the shoals and little channels, throwing up a track of spray, the clear drops of which glistened like silver in the brilliant sunlight. The Indian would nod his head and laughing say, "got um bad scare dat time!" In one or two cases the fish, after having rushed perhaps seventy-five yards, ran into water so shoal that it was forced to turn and run up stream again. From ahead we saw the spray fly as the fish got into shallow water, and then the wave, broken by an occasional splash as it rapidly retraced its course. Nickolas dropped his pole and went overboard, pushing the canoe to a place of safety, then again seizing the pole, waded to shoaler water near where the big trout had to pass on his return journey. On he came, now running fast, and splashing past stones and through shallows, now running quietly and slowly through the deeper channel, his movements only indicated by the wave thrown up. As the fish came near, the Indian got solid footing and poised his pole. Suddenly beneath the clear water, a long black shadow appeared, moving slowly with hardly a ripple above it. The Indian waited for a second. Quick as a flash the trout saw him, as he slowly swung the pole. The fish darted forward. Instantly the Indian struck into the cloud of flying spray that marked the path of the trout, the shoe of the canoe pole clanged hard against a stone, and glanced perhaps not half an inch from the fish as he rushed past. But the half inch was sufficient; and the track of bubbling water and flashing spray was continued up stream.

But he had another danger to overcome, as he went past the birch bark canoe, Moulton leaned forward and cut with the paddle, the blow struck home but was not heavy enough, and the Indian went overboard and the struggle began. The half stunned trout swam blindly here and there, now under half sunken bushes, now through shoals, followed by a bounding, laughing, water-soaked Indian with a canoe pole in one hand and a paddle in the other, who now jabbed

the pole under a big rock then looked round in bewilderment for a moment or two, after which a big wave could be seen zig-zaging away or circling around in an apparently aimless manner, and the pursuit was renewed again. By this time, the other Indian had splashed his way to where the encounter, which had now become a sanguinary one, was in progress. The picture as these two men rushed laughing around, with poles held aloft, now up to their hips in water, now running wildly through three or four inch shallows, to gain some point of vantage, was one not easily forgotten, and a striking illustration of the boyishness of the Indian, no matter what his age. At last a lucky blow from one of the poles—no one yet seems to know which did the work—the big fellow was fairly speared through the gills, and up on the points of the two poles, he was hoisted from his native element, never again to return to it. He weighed a little over $3\frac{1}{2}$ pounds, and made another acceptable addition to the larder.

When we again resumed our course on the river, the sun had begun to throw its rays at a heavy angle across the tree tops, its radiance changing from silver whiteness to a reddish glare that lighted up the spruces with a copper glow as though they were attempting to rival the golden splendor of the maples below.

It was nearly four o'clock when we came to the mouth of Hunter's Brook, a fair sized stream flowing into the Restigouche from the south side. On a bar at the mouth of the Brook, was planted a stick surmounted by a chip, on which was written something relative to there being a camp some three miles up the Brook, which would serve as a shelter to the hunter. But owing to its author's lack of tuition in English we were not enabled, even with the efforts of the Indians to discover its whole purport. As the sun was sinking when we left the Brook, it remained but to find a suitable camping ground. After about a mile further poling, we came to a site formerly occupied by one of the Government fish wardens, Guiseppe Violette, and it turned out to be an excellent place to pitch our tent. As a bear had visited the place

between Mr. Violette's departure and our advent, we found it necessary to fill up with moss and stones, several holes which that inquisitive animal had dug in the tent floor. But with this exception, practically everything was ready for occupancy. The canoes were then turned over and the baggage carried up to our new home.

The evening was clear and promised to be cold, and, in a few moments the sound of the axe echoed and re-echoed among the trees as the Indians cut the bark logs in preparation for a frosty night. They soon had a pile of fire-wood that would have kept an old fashioned fire place going for several days, and before darkness had fairly come on had gathered the usual bed of soft, springy odoriferous "browse." The big trout, which had been the hero of one of the interesting episodes of the day was soon sizzling and spluttering in the frying-pan. The "kid" was making vast preparations for sleeping in comfort, in the way of putting on additional layers of underclothing. One or two owls, always inquisitive and fond of fire-light, were quietly moving about from tree to tree and watching our every movement. By the time supper was ready and the enormous mugs of coffee poured, the moon, one day nearer the full, was lighting up the dark spruce across the river and touching the tree tops high above our heads, while down below, the camp fire threw its ruddy, flaring, home-like glow out through the interstices of the long feathery branches. After supper the problem arose as to how I should get sufficient darkness in which to change plates. The question was explained to the Indians, and, after a few moments thought, solved satisfactorily by them in this remark. "We make um little camp inside big camp wid blankets, dat be plenty dark, guess," which they proceeded to do. The necessary frame was then made of birch seedlings and in less time than it takes to tell, the little camp was a reality, and the most exacting photographer could not have wished anything darker. Not a night passed on the trip without the first question after supper being, "want um little camp tonight?" and they seemed to evince a real interest and pleasure in its

construction, which was always accompanied with a good many jokes, which my acquaintance with Malicete—fortunately for my own self conceit—did not always lead me to thoroughly comprehend. About half-past eight, we turned in to sleep the sleep of the woodsmen.

All the upper portion of the Restigouche River, from its source down to some distance below the Gounomitz River, has not cut down very deeply into the formation through which it runs. Both the land and the river are comparatively elevated. The country, as is the case farther west in Madawaska County, is somewhat undulating, with no sharp hills, and is covered with a continuous heavy growth of timber, consisting, for the most part of spruce.

When we arose next morning, the frost had clothed the bushes in a white, glittering mantle, and round the edge of the River, and in the little back-waters, there was from one-quarter to one-half inch of ice. The air was clear and keen, and the sky cloudless as on the preceding day. Breakfast was ready as the first rays of the sun glared through the tree-tops and lit up the slowly ascending smoke. A half-hour sufficed to finish breakfast and break camp, and, in a few moments afterwards everything was in the canoes, and the scene was left in charge of the ubiquitous, always-inquisitive and always-hungry Canada Jay, who, for some ten or fifteen minutes, in language known only to Canada Jays and woodsmen, had been expostulating with us for keeping him so long from his well-earned breakfast. When I say well-earned, I mean that he had been watching it with more or less constancy ever since we had landed the night before.

The morning, to say the least, was cool and the water was icy, but the first shallows saw the Indians overboard, as usual, apparently caring no more for cold water than if they were a pair of salmon. We had hardly gone 300 yards from the camp before, as we rounded a sharp bend in the River, a flock of Black Duck, that King of New Brunswick game ducks, comprising perhaps twenty-five or thirty birds, rose with a great flapping of wings, and quacking out their expostulations, went whirring away down the River. Several

times we disturbed them, as they would also follow the stream down, until, tired at last of being so persistently interrupted, they wheeled away over the woods, and doubling their track, returned, no doubt, to the large pool from whence we had at first driven them. A few miles below this we encountered another smaller flock, and a short distance below, still another; while just before the time arrived to stop for dinner, a large flock of red-breasted Merganzers burst away at a seventy mile an hour gait, and must have flown past our camp of that night as we saw no more of them.

Here and there as we got further down the River, along one bank or the other, we would meet with an occasional swamp where large ceders hung their feathery foliage over the River, and the spruces were festooned with great stringers of the white lichen (old man's beard) which waved and streamed in the soft northerly wind. The River was deepening somewhat by this time, and the Indians had less often to drag the canoes over the shallows. Here and there a half-sunken bush would save us from running into a sharp stone, but even with all the care exercised by the Indians, occasionally the canoe would glide up on a rock, until I would feel that I was getting directly on top of it, and would wonder how the canoe could possibly stand the strain. A big lurch and heave would set her free again, however, and on we would go as easily as before. Then again there would be a shoal to surmount with perhaps another one beyond a dark pool, and the Indian would sit on the bow with his feet dangling in the water until the deep water was passed, and then again have to drag and twist the canoe over the rocks below. Now we would glide into a long quiet stretch where there would be perhaps sufficient water to use the paddle, and then, from farther down stream a new sound would arise—the deep rippling roar that denotes a rapid.

The Indian then stands up with pole in hand, moving the canoe, as she runs more and more swiftly towards the obstruction, from one side of the stream to the other, his keen eye scanning every ripple that indicates a rock and

every roll that shows where the deep water is. The stream narrows until it is barely twenty feet in width, and though the rocky portals on either side of the opening rushes green, clear and smooth only to break into a thousand little curling waves below. The canoe moves swiftly on, allowed to go at her own free will for a few yards, then as the keen eye of her owner sees that she is going too far to one side, the pole is swung quickly forward, the iron shoe wedges itself firmly between two rocks on the bottom, and the Indian throws his whole weight on the slender stick. The canoe stops as if by magic, and the water rushes and foams past. Her stern, however, has been pushed far enough aside, and as the current again carries her on, and is assisted by one last mighty push from the Indian, she glides into the smooth, green torrent, passes, like a race-horse, the sharp rocks over which the water is foaming, and glides into the turbulent, leaping foam below. As far as the motion of the canoe is concerned, it is hard to realize that she is increasing speed in the upper part of the rapid, and except for the rapidity with which the rocks move past, and the swish of the breeze as she leaps forward, one hardly knows from whence comes the exhilaration.

Here we came upon the first signs of lumbering we had seen since we left the mouth of the Wagan. A brough of logs was piled on the left bank of the river, while farther down other broughs were in sight, and we soon came across the gang, a party of Mr. Gunter's men, who were busy with their mid-day meal. The logs are cut and "snaked" by horses out to convenient positions on the river bank, where they are piled in broughs ready to be driven down with the spring freshet.

We dined at a ferny glade directly across the river from one of the finest specimens of *abies nigra*, the black spruce, as one would wish to see, at least as far as size is concerned, though I have seen more symmetrical trees. It towered between 80 and 90 feet above the river, and stands an excellent type of one of the most useful of timber trees with which this part of New Brunswick is abundantly blessed. At a

point near where we stopped, the river narrowed and deepened, with an overhanging bank on one side, which place immediately woke the fishing instincts in the "kid." The result was that, with the aid of a birch pole and some pieces of ham, his fishing tackle managed to procure for us some good sized trout.

A short time after dinner, we crossed the boundary line into Victoria County, through the extreme northwest corner of which the Restigouche River runs.

After dinner when paddling through a somewhat longer pool than usual, we noticed on the shore some tracks, which were evidently worth examining, so examine them we accordingly did. They proved to be caribou and some of them were comparatively fresh. The whole point of sand on which we found them was covered with track upon track like mud in a barnyard. This was evidently one of the places where the big fellows came down night after night to drink, and probably we might have been rewarded had we stayed until that evening, but as our progress had not been of the rapidest, I thought it advisable to move ahead. In a pool just below this, Nickolas made some quick exclamation to the Indian behind, and both pointed their poles in the direction of a deep run of the channel. "What is it?" I asked, "Salmon!" was the reply; "a big feller too; dar! dar he go, see him?" and as he spoke a dark shadow shot like lightning past the bow of the canoe, and went foaming, skuttling and splashing down through the rapids below.

The fact that salmon were then out of season and the property of Her Majesty, and not of private individuals, did not prevent the Indian hurling his pole after the rapidly retreating fish, then seizing his paddle and forcing the canoe, with short, sharp, hissing strokes in the direction where the waves and splashes were last seen. Like the trout of the day before, the salmon was forced to double back on account of shoal water, and also like the same fish, he had a comparatively narrow escape from the recovered pole of the enthusiastic Nickolas. But altogether unlike his less fortunate

cousin, he eluded canoe number two with wonderful dexterity, which caused the kid to gasp in undisguised amazement, and the pilot of that invaluable craft to throw both canoe pole and paddle in the attempt to stop the lithe, muscular giant that churned the water into foam and bumped contemptuously against the stern of the bark canoe, as he swam majestically back to the depths of his pool. Two or three grilse darted here and there during the excitement, but were unnoticed as far as drawing a shower of missiles at themselves was concerned. Nick smiled grimly, which seemed to bode ill for future salmon, and remarked, "Well, miss um dis time, but spouse um kin catch him some noder time. Dunno, wait till by me by, den we see. Go pretty dam fas' but sometimes not fas' nuff for injun, or more likely not fas' nuff for sa'mon." With this threat he resumed poling.

This pool, about four miles above the Gounomitz River, was the farthest up the Restigouche that I observed a salmon; as far as I know there are no pools above this point suited to the spawning habits of this fish. About a mile below this we came into a salmon pool in which we counted some fourteen or fifteen fish fully grown, and a very considerable number of grilse.

Just below this pool on the North bank of the river, we found our next camping ground. That evening an examination of the canoes showed that, tough as they were, they could not be expected to stand the dragging over stones which they had gotten during the last few days. So we decided to stay a day in that camp and make shoes out of the cedar that was there so plentiful.

That evening after supper was over, every trace of wind had died out; there was not a single cloud in the sky, and the moon, almost full, sent the long black shadows of the spruces atharwt the stream, and touched the top of every tree with silver. What sort of a night do you think this would be to try and call moose? was the first question I put to Nickolas, after the dishes had been washed and put away and the fire-wood gathered in for the night; he wandered out, slid down the bank to the river and stood for

some time looking at wood and water and sky. After a little while he returned and looked into the fire as though undecided; finally he apparently made up his mind and said, "Well, pretty good night, mebbe too much light, or a good deal anyway, but don' min' dat much; no win' but not very good country. Well, spouse um can try, an', not catch him dis time, catch some nudder time, mebbe." Having delivered himself thus, he spoke a few words in Malicete to the younger Indian, and the two of them started on a search for suitable birch bark from which to make moose horns. In a few minutes they returned, each with several large sheets of new bark.

The horns used in calling moose are made of the bark of the White Birch, or Canoe Birch, as it is sometimes called, on account of its use in making bark canoes. Good pliable pieces of the bark are obtained as free from knots as possible. It is heated before the fire, and after being carefully cut to suit the taste of the artist who is constructing it, it is made into a conical horn, the proportions of which differ somewhat according to the ideas and choice of the man who is making it. The average moose horn that I have seen is, perhaps, fourteen inches long, has an opening of about one inch at the smaller end, and about six inches at the mouth or larger end. It is bound with a couple of twigs of withe wood, pieces of rope yarn or a few small ash splints, and is often made to stand a great deal of use, a horn frequently becoming a great favorite with its owner, who perhaps through its agency has lured many a fine specimen of the most magnificent of the deer tribe to his death.

The operation of making the horns in the evening in question, was carried on with a good deal of care, the bark being cut and rolled up, then tried with a low call, unrolled slightly or perhaps rolled still tighter and tried again. Finally when the practised ears of the Indians decided that it produced just the right sound, it was withed tightly into the correct shape, and, with a few final trimmings, was ready for its work.

It was not later than half-past seven when we were ready to start; the two canoes, which were to be manned as

usual, were gotten ready, and, with a final look to the rifles, we quietly took our places on the piles of browse which the Indians had placed in the canoes for us to sit on. We made no unnecessary noise as the Indians pushed off, using the wooden instead of the steel-shod end of the canoe poles. The only sounds as we started down stream was the slight grating of the poles on the sand on the bottom, and the click, click, of the magazines as the cartridges were pressed into place. Then these latter sounds ceased, and as the Indians became more careful, the former became less evident, and all would be silent, until some curling ripple would show where some rock lay just beneath the surface, and the water would rush past as the Indian would lean forward and snub the canoe into another channel. Sometimes a slight rustle amid grass or ferns, a few feet away would strike the air in the dead silence, and cause you to attach more importance to it than it deserved. It was perhaps only the movement of a mink or muskrat startled by the procession that glided past. Now, after passing through some little rapid, there would be a long stretch of dark, absolutely smooth water hugging close in under a bank of spruce which would run up perhaps two hundred feet on the right, while on the left would stretch away a piece of flat low-land lighted up by moonlight, while the river itself was thrown into the deep shadow. Now and then a salmon would dart across our bow, and we could follow the dark wave as it coursed away up stream, and hear a half smothered exclamation as it passed the other canoe, which would be immediately followed by Nickolas raising his finger for absolute silence. Once one of the fish actually got beneath the canoe, and caused the Indian to remark in sepulchral tones, and in a voice hardly audible "Got um pretty big squeeze dat time." With a splash, however, the fish was off again, leaving everything as silent as the tomb. As we moved still further on, and more care was taken, faint rustlings came from here, there and everywhere, and it seemed impossible to believe that big game was now moving stealthily away as we glided on.

Here the river would wind in a southerly direction, and the moon would light it up with its silvery glare, until it seemed as if we must be the most conspicuous objects for miles around; then it would swing again to the east, and beneath the shadow of some friendly hill, we could again look out on the scene before us from our position of comparative obscurity. It was just such a place as this, perhaps two miles or more below the camp, that the Indian decided to try his first call, so he pushed the canoe gently towards the right bank and grounded her bow on a half sunken log without a sound that was audible even to me.

On our bank rose a steep hill, spruce-clad and dark, for perhaps 200 feet, while on the opposite side of the river the moonlight threw weird shadows through the now almost bare branches of the hard-wood that clothed the flat. Laying down his paddle, he stood up with a horn, without so much as sending a ripple across the still surface of the water, and then through the intense stillness rang out that weird indescribable challenge that broke the silence as effectively as could a cannon shot, and echoed, and re-echoed, roaring and bellowing back from the hills of spruce. Then silence again that seemed by contrast a hundred times more intense than before; five, ten, fifteen minutes elapsed, and no sound, except the rush of the rapids below, and then a second call; again no result. The silence after the third call, for a few minutes, was as unbroken as in former cases. Then, suddenly in the rapids below, three or four heavy splashes as of a large animal wading up through the shallow water—then a pause, and finally seven or eight more splashes in rapid succession. Now, I am not much given to be nervous, and when the splashes could be heard out of the obscurity down stream, I sat with my rifle cocked, imagining what the moose would look like when he loomed up in the moonlight, and thinking just where my rifle sight would find its resting place before pulling the trigger. But when the splashes ceased, for some unaccountable reason which I have not yet solved, I trembled. It seemed absolutely ridiculous that a man could sit there, without

mental excitement, and not keep shivers from running up and down his spine.

For twenty minutes we waited motionless, hardly daring to breathe, and there was no repetition of the splashing; fifteen minutes longer and the Indian became uneasy. He pushed the canoe gently from off the sunken log, and with the paddle and without a sound, we again glided down stream. On we went until at the brink of the little rapids that we had heard in our former position, and still not a sight of any living creature. With pole holding the canoe, we waited for perhaps ten minutes, motionless and alert. Then, from down the rapids, came a series of tremendous splashes. On, on, on they came, and still, strain our eyes as we would, we could see nothing. Then they ceased with a splash of spray which glittered in the moonlight hardly fifty yards away, and the Indian uttered a disappointed grunt, accompanied by a single word which explained the cause of all our waiting. Salmon? I inquired, "Yas," was the disgusted reply, "Him no answer, so tought mebbe be Caribou Deer, spose um so, come down see, got left dat time, mebbe catch him some nudder. You wait." The last with a smile that recalled a somewhat similar remark made after missing the salmon on the previous day. And so ended our first night's moose call.

Poling the canoes back to camp, sometimes through long pools and again through stiff rapids, would have been a feat for a man not accustomed to canoes, but these men took it as easily, apparently, as they did going down stream. The moon was high by this time, and nearly the whole river lay gleaming under its soft white light. Occasionally an owl hooted, a sound which we had not heard before, and, in one portion of the river not far from our camp, where lay a long stretch nowhere over a foot deep, we encountered a great number of salmon running up to the pools above. The Indians persisted in going overboard and apparently delighted in chasing them, as does a terrier a flock of chickens.

It was nearly eleven o'clock when we got back to camp. The fire was low, so, as it was not a very cold night, we lit the Primus stove and had a hot cup of Fry's cocoa.

As I lay in my sleeping bag, half dozing, it seemed that from the ripple of the river outside the tent, would arise great splashes, and from some dusky, ill-defined shadow, a great moose would strike out into the clear moonlight, and then mysteriously dissolve into thin air.

The next morning opened a day with a clear sunshine. The Indians were up and at it bright and early, as usual. Breakfast over, we retired to the swamp back of the camp, and, in a little while, the strokes of the axes rang out in rapid succession, and a few moments sufficed to bring crashing down, a cedar suited to their purpose.

The so-called shoes used in protecting the bottoms of canoes, when run through very shoal water, as in our case, are ingeniously made affairs worked from the White Cedar. Out of the cedar for each canoe, is split nine pieces perhaps half an inch in thickness, which are shaved to a width of about five inches at one end, tapering gradually to perhaps an inch and a half at the other end.

Five of these are laid side by side and held in their position, with the wide ends together, by ash splints running through each. The remaining four are put together similarly. The canoe is inverted and the four are first placed on the bottom with the wide ends amidships, while the other ends are gathered together at the stern and tied by rope or splint, held on notches near the ends. The remaining five are then placed in a similar position, and the small ends gathered up at the bow, these bow shoes being sufficiently long to overlap the stern ones amidships. The shoes are fastened in place by the ash splints, which hold them together, being tied securely to the gunwale or thwart. Defined in this way, the amount of knocking round which a canoe will stand, is almost incredible.

As the Indians were occupied all day, I spent the time in cruising the section of the country near camp. Here the river has cut its way somewhat more deeply than above, into

the underlying formation, which seems to be chiefly broken silurian shales, with an occasional out crop of limestone, in some cases more or less metamorphic, though nowhere did I see any that was or could be considered marbleized. The timber, for the most part, consists as usual of spruce, though on the highlands, both north and south of the river, a very considerable scattering of beech, birch and maple is to be found. In lower situations ash is, at times, quite plentiful.

There are in this region several comparatively long stretches of lowland along the river bank, throughout which are to be found very considerable quantities of white cedar. The land is sufficiently wet to keep the wood sound, and many of the trees attain a very great size. In several positions throughout this lowland, I found as many as sixteen large cedars to seven large spruce, and a large number of half grown trees. I have nowhere in New Brunswick seen as finely developed white cedars as on the lowlands along the upper Restigouche. I came upon several bear tracks during the day's tramp, none of which were very fresh, the animals having by that time forsaken the river banks where the last of the berries had disappeared, and retired to the highland where beech nuts were sufficiently plentiful to furnish them with a means of livelihood.

Down through one or two little valleys, a caribou path was beaten, as though a herd of cattle passed over it every morning and evening, while among the others the sharper moose track was occasionally to be seen. Once, as I came out upon the river, a racoon hurried away before I could get a shot at him, and several times a muskrat would splash into the water as I approached it, and, again a flock of titmice would run across my path, working away with their cheery little notes always in evidence, as they passed on their errand of good into the deeper wilderness. Then a raven or two, or perhaps an occasional crow, would wheel away before I had fairly gotten a chance to see them. Then that cousin of theirs, the omnipresent Canada jay, would make some quiet remarks in jay language from a nearby pine tree.

I tried to calculate the number of grilse and salmon which were in and passed through one of the larger pools, during the time I spent there, and believe there were about eighty-eight fish in all, the time being not over two hours. Some of the fish were large, but the majority of them were grilse, weighing perhaps, between four and five pounds.

By supper time the shoes were finished, and the evening, unlike the previous ones, was cloudy. As it was full moon, this was regarded as an advantage than otherwise, as far as the possibilities of moose calling were concerned. "Goin' git moose to-night, sure," Tom remarked, as he finished washing up the supper dishes, and hung the mugs on convenient twigs of the nearby bush. I hope so, I replied, Nick smiled. "Oh yas, catch him sure dis time," and then with a pause, "mebbe" as if he did not like to run the chance of having his prestige as a prophet entirely destroyed.

On account of the cloudiness, it was much darker than on the previous evening and the faintest trace of a breeze sent, now and then, a peculiar moan through the needle-like leaves of the pines and spruces. The usual caution was observed, but this time we went at least a mile and a half down river until we came to a rippling, purling stream almost as large as the Restigouche at that point which came in from the north side of the Gounomitz River. Here, on the left bank of the Restigouche is a very considerable area of lowland, several square miles in all, and covered with a growth of ash, birch and maple, as is usual in such situations." "Good moose country" was the pleasing assurance whispered by Nick, as soon as we had silently glided past a few hundred yards of this lowland. Then the required shielded position was found, and the two canoes grounded as noiselessly as the night before, or floating quietly by a big half-sunken birch, which formed an ideal situation from which to see without being seen.

Owing to a slight breeze that occasionally shook the tree tops and caused a few dried leaves yet clinging to the tips of the branches, to flutter in an alarming manner, the

call did not seem to ring with the same sonorous, silence-breaking effect that it did on the previous evening.

Compared with the former effect, the call was almost a disappointment, and it seemed that, if the weird bell of the previous evening had succeeded in raising nothing, tonight, when the note could not be heard half the distance, it must necessarily be a failure. In the few minutes of silence which followed the first call, the occasional faint rustle caused by the hardly noticeable breeze served to bring a disappointed, half deadened imagination back to full life and alert activity, and by the time the second call rang out, every aberrant ripple of the river, and every slight crackle of the dried fern frond seemed to be the step of the looked-for giant.

The night with its uncertain and changing cloudiness, was much more calculated to lead one to believe in all sorts of strange figures in motion on the opposite bank of the river. The third, fourth and fifth call, however, passed without any sound except those before described, to which the strained senses were now becoming accustomed. The waiters had relapsed almost into a state of indifference, and the Indian bent down to again lift the horn, when suddenly a sound that there could be no mistaking, broke upon the stillness, and threw the others of less magnitude into utter obscurity. Far away in the tangle across the stream arose a crashing and snapping as though a herd of elephants were plowing through the undergrowth of young birches. For perhaps a quarter of a minute there was no other sound and the crackling grew louder with, once or twice, a splash, as if the animal were crossing some of the smaller streams that flowed through the lowland. Then, for a moment or two there was silence, followed immediately by the peculiar snuffing, whining grunt of inquiry, and then the thunder-roaring magnificent challenge of the bull moose. In another instant the crashing re-commenced, this time veering away to the left up river. The Indian seized the horn and uttered a low penetrating, half-grunt, half-moan that caused the crackling to cease for a moment. It was but for a moment, however, and then it began again; this time, however, trending in our

direction. On it came until it seemed that the animal must be visible a little above us on the opposite side of the river. But strain our eyes as we might, we could see nothing. Then came a silence, and what a silence it was; Not daring to move a muscle, he breathed something as if it must be heard on the other side of the stream. Cramped, alert, silent, we waited. Perhaps five minutes passed; it seemed an hour. Now some cloud, thinner than the rest, would cause a light haze to sweep over the point on which our eyes were fixed, and again, everything would become obscure

Nickolas, with a motion so slow as to be hardly susceptible, reached down to the surface of the water and raising a little in his hand, poured it splashing over the birch bark horn. Instantly there was a movement across the stream. All doubt seemed to have vanished from the waiting animal, and, with a rustling of grass, and a clicking and grating of stones, the monarch of all the Deer tribe trotted out into the middle of the stream, hardly forty yards from us. Then for an instant he stopped, and, with head stretched forward, walked slowly and nonchalantly down the middle of the stream. In the uncertain light, the animal, seemed at least ten feet in height, and the great antlers seemed as if they might eclipse all previous records for breadth of span. Thirty-five, thirty yards, twenty-five yards and finally twenty. The Indian's paddle touched me between the shoulders, and I swung the rifle with a death dealing dum-dum bullet in the chamber, slowly to the right. My chance had come, and with the ivory sight of the rifle gleaming white against the forepart of the giant's shaggy body, I pulled the trigger. The sharp crack was instantly followed by a splash and a roar that seemed to shake the very hills, and the moose charged in our direction. Between our canoe and the oncoming animal was the birch stub which had formed so convenient a hiding place, and through its gnarled roots I fired another shot. Simultaneously with it came the deeper bang of a 44 calibre Winchester from the other canoe, and the following instant the moose lurched forward, his

horns striking the birch stub, hardly eight feet from us, with a force apparently sufficient to kill half a dozen men. Then his fore feet came up on it, and his antlers loomed above us, as if a moment would see the canoe crash beneath his weight, and then, in a space of time which could hardly be realized, he had sunk back and fallen on his side and was lashing the water with his ineffectual struggles.

No one seems to know how and when we left the canoes, but the fact remains that two frantic Indians and two probably no less excited white men found themselves dancing round in a foot or two of water, while in the centre of the group lay a bull moose stone dead.

After the first examination was over, which resulted in finding that the antlers had been somewhat magnified by the moonlight, but were still not to be despised, and that the moose himself was in reality a giant, it was seen that the first thing necessary was to get him ashore. It is difficult to realize how hard it is for four men to haul a thousand pound moose, even if he is lying in almost two feet of water. Finally, with a great deal of pulling, we managed to get him into deeper water and drag him along to a place where the channel ran close under the bank. Here he was partly dragged ashore, until the ropes, which were carried for just such a contingent, could be gotten into service. These were then thrown over a stout branch of a nearby spruce, and with a great deal of belaying and taking in the slack, the moose was finally hoisted well out of reach of any passing fox.

"Mebbe goin' to rain tomorrow," was the first remark Tom made on returning to the canoe, after his exertions, Perhaps we better cut him up tonight, I suggested. "Well, spose um can do dat" replied Nick, "mebbe if we do, better get um to work now." So the lantern was gotten from the canoes and lighted, and the operation of skinning begun. It was over an hour before the axes and knives had finished their work, and the canoes were loaded ready to get back to camp again; it was between two and three o'clock before the triumphal procession, consisting of two canoes, of which

the bow of the foremost was decorated by a moose head, reached the tent again.

The fire was nothing but a pile of white ashes, and rain began to fall gently. Everyone was wet and everyone was satisfied, and when on the road to slumber, there were no visions of a point of deep obscurity and a vanishing moose, to cause trouble.

The next day, October 18, was wet, so we decided not to attempt to continue our journey as we had no tarpaulins with which to cover our bedding or provisions. Part of the day I spent in the camp writing up notes on the surrounding country, and later decided to see what more I could see in the surrounding woods. Putting on my wet weather rig, I started North from the river bearing away some distance into the highlands on that side of the valley. In this region the timber consisted of mixed evergreen with a plentiful sprinkling of deciduous trees. Among the spruce on the high ridges here, I saw some of the finest timber that was noted during the trip; a considerable proportion of trees girding seven feet or thereabouts.

Occasionally I came across an enormous solitary specimen of the white pine, once perhaps the most valuable timber tree in the Province, but now very thoroughly culled. Some of these trees would girth ten feet and upwards at the base, they were not in sufficient quantities, however, to warrant operations on their account alone. Through this region also, I found several outcrops of the more or less metamorphosed limestone. Before, in one or two valleys, I came across a considerable number of deer tracks, as if the place had been a near rendezvous of these timid and beautiful denizens of the northern wilderness. The deer referred to is the American or Virginian deer, which is now found in great quantities throughout the whole Province, even in the most civilized districts, in some places being so common as to become a nuisance.

The meat of the Virginian deer is delicious in flavor and fine in grain, and is a great favorite of lovers of good venison; the result is, that as soon as the season opens, the

markets are plentifully stocked with the most beautiful of the deer tribe found in the Province of New Brunswick. I flushed several coveys of ruffed grouse, but having no shotgun and not following birds up, I got none during the walk.

Nowhere in the Province, or for that matter, anywhere have I seen ferns as plentiful as in this portion of the upper Restigouche region. The majority of them were now, here as along the portage road, frost-bitten and broken, but sufficient evidence of their enormous number was still on every hand. I have never traversed this region in Summer but the contrast must be very marked between that season and the late Autumn. Now, where hardly a bird's note is heard, then every thicket would be alive with thrushes, warblers, fly-catchers and wrens, making the wilderness seem far less wilderness than could be realized later in the year.

When I returned to camp one would judge from the sounds that issued from the tent that a possible horde of street singers had been captured and pressed into service. Everyone was in good humor, not that they had not been during the previous portion of the trip, but they now seemed in exceptionally good humor. Probably it was the change of diet from salt meats to fresh venison.

By evening the sky had cleared again, and thus ended the only day of rain which was experienced during the journey. Before nine o'clock the evening had become cold, and encouraged by the success of the night before, we decided to go up stream, this time to where we had seen caribou tracks, and wait there for what might turn up. The same silence was preserved, and the precautions taken were, if possible, greater than before. But a four hours wait gave no result except the creation of four wonderful appetites, which forced the Primus to hiss away for half an hour in an endeavor to satisfy.

As we had been forced to lose two whole days at this point, dawn the next morning saw us eating breakfast in preparation for a long day's run down river; in a little while

afterwards, we were underway, and the pile of browse, with the ashes of the camp fire, were the only things left to indicate that human beings had been there.

We passed the mouth of the Gounomitz River, stopping only long enough to take a photograph of the lovely little stream as it flowed out through the head waters over its bed of pebbles to where the struggle of but a short time before had taken place, and of which now not a sigh remains, and everything looked far less romantic under the influence of the morning light.

About five miles below the Gounomitz, after we had crossed the boundary into Restigouche County, we came upon a road leading from the river into one of the lumber camps, near it on the river bank were large quantities of stores and provisions. These provisions are brought up the river from Campbellton, 130 odd miles from its source, by long scows which are towed by three horses. These scows are eighty feet long and eight feet wide, drawing as much as a foot of water when loaded; each scow carrying about seven tons of fodder and provisions. The same type of scow, with a house built upon it, is used in conveying parties of sportsmen up to the regions where moose and caribou are plentiful. As the houses are provided with stoves and comfortable beds, this is indeed a luxurious method of travelling. The charge usually made for conveying parties up river in a scow of this sort is \$10 per day; this covering the cost of scow, three horses and two or three men. One of these scows was lying beside a less pretentious cousin used by the lumbermen. As the sugar showed some signs of disappearing before the time apportioned it, Tom made reconnaissance in force—with an axe in one hand—in the direction of the lumbermen's molasses barrel, and succeeded, after some careful manipulating with a hardwood wedge and a spike, in getting one of the sauce-pans full of that remarkable Porto Rico product, connected with thoughts of our childhood and huge slices of bread.

It is an understood thing in the life of Canadian woodsmen, that, if anyone is running short of provisions, he is to

help himself from the first cache that turns up, so, with guiltless conscience we proceeded.

For some time I had been expecting to meet with Mr. Fantin Tynan, whose whole title is Dominion Government Fish Warden of the Restigouche River from the mouth of the Quatawamkedgewick to the head-waters. This individual is famous among sportsmen and poachers alike as being the most fearless man in the discharge of his duties in this section of the country.

Several miles below our molasses depot as we rounded the bend and came out on a straight stretch of the river, we saw about one hundred and fifty yards down stream, a man poling a dug-out in our direction, and decided that this must be the gentleman in question; on nearer approach this proved to be the case. The dug-out—a long proa shaped canoe hollowed out of a single log—had evidently seen many vicissitudes, and, as my assistant said, was somewhat frayed at the edges. Amidships were his camping and bedding materials, a good-sized waterproof box to hold provisions, and the omnipresent frying-pan; while in the bow sat an enormous and not too friendly looking dog, who, as the Irishman himself is very deaf, supplied the ears of the combination. The guardian stood erect in the stern of his peculiar craft and poled along to meet us, regarding us suspiciously. After discovering from our appearance that we were probably not poachers, but must necessarily belong to the other class (he only knew two) and be sportsmen, his first salutation was, "Good day? Did you see any blankety-blank Madawaska Frenchmen up river?" On being informed that, with the exception of lumber crews, we were the only men between him and the head-waters, and would not long come under that classification, he seemed satisfied.

I presented my letters of introduction, which the Fishery Commissioner, Mr. D. G. Smith, had very kindly given me, but these, however, did not prevent him poling over and taking a furtive glance into the canoes to see if there were any salmon in sight. He then began recounting some of his late experiences with poachers from the adjoining county

before mentioned, and interesting enough they were too. Just to give one which he himself had not told me, it may have been his modesty that prevented him, or he may have forgotten it, but which was recounted by some other man who had heard it from one of the principal actors in the scene. It appears that a party of six guileless Acadians from Madawaska County had portaged through from the head-waters of the Grand River to the Restigouche, with two dug-outs and a considerable amount of apparatus (nets, etc.) with the intention of capturing the wily salmon out of season. Now it may have been that a cork net float escaped and went bobbing serenely down stream and came under the notice of the river guardian, or it may be the dog's sense of smell had so developed as to extend through thirty miles of wilderness under favorable conditions of the wind, or again, it may be that the peculiar condition of Mr. Tynan's hearing were such that, though you had to shout at him from a distance of a yard or so, that he could hear sounds which came from the remotest distance, in the way that far-sighted people can see objects some distance away, yet will not be able to distinguish those near at hand. But whatever the reason may have been, and no one knows except the guardian himself, Mr. Tynan turned up at the camp of the six Frenchmen, when the proprietors were not in sight; the dog wandered around and devoured anything that suited his taste, and the warden himself occupied his time in chopping holes in the larger of the two hostile dug-outs.

Then the owners returned, and the odds were six to one. The river guardian, true to his duty, and nowise daunted, backed two of the men out into the middle of the stream at the point of a revolver, and made them kneel down in the icy water and swear that, if he let them go that they would never stop except to eat and sleep, until they reached their homes in Madawaska again, and that if he ever caught them on the Restigouche River again, he would—well it is needless to say anything further, for the other four were so terrorized that all immediately came to terms. Two men poled the remaining canoe up the Restigouche and the Wagan

river, and the other four tramped forty odd miles through the wilderness back to a road again, and it is recorded that they have found farming a more remunerative pursuit than catching Her Majesty's salmon.

After talking some little time with the warden, who had been occasionally eyeing the moose-head furtively, he asked to see our licenses which were forthwith produced, and I finally left him with a promise to send along a print of a picture that I took of him in his dug-out, much to his apparent edification. He informed us that the Quatawkedgewick opened in about eight miles further down stream, and we decided that we could make some distance beyond that river for reaching our camp of that night. We had hardly left Mr. Tynan a mile behind before, in one of the small rapids, a much enthusiastic grilse in his rush up stream came too close to the canoe for the nerve of the Indian; the result was that, in spite of the awe-inspiring effect that Mr. Tynan should have had, Nick's canoe pole made a vicious jab at the rapidly running fish, and, as luck would have it, the pole struck home, and in an instant I was, as is usually the case under such conditions, left to guide the canoe to some place where she would ground, and to sit passively and watch the struggle. It was not of long duration; the half stunned grilse made a few desperate rushes, each time to be met by the active Indian, until finally the fish turned, throwing up a splash as he endeavored to avoid his pursuer. Nickolas seized the advantage, and the pole shot into the centre of the troubled water, emerging with the grilse securely pinned on it through the gills. "Dar" was the remark, "I tol dose sa'mon day was purty quick, but spose um some time not quick nuff fur injun; mebbe good time havin' dinner now." Everybody was agreed to this, and to broiled venison was added poached salmon.

Before the grilse went into the frying-pan, I got a picture of both the victor and his victim. Then, when the meal was finished, we started again in the direction of the Quatawkedgewick. On approaching this river, the land



A typical Gulf Shore Farm House at Oak Point, Miramichi Bay, N. B.

becomes very considerably higher, and more resembles the typical lower Restigouche, which is a very different, and, in many respects, a very much more beautiful stream, than near the head-waters.

The Quatawamkedgewick itself, or the Kedgewick, as it is often abbreviated, is the second largest of the tributaries of the Restigouche, and flows in from the northwest side of that river about thirty miles below the mouth of the Wagan. It is a long river, its branches ramifying through almost the whole of the extreme western portion of Restigouche County. By some it is deemed so important as to be considered the main Restigouche, while the portion flowing from the southwest, into which the Gounamitz flows and down which we came, should, according to their idea be considered a branch. This I do not think, is justifiable. The Kedgewick flows into the Restigouche in a broad, open, alluvial plain which is partly cleared, and a single farm house is here situated.

Just after the Kedgewick enters the Restigouche river there is a considerable stretch of rapid, not dangerous, but through which the water flows very rapidly. At the foot of this rapid is situated one of the finest salmon pools on the river, and here we came upon the first of the lodges of the Restigouche Salmon Club, the headquarters of which are situated at the mouth of the Matapedia river, only thirteen miles above Campbellton. The salmon pool below the Kedgewick, besides being a fine fishing pool, is very beautiful, on one side the rocks descending sheer into the pool from a considerable height, and on the other the hardwood land sloping upward gradually, forms quite a hill.

A mile or two below this pool, whose silence and depth of the bottom—often being far out of sight—appear in strange contrast to the rest of the river, we met the first of the lumber camp supply scows which we had yet come across in motion. Two or three men stood on the bow with long poles ready to snub the scow to one side or the other so that the rocks might be avoided and the channel followed as well as possible. The horses, one hundred and fifty feet



Pabineau Rapids, (Upper Stretch), Gloucester Co., N. B.

ahead, now walked clanking along the stony beach, now waded through the channel or splashed along the shallows. A man at the stern of the scow steered as best he could with a big cumbersome pivot swape, and along the shore the scow tramped a crowd of lumbermen, going in for the winter. Now they would hurl delicate jokes at each other, now throw stones at the man riding the horses, then a few words of counsel and wisdom would be offered to the men on the scow, which were generally returned with some mock vituperations that only served to illicit further advice usually accompanied with a shower of stones, which were calculated to do no further harm than thoroughly soak the man at whom they were hurled.

Thus we would proceed until some little rapid was reached and the horses would be fastened close up to the scow and the struggle would begin. The three horses which are always hitched abreast, would feel their way out into the deeper channel, guided by the man who rode the central one. The scow would swing out behind and then would come the tug-of-war. Up stream through the swift current we would go, until one horse would be perhaps carried off his feet, but in a moment or two he would regain them again, and a few seconds would suffice to get into shallower water. Then the rapid would be lengthened out once more, and the duties of the man on horse-back would be less arduous. This particular scow had made not less than twenty-three miles, under the circumstances, that day.

We got a cheery greeting as we passed, with a considerable number of questions regarding the hostility of the tribes that inhabited the interior, and, after answering these to the best of our ability, we passed on to find our camping place. This was on the left bank of the river among some young swamp willows, a different situation than we had yet had.

The next morning, October 21, it was decided that we should discard the shoes as we had no further use for them, the river having become sufficiently deep to obviate any danger of injuring the canoes. Before they were taken off



"Pot Hole" at Palineau Rapids.

I took a picture of them to give an idea of their construction. The day was as clear as any previous, and we hoped to make the mouth of the Patapedia, another of the larger tributaries of the Restigouche, like the Quatawamkedgewick running into the river from the north side. The Patapedia forms a portion of the boundary line between New Brunswick and Quebec; it takes its rise in several lakes in the last named province.

The land between the Kedgewick and Patapedia is very much higher than we had previously encountered. A large portion of one section of it had been burned and is now becoming covered with a second growth of young hard-wood.

There was but one incident of unusual interest during the day, and this was a few miles above the Patapedia river, just above Stillwater Brook. We were passing through one of the smaller rapids or "rough-waters" when, on the right bank of the river which arose steeply for three hundred feet or more, and was almost bare, I heard a stone roll down, and looked around to see the cause. High up on the hill-side, just beneath a place where the bank was almost vertical, was a deer, which had evidently been making its way up from the river bank below. It was a doe. It watched us for a second half curiously, then turned and tried to scamper up the almost perpendicular face of the bank above it. It was a good two hundred yards away, and the canoe was rocking and bouncing on the troubled water. I knelt in the bottom and fired; no effect except to detach a piece of rock six or eight feet from the deer, and send it rolling down until it clattered on to the beach below. Again I fired; then came two shots in quick succession from the other canoe, the Indians in both cases trying vainly to keep the little crafts steady enough to enable one to get a satisfactory shot. The deer bounded and struggled this way and that, and shot after shot from the rifle rang out as though a considerable skirmish were in progress. But the deer was gaining ground now walking this way and now that, but always getting nearer the top. After another shot detached a stone of considerable size, which, though it hardly touched the deer on



Removing Pulp from Digester Pit, Chatham, N. B.

its way down caused him to loose his footing and roll for perhaps ten feet, I thought I had killed him, but such was evidently not the case. In an instant he was up and, in a few seconds had regained his lost ground.

The bullets, under the influence of the smokeless powder threw up red clouds of dust sometimes but a hand breadth from the deer, but always just passing him, and finally, with one or two parting shots, we had the mortification of seeing him, with one mighty effort, spring to the top of the bank, and, with a bound, disappear from view. The Indian laughed, "Never hit him once," was the remark. Well, I bet you would not have hit him either, I answered. "Me fire three time, but hit tird time sure." Perhaps, I said; but I have my doubts, and for that matter, I still have them. I never counted the number of shots I fired at that deer, and I am not going to either. But then there is the usual "if" and it is this: If either of us had thought of getting out in the rapids, we could have got steady footing and possibly have gotten the deer.

We camped that night on an open space, around which the river flowed with its shores almost as evenly cut as a canal. We had shot several grouse on the way down, and a few more were got within a few yards of the camp. The deer formed the subject of conversation for some time after the tea dishes were washed, and the Indians were having their smoke when we were interrupted by the sounds of an approaching scow with her crew. They had aimed for the same camping ground that we did, but likely we had gotten there before them. They camped alongside us, however, in almost as good a situation, and once again we heard the champ, champ, champ, of the horses to lull us to slumber.

The party contained among others, two of the most expert hunters in northern New Brunswick, and many a tale of spritely deer, of fleet and wary caribou, and of giant moose went the rounds, before the fire had burned itself low and we turned in for the night.

Long before dawn the next morning, October 21, the scow's crew was ready to get off; as soon as the first streak



Harkin's Academy, Newcastle. A good type of a New Brunswick High School.

of daylight had glinted over the tops of the dark trees, and by the time that our breakfast was ready and our horses were hitched, the big scow swung off, and they were at it again for another twelve hours. By that night they would make some point above the Quatawamkegewick, perhaps even to their destination, which was a few miles above that river.

Just before we left, another smaller scow came up the river from the mouth of the Patapedia. She was towed by a single horse, and her crew consisted of two men. They were taking a sledge in over a portage road to one of the numerous "dead waters," to bring out a moose which had been shot a few nights before, and, incidentally to get one or two more if possible, while they were there.

The first point of interest in our journey of that day, was the mouth of the Patapedia river, which was situated about three miles below the camp. This river, as before mentioned, forms part of the boundary line between Quebec and New Brunswick, so that henceforth, on our trip down the Restigouche, the right bank would be New Brunswick and the left Quebec.

Three or four miles below the Patapedia, is situated probably the finest ox-bow on the Restigouche river. Here the river sweeps round in a magnificent curve, while across the bow, a short-cut has been made through which a large portion of the spring freshet flows. On the upper stretch of this bow, is situated another of those fine salmon pools, with which the river abounds, and here is another of the cosy lodges for the convenience of salmon fishermen.

A mile or two below the ox-bow, we came to Cross Point, one of the scenic attractions of this portion of the river. Here about eight miles below the mouth of the Patapedia, the river makes a sharp bend on itself, so sharp, in fact, that two points, a mile or more apart in the course of the river, are separated by only about one hundred yards. At this point there is a high rocky ridge, running up to a sharp-knife edge between three and four hundred feet above the river.



Intercolonial Railway Bridge across Miramichi River, above Newcastle, N. B.

Farther down stream, the bank can be readily climbed, and a position on this dividing ridge attained.

The view from here is perfectly magnificent. As you face southeast, the river lies at your feet on both sides of the ridge and circles round behind you. You can look far to the south and see it as it flows down from the wilderness; then it is hardly necessary to turn your head to look down a long stretch to the east, as the stream flows on its course towards civilization.

On the very top of the ridge, where it can be seen for several miles either up or down stream, someone has planted a rough wooden cross, which serves to mark the mecca of the Pilgrim sight-seer. We climbed the ridge getting photographs of its beauty, and breathing in the air that comes fresh and clear over thousands of square miles of New Brunswick forest.

When we got to the canoes again, the afternoon was well along. As we rounded the extreme point, we met with another scow on its way up river. This one was loaded entirely with hay, part of the very considerable amount that has to be taken up to each lumber camp for the consumption of the horses during the winter.

Near the foot of the stretch below Cross Point, lies another of the finer salmon pools. Hills on both sides run up to four or five hundred feet, and are clothed almost entirely with hard wood, though here and there, the dark green path of spruce shows up.

Never have I seen water that showed a more limpid green, and the pool encircled by hills is almost always calm. In the early Autumn, the hillsides on both banks of the river form a perfect blaze of gorgeous colouring, on account of the great number of maples.

The shadows had fallen deep over the beautiful river by the time we had reached the pool, and a short distance below it, as the river makes a sharp turn to the northwest, we again pitched our tent, and the next morning, clear as the ones preceding it, saw us again en route down river.



Mill_Cove Gully, looking out on Miramichi River below Newcastle.

The scene throughout this part of the country is indeed very beautiful. There is not a feature to mar this beauty; no burnt land, and the banks are lined with great quantities of large birches, beeches and maples, the river is changed from a rippling brook to a river indeed. Though not a very large river, even yet here and there, a slight rapid is encountered, and often a long absolutely uninterrupted curving stretch of calm water; while everywhere lies the hills becoming higher and higher as we advance down stream, and also more picturesque and beautiful.

Shortly after getting into camp, when Moulton had gone down to the shore to get the last piece of dunnage, we heard the bushes crackle from an unexpected quarter, and the Indian came quietly into camp remarking that "Dar was some caribou comin' down little brook troo de hill over nudder side de river, an' better tak' de rifle out." This advice, of course, was immediately followed, and the entire party stole quietly down to the edge and waited. At first we could hear no sound, then occasionally a rustle some little distance up on the hill on the opposite side of the stream, denoted that something was moving. It was a considerable distance, perhaps two hundred and fifty yards, but as the air was perfectly quiet, the slightest sound was thrown from hill to hill with perfect distinctness, and now and then a sharper crack would be heard, and then silence again.

After a rather longer period of silence than usual, the whole thing did not last more than two or three minutes—a movement was seen in the low bushes near where the mouth of the little gurgling brooklet ran into the river, and then with perfect fearlessness and apparent unconcern, three caribou stalked down to the river and started to wade across. It was half dusk, but we could see the big antlers of the male as he swung his graceful head, now high in the air, and now down till his nose touched the water. They waded along in a matter-of-fact way, until near the middle of the stream, the point where they would land was at least eighty yards below us; so we decided that this was the best chance we could have, especially as the light was better over the



A Road through White Birches, near Newcastle.

river. I raised my rifle sighted as best I could, and fired at the biggest of the three animals. He dropped for an instant and the others turned and bounded down stream, then back to the other shore followed by two or three shots in rapid succession from my companion's rifle. Then the big caribou struggled and rose; turned his head this way and that as if undecided where to run. I took hasty aim and fired again. This time I evidently missed him, as he turned and ran toward the other bank. When firing the third, the light was so uncertain, that I must have missed again.

By the time the giant had reached the shore, he took two or three bounds in the direction of the woods and then stopped, stood stock-still for a second, and sunk down on his haunches. Another second saw four men in two canoes poling and paddling over the deeper portion of the river—for the water here was not over four or five feet—and then, leaping out and splashing their way to where the caribou lay, now perfectly dead. The animal was not large, but the head was a splendid one; the antlers having thirty-five points in all.

By our united efforts, we managed to half-drag, half-carry him into the river, and with the aid of the two canoes and poles, we piloted him safely across, and lugged him up to the mouth of the little path that ran down from our tent to the river.

We had been hungry before, but this experience added a zest to our appetites that enabled us to dispose of more pounds of the unfortunate moose, that we had gotten at a point that now seemed far away in the wilderness, than we could possibly have done under ordinary circumstances.

It was well that the water in the river was considerably deeper, as the canoes were becoming so heavily laden, that it would have been impossible to have gotten through places like those to be found in the upper stretches of the river.

The night was clear, and colder than any we had yet had, and as soon as the moon, now some days past the full, was up over the hills on the opposite bank of the river, with its light and that of the camp lantern, we skinned and cut up



A Sketch of the Restigouche between the Gounomitz and the Quatawamkedgewick.

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the caribou, which operation was finished in a remarkably short time, and everything was ready for the night.

By ten o'clock it was very frosty; the moon had risen well above the hill, and everything was covered with its light. Never have I seen a more beautiful moonlight picture than that long clear stretch of the river, from the surface of which was reflected the hills, as they towered aloft on both sides, both up and down stream.

When I went back to camp, a big fire had made things cosy and comfortable. The Indians were sitting beside it engaged in skinning a few mink and muskrat, which they had shot on the way down during the day. The skins were then turned wrong side out and stretched on boards to dry, and we turned in for another night's rest.

The next day, October 22, from sunrise to sunset, was almost absolutely cloudless. Just cool enough for comfort, it was an ideal day of the late Autumn; a day when the air made itself felt as though it were another medium than usual.

But a short distance below camp, we passed the mouth of Ferguson's Brook, and just here were situated Ferguson's Rapids, one of the heaviest rapids on the river, and again, a mile or two below this brook, about half-way between it and Red Pine Brook, we came to one of the most beautiful hill and river scenes to be found on the whole course of the Restigouche. Here the river winds in and out between great spruce and birch-covered hills, that plunge rapidly down and are out lined against each other in beautiful contrast.

Today was to bring us into the beginning of the first attempt at continuous civilization found so far, in our course down river, for in the middle of the afternoon, after passing through Heroes Rapids, we came out at Chain of Rocks, a village consisting of two houses with the nearest grocery store situated twenty-two miles distant at Matapedia. The entire family from one of those houses turned out to greet us, and in numbers they were, though it seemed at first impossible, stronger than some of their neighbors in Madawaska.

We were here presented with a fat gosling—for a consideration—on the condition that we captured him ourselves.



Mouth of Upsalquitch and Squaw Cap Mountain, Restigouche River.

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After the entire family had chased the flock of geese for some ten minutes, I managed after getting about ten feet from the gosling in question, to put a bullet through his head, much to the edification of the spectators, who informed me that I was a great shot, and that I should have been there ten about minutes before, as two caribou had just been down to the river to drink, at a point about one hundred yards from the house.

I may remark that the portion of the Province south of the Restigouche river, in this region, has probably more caribou to the square mile than any other part of the country. In the higher lands in this vicinity, I have seen caribou paths beaten as thoroughly as if herds of cattle were driven over them every day.

Then we came to what was to be our resting place that night, a few miles below Chain-of-Rocks.

"'Twas one of those glorious Autumn eves,
As the beautiful sun sank low,
It tinted the surrounding western sky
With a molten, golden glow;
As 'twere giving a glimpse of Heaven
To us mortals here below."

It was one of the finest sunsets that I have ever seen, and the Maritime Provinces of Canada are famous for beautiful sunsets. The goose which we had gotten during the day, spluttered away in the baker for the greater part of the evening; and early in the morning, when the first of the Indians got up to waken the fire, the goose was replaced in his former position, and, by breakfast time, was ready to be eaten. The fact had not been misrepresented, as far as the bird's tenderness was concerned, and, though not exactly a breakfast dish, in the civilized acceptance of that term, the goose was most decidedly a success.

The pink glow of the sunlight had hardly merged into the light of another day, before we were again ready to move. From this point down, houses were not infrequent, one turning up on an average of every few miles, and here and there



Looking up Restigouche River from High Bank
over Ox-Bow, above Cross Point.

a fishing lodge, wherever a sufficiently well situated pool was to be found.

In the course of the morning, we rounded a bend in the river, and straight ahead of us, eight or nine miles downstream, came in sight of Squaw Cap Mountain, the third highest in New Brunswick, twenty-two hundred feet above the sea level. It loomed up like a lonely volcanic cone among the lower hills around it.

In a little while we reached the mouth of the Upsalquitch river, the most important tributary of the Restigouche, which flows in from the south side, about twenty-one miles above Campbellton. Here are more salmon lodges, and very prettily situated too. The Squaw Cap mountain is situated about four miles southeast of the mouth of the Upsalquitch, and a short distance north of it is Slate mountain, some two thousand feet in height.

From the top of the Squaw Cap, and from a point on the westerly side, one can look over more than eight thousand square miles of New Brunswick, and see, on a distant horizon, Mars Hill and Mount Katahdin in State of Maine; the latter with its height of five thousand five hundred feet, being over two-hundred miles distant. Away dead south lies Bald Mountain at the headwaters of the Nepisiquit and Tobique rivers, with its companion, Twin Mountain, a little to the eastward; while beside them looms up Teneriffe, so named on account of its resemblance to the famous volcanic cone. Even in the Province itself, there are but comparatively few eyes that have ever rested on these three sisters of the wilderness.

To the south of Squaw Cap Mountain and running apparently along its base, the silver thread of the Upsalquitch winds in and out, and drains the whole central portion of the County of Restigouche. Around the head-waters of this river, especially around Upsalquitch Lake, from which it is but a short portage into the Nepisiquit river, lies what is undoubtedly the finest moose and caribou country in the Province of New Brunswick. As a moose country, this particular region is probably unexcelled if equalled, in the world,



Lumber Mills on the Miramichi River.

and, as far as the caribou are concerned, it is improbable that anyone could wish them more plentiful than through this paradise of the big-game hunter.

Both branches of this river, the southwest and southeast, lie absolutely in the wilderness, and, for the most part, are free from even the civilizing influence of the lumberman.

The country can be reached in a variety of ways; up the Restigouche to the mouth of the Upsalquitch, then up the Upsalquitch to its head-waters; or, from Andover, on the St. John river, one may go up the Tobique to Nictor Lake, portage across the Nepisiquit Lake, at the headwaters of the Nepisiquit river; then travel down the river to portage brook, and across by portage again, to Upsalquitch Lake, finishing the trip by going down the Upsalquitch river, and down the Restigouche to Campbellton; again the region can be reached by going up the Nepisiquit river from Bathurst in Gloucester County, on the Gulf of St. Lawrence, until portage brook is reached, and then portaging to Upsalquitch Lake as before. This is perhaps the most practical method of reaching the Lake region, though the Tobique route is also an excellent one, there being in this case, the additional advantage that excellent guides can be procured among the Malicetes at the mouth of the Tobique river.

But to return to the Squaw Cap mountain. The path to this famous hill—and the trip is one that will never be regretted—runs through a tangle of undergrowth which is kept open by the numerous bears that traverse it.

The man who acted as our guide, when I climbed the mountain, in company with a number of the members of the Summer School of Science, in August, 1899, informed me that he had taken thirteen bears by traps set along this particular path. When the mountain itself is reached, you have to contend for fifteen hundred feet or more, with a steep slope of broken shales and slates. The panorama that opens out as one gets higher and higher, is beautiful in the extreme.

To the northwest lies the Province of Quebec, running through which, in both directions as far as the eye can



Maritime Sulphite Fibre Co's Pulp Mill, Northumberland Co., N. B.

reach, can be seen the Notre Dame Mountains. The Restigouche valley with the glittering river, also winds away in this direction towards the wilderness and bending around to the westward its valley can be traced for a long distance. To the south as before mentioned, can be seen the Upsalquitch valley and the mountains, while to the west stretches the apparently interminable wilderness. From the eastern face the Sugar Loaf mountain, just back of Campbellton, some twenty odd miles distant, is visible, while beyond, half hidden in a white haze, stretches the beautiful Bay Chaleur, and to the southeast all is wilderness again.

Just opposite the mouth of the Upsalquitch, lies the beautiful little settlement of Runnymede, an almost perfectly flat alluvial plain, on which are several fine farms; while a little farther down river, on the opposite side of the stream is Dawsonville, nestling at the base of Slate Mountain. Between the Upsalquitch and Dawsonville, the road runs along the steep base of Slate Mountain, two or three hundred feet above the river almost directly below, and from the birches that cover the side hill, you can look down as you drive along, over the green fields and pretty farms of Runnymede. This particular region is, perhaps in some respects, the finest from a scenic point of view, in the Province of New Brunswick.

Just below Dawsonville is situated the worst rapid, and for that reason, the most interesting to shoot, on the Restigouche river. None of the rapids on the Restigouche can be said to be dangerous, though this one is the nearest approach to anything of the sort. If a canoe were overturned in such a rapid as this, probably the only bad result would be that the occupants would get very wet, and this they decidedly would do.

We dined rather late just below the rapid, and here met a whole flotilla of scows en route to the upper stretches of the river. They did not attempt to go through the main rapid, but took an alternative course which here lies open to them, and followed a smaller channel, thus avoiding the hard pull they would otherwise have.



Block Pile at Barking Mill of Maritime Sulphite Company, Northumberland Co., N. B.

The sun was low when we got into the most famous of all portions of the most beautiful of New Brunswick rivers: the mouth of the Matapedia, "the meeting of the waters." Here from the hills of Quebec, this river, the nearest the sea of any of the tributaries of the Restigouche, flows in from a north-westerly direction. The Intercolonial Railway of Canada, which follows the Restigouche river from Campbellton beyond up to this point, here crosses and follows the Matapedia up through the Province of Quebec.

Just beside the Matapedia station, is the head-quarters of the Restigouche Salmon Club, a luxuriously-fitted up building, where a number of prominent American gentlemen come to wile away part of the summer, and, under the influence of the glorious scenery and the clear air, to regain lost strength and nervous energy, that has dribbled away amid the bustle and roar of an American city.

No sooner had I landed at Matapedia, than Mr. Baker, the gentleman in charge of the interests of the Restigouche Salmon Club, invited me to dine with him, and despite my protestations that I had nothing to wear for such an occasion, and had no possibility of getting shaved, both he and his wife insisted that I was to go as I was. As I then rejoiced in the possession of from a quarter to a half inch of beard—it was then in that stage which someone has neatly described by saying that its possessor's face looked like the cylinder of a music box—it could be readily imagined that I was not altogether proud of my personal appearance. My dinner dress consisted of—beginning at the bottom—a pair of anhydrous K boots, a pair of course grey pants, constructed for life in the woods, with compound seat and knees; a pair of leather suspenders, a grey lumbermen's shirt without a necktie, and a brown canvas coat. One can understand that my first thoughts led to things in civilization.

It is almost worth spending ten days away from civilization, for the amount of appreciation for news which one develops in a remarkably short time. I discovered among other things, that war had broken out between Great Britain



Barking Mill and Load of Blocks en route to Pulp Mill.

and the Transvaal, and much to my disgust, that the "Shamrock" had been beaten by the "Columbia," and then there was a horde of other things of more or less secondary importance, which were all interesting.

My host informed me that we might occupy the lodge recently vacated by the head keeper for the Salmon Club, which was situated just across the river, and this we gladly did, and that night had our first sleep under a roof. We were but thirteen miles from Campbellton, which we intended to reach the next afternoon, so that this would be our last night in camp. Now we were indeed into civilization, and in the night we were disturbed by the altogether unfamiliar sound of the Maritime Express, the finest train in the world, as she thundered North in the direction of Montreal.

Sunrise saw us again on the move for our last day's journey, and as we passed beneath the railway bridge round one of the river's bends, Bracketts Mountain, on the Quebec shore, loomed through the blue haze ahead. Now the river ran moderately shoal, and now we crossed a deep pool where thousands upon thousands of suckers, which are common also on the upper stretches of the river, swam lazily away as our canoes approached. Down we glided past flatlands and the upper islands to Morrissey's rock, where the Intercolonial railway passes through a short tunnel as it winds along the bank of the river.

All along are farm-houses and on the islands the last of the harvest was in, and the hay stood here and there in cocks, ready to be transported to the mainland as soon as the ice would hold.

The view from the Morrissey rock is very fine both up and down river. Looking down stream the river, as it flows round the innumerable islands, stretched away towards the Sugar Loaf Mountain and Campbellton eight miles distant.

Noon brought us to the Head of Tide, and the water changed from that indescribable clearness to the comparative murkiness of salt water. Between these picturesque little islands, the channels run everywhere.



French Village and Farming Country near Bathurst, Gloucester Co., N. B.

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We found our way in and out, always apparently coming out in some main channel, and always finding that the curve through which we were passing, led into some labyrinth, until finally we immersed in a broad stretch of shallow brackish water and the harbour of Campbellton stretched shimmering before us past the town which lay some four miles below us on the right bank.

At the wharves lay a few barques loading lumber, and here and there plied a tug boat, leaving a little trail of white steam to contrast with the intense blue of the sky and water. The two canoes were pulled together, and we sat and ate the last meal of the trip on board; then started on a four mile's paddle through salt water. The change from river to harbour was so instantaneous as to be hard to realize.

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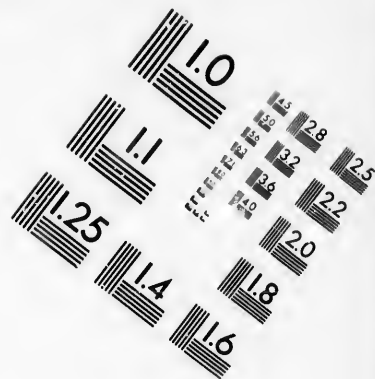
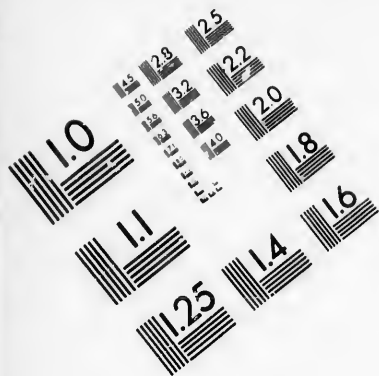
As we were passing along through the flat, about a mile below the mouth of the Gounomitz, the Indian suddenly stopped poling and said quickly, "Moose!" Where, I asked. "Dare, over left bank," came the reply, and there, sure enough, half hidden by some small shrubs, we could see the hindquarters and part of the body of a good sized moose. We paddled closer quietly, and I cocked my rifle noiselessly and waited. Seventy-yards, fifty yards, and still no motion. I picked out the exact spot where I was going to hit him, and then the head was slowly raised, and the big ears thrown forward, and a cow moose gazed at us placidly for perhaps half a minute, and then turned and walked slowly away into the bushes. Unfortunately the camera was not ready.

We paddled up to the spot as quickly as possible, expecting, as there had been no sound, to see the moose standing just inside the fringe of bushes on the bank; but there was not a sign of it anywhere.

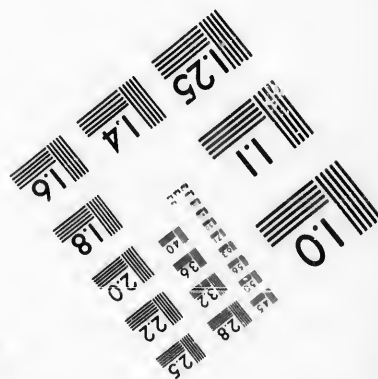
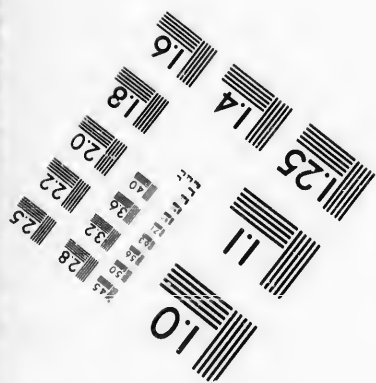
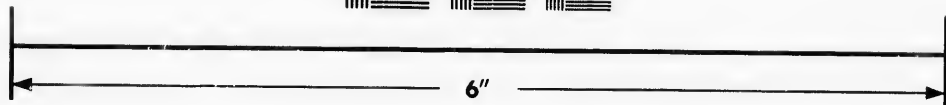
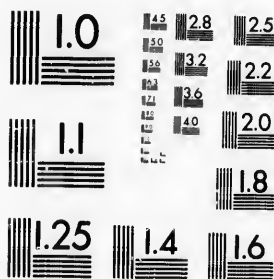
Nothing strikes you as more remarkable than the wonderful quietness with which such a large animal as a moose can steal away when frightened.

In the Province of New Brunswick there is a fine of four hundred dollars (\$400) for shooting a cow-moose.





**IMAGE EVALUATION
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10
15

There were no more half-sunken logs, no more foaming rapids or beds of glistening pebbles; but, now and then, an area of eel grass alternating with the deep channel. The zip, zip of the paddle continued uninterruptedly, accompanied only by an air that the Indian hummed as he paddled; there were no stops and precautionary silences, for there were no bends to round and no big game to watch for. A light easterly breeze flowed in from the Gulf of St. Lawrence over the glittering water, and drifted the white smoke from the big saw-mills up past the round dome of Sugar Loaf which stood out black against the sky, behind the town.

On the left bank of the river—on the Quebec shore—some distance above the town, we passed the Indian Mission of St. Anne's situated on Mission Point. Here some four hundred or five hundred Micmac Indians live in a rather neatly built village. Their spiritual wants are catered to by some Fathers of the Capucin Order, and on Sundays and fete days, the little brick church has a large congregation of aboriginal Americans. In this village are to be found some of the most famous guides and hunters of this section of the country. Not far from the village can be seen at low water, a relic that recalls another period in the history of Canada. Just above the wash of the usually calm waters of the Baie des Chaleurs, stand out the blackened, broken timbers of a vessel that must have been of considerable size. They are the sole remains of one of a fleet of French warships which sailed into the Baie des Chaleurs and were there hunted out by one of the roving English Admirals of that period, and utterly destroyed, as a fitting culmination to the struggle which, but a short time before, had included Wolfe's victory on the Plains of Abraham.

The whole region of the lower Restigouche river is one which is of the utmost interest to the historian and archæologist. On both banks of the river, within a few miles of Campbellton, have been found great numbers of Indian relics; relics of the days before even the eyes of Eric the Norseman had pierced the fog that hung on the banks of Newfoundland; and opened the way for the subsequent discovery of

the Western world. And relics of a period far later, are here almost as common as are those of the earlier time. Now and then, as the farmer of the present day is plowing, he turns up a pitted, rusted, cannon-ball, or the bent corroded blade of a sabre, indicative of the fierce struggle between the French, and the possessors of the land that were to be. Sometimes a light brass gun is found, and occasionally one of the heavy, massive cannons, that belched death from the sides of the French frigates, until the rulers of the seas took a hand in the work, and they were silenced forever.

As we today look about the beautiful head waters of the misty Baie des Chaleurs, it is not to be wondered that the place was such a favorite with the men who came in former times. The great run of salmon up the river, as it still continues, must have formed no small attraction, as must also have been the case with the great variety of game of other kinds. And the large game is as plentiful as ever, much more plentiful in fact, than it was a quarter or half century ago. Again, the fertility of the soil and the great luxuriance of the forest growth, must have added greatly to the value of this part of the country which was at once apparent. Even now, when centuries have passed, the country has been but scantily appreciated, and is far from being developed as it should be.

The town of Campbellton has the finest situation, from a scenic point of view, in the Province of New Brunswick. It is on the extreme head-water of the Baie des Chaleurs, an estuary of the Restigouche River, about sixteen miles above the town of Dalhousie, the shiretown of the county, which is generally considered as being at the normal mouth of the river. There is deep water, however, up to the wharves at Campbellton. The Sugar Loaf Mountain, a dome-shaped hill a thousand feet in height, rises a mile or more from the river, and from its base, the town gently slopes down to the water's edge. On the opposite side of the river, the long, blue, uneven ridge of the Shickshock Mountains stretches away in both directions, through the Province of Quebec. The Shickshocks are a part of the Notre Dame Range.

The view from the top of Sugar Loaf Mountain looking across the river and down into the Baie des Chaleurs, with the town of Campbellton at your feet, with its houses gleaming white, seeming no bigger than rows of toadstools a thousand feet below, is one of the most beautiful I have ever seen, and undoubtedly the finest of its type in this part of Canada. The town is so situated as to tap the lumber resources of this portion of the Province, and great drives come down the Restigouche to be sawn into deals at the mills in Campbellton. One of these mills will perhaps make an average cut of four million feet during the Summer months, and until navigation closes in the Autumn, which it does late in November or in December, ships, barques and steamers come up to the wharves at Campbellton to load deal, a great portion of which goes to the old country.

Like most Maritime Province towns, practically every denomination is here represented, church spires, as is usually the case forming prominent features in pictures of the town. The Intercolonial Railway passes through Campbellton on its route from Halifax to Montreal, and thus the town has the finest transportation facilities. Sportsmen often make this delightfully situated place their head-quarters. The fields for large game hunting are conveniently accessible from here, and in the Spring and Fall the Baie des Chaleurs is crowded with enormous numbers of different varieties of ducks and geese.

By half-past three in the afternoon, after paddling past several of the wharves, we swung to a float, which was just being vacated by a ferry-boat—that I have always believed should have been ranked with the seven wonders of the world—and stepped ashore, and the trip was at an end. It remained but to get packed up, to answer the thousand-and-one questions put to us by the inhabitants, to get the Indians started for home, and to leave ourselves for St. John, on the Maritime Express, a very much more elaborate, but not a whit more luxurious method of travelling than we had been indulging in during the last twelve days. After settling with the Indians, and saying good-bye to them, we took a

surreptitious glance into the second-class car. They were seated opposite each other, each with his feet up on the other's seat, and their axes, with the canvas bags containing their wardrobe, stowed away in the racks above. Each had an air of contentment, and each was puffing away at a ten-cent imported cigar, which they had gotten on the strength of receiving their salaries. From what I heard later through Mr. Perley, those cigars must have been very strong, or else some other form of intoxicant must have been resorted to, for, after the 24 hours ride they arrived home in a wonderful state of mental exhilaration, and, according to the same gentleman, made more laudatory remarks about me personally than I have ever had made before or since.

**THE EASTERN SLOPE, INCLUDING THE COUNTIES OF
GLOUCESTER, NORTHUMBERLAND AND KENT.**

(WESTMORLAND INCLUDED WITH ALBERT COUNTY UNDER
SEPARATE HEAD.)

To repeat once more what I have said several times before, all that I have even striven to do in this book is to describe territory which is typical of the different portions of the Province, and not to attempt to give any exhaustive description of these portions themselves. Thus it may often seem that in one part of the Province some particular political division labor, sacrificed to some other. It will be found on examination that the part which is apparently sacrificed is not essentially different from some other part generally near at hand which has been described more fully. All this is especially true of the region we are considering under this heading.

In the three counties of Gloucester, Northumberland and Kent there are many things in common, and this will also apply in the case of Eastern Westmorland County. But on account of the considerable area of Westmorland

which is effected more or less directly by the peculiarities of the Bay of Fundy, I have placed it with the County of Albert, much resembling it in its physical features, under a separate heading. The Eastern slope comprising the three counties named, all of which are bounded on the East, and in the case of Gloucester on the North also, by the Gulf of St. Lawrence, is a country, in its seaward portions, of multitudes of bays and harbors, some small and some of very great extent. The coast is, for the most part, low lying, there being no hills that attain any considerable elevation. Along the Eastern shore, South of Shippegan and Miscou Islands, and extending to the harbour of Shediac, much of the true coast is protected from the sea by great bars of sand, which, under the influence of the easterly storms, have been thrown up by the action of the waves. These bars enclose harbours or lagoons which are usually shoal, though in many cases their channels afford excellent anchorage for ships of very considerable tonnage. The finest of the harbours along the Eastern coast is undoubtedly that of Chatham in Northumberland County, the town being situated on an estuary of the Miramichi River at the head of the bay of that name. The rivers and small streams which flow from these three counties into the Gulf of St. Lawrence are simply innumerable. The most important of these are: In Gloucester County the Nepisiquit, one of the famous trout and salmon streams of the world; in Northumberland, the noble Miramichi, second only to the St. John River in size; while in Kent County the most important stream is the Richibucto.

Farming is, along the shore on the eastern slope, carried on in a manner that is typical of the country, and on account of the great similarity of the soil there is no great variation in methods noted in the three counties. Though advancement has been slow in coming, it has been steady, except at certain periods, and is now proceeding much more rapidly than before. Next to farming, lumbering and fishing vie with each other as to their importance as industries throughout this section, and now a new source of wealth is

being introduced in the manufacture of pulp from the spruce which so plentifully clothes this part of the Province.

To look at the counties somewhat more in detail:— As can be seen by examining a map of the Province, the County of Gloucester occupies the extreme northeast corner of the irregular quadrilateral which the Province forms, and includes, off to the northeast, the two considerable islands, Miscou and Shippegan. The chief harbours in the county, though the whole Bay Chaleur lying to the North may be considered one great harbour, are around on the north, Bathurst and Caraquet, the land between being extremely picturesque and pretty; Shippegan Harbour between the main land, Great Pokesuedie Island and the Island of Shippegan; Miscou Harbour between the Islands of Shippegan and Miscou; then on the East Pokmouche Gully and Tracadie Lagoon, the last two comparatively shoal. The rivers are, first and most important, the Nepisiquit, in its last stretches, running almost directly north and emptying into Bathurst Harbour and finally out into Nepisiquit Bay. The big and little Tracadie Rivers are next in importance; these with the Pokmouche and the Tête-a-gouche being famous fishing streams. Besides those mentioned are a multitude of little streams, nearly all able to supply their quota of sport for the angler.

The farming lands of the county are situated around the shores, the interior being to a great extent covered with lumber and containing no settlements of importance. Immediately around the mouth of the Nepisiquit, westerly and northerly, where travels the Intercolonial Railway, and to the east of the Nepisiquit where the Gulf Shore and Caraquet Railway opens up, large stretches of country are to be found, some of the best farms in the county. While along the coast south of Shippegan down to the southern boundary of the county, farming is improving rapidly.

The soil in the eastern portion of Gloucester County overlies the carboniferous formation. The sharp line of demarkation between this formation and the Slate Belt which traverses the Province, running approximately, northeast

and southwest, cuts Gloucester County and reaches the Baie des Chaleur at Bathurst, leaving fully two-thirds of the eastern portion of the county carboniferous, the remaining western third lying over this portion of the Slate Belt. In the region of Bathurst there are some out-crops of granite, diorite and so forth, but these do not cover any considerable portion of the county. The soil of Gloucester as is also true of Northumberland, Kent and Eastern Westmorland, is for the most part, a considerably lighter loam than is found in Restigouche County. The Counties of Northumberland and Kent also lie, to a great extent, in the carboniferous portion, the Western part of Northumberland, north of the main Miramichi River, lying also in the Slate Belt. Kent County lies entirely in carboniferous formation, and the same system underlies the soil of the County of Westmorland. Through the whole shore region of the County, the quality of the farming land is well calculated to impress the observer very favourably; a part of it has been very carefully worked, and a very considerable portion of it has been worked but indifferently.

From Bathurst round to Tracadie the population consists to a greater extent of French, though there is a comparatively large number of farmers of English, Irish and Scotch descent. Tracadie, Caraquet, Bathurst and the vicinity of Petite Roché present probably the best developed farms in the county. Here, as elsewhere, dairying has taken a start, and is advancing with most remarkable rapidity.

The town of Bathurst, the shiretown of the County, is situated on the harbour of that name and is on the main line of the Intercolonial Railway. The greater portion of this town lies on a point between the mouths of the Nepisiquit and Little Rivers. Across the mouth of the Little River runs a bridge to the smaller portion of the town, which lies on a rather sharp hill overlooking the bay. The harbour itself is over three miles in length, and in places almost as wide. Several lumber mills cluster about the town, the logs for which come, for the most part, down the Nepisiquit.

Bathurst on account of its situation has long been a favorite as a Summer resort; the days are seldom uncomfortably warm, and the nights invariably cool. The harbour opens out on the broad, beautiful Nepisiquit Bay, itself a southern extension of Baie des Chaleur. The good things that may be said of Maritime Province towns, may be said also of Bathurst. It has some really fine churches, excellent schools and a few rather imposing public buildings; the rest of the houses and buildings are, for the most part unpretentious, but when taken in connection with the surroundings, the effect is remarkably pleasing. For one who loves a village lying where the fresh breeze from the sparkling blue water, can blow in at every door; a village that lies in the midst of an excellent farming and magnificent sporting country, Bathurst may be ranked with those places which a German writer describes as "interesting to visit, but delightful to live in." Into the harbour, besides the Nepisiquit which we have already mentioned, empties the Tête-a-gouche, famed for its wonderfully beautiful falls, the Little River, a pretty little stream flowing from the south and the Middle River, the mouths of the last two, converging to their junction.

The various harbours of Gloucester County form centres for an important fishing industry. The Gulf of St. Lawrence teems with cod and haddock, and a man can obtain his winter supply of these fish if he chooses by simply spending a few days in catching and curing them. Great schools of mackerel, once far more plentiful than at present, are found throughout Northumberland Straits and this portion of the Gulf of St. Lawrence, and great quantities of herring are obtainable at nearly all times. Shippegan harbour is often crowded with the fishing fleet, the numbers of vessels with their white sails forming, on some fine summer day, a beautiful picture, as they lie in the land-locked bay. Everywhere around the Gulf are to be found lobster factories. Lobster fishing, however, has become a far less remunerative pursuit than formerly, as the shellfish have decreased considerably under the influence of the wholesale fishing;

thousands of tons being taken along the Gulf Shore annually. In the winter, great quantities of smelt are taken through the ice. A fuller description of these, however, will be given under the head of Northumberland County.

Let us turn our attention, for a little while to the sporting facilities afforded by Gloucester County. For big game the most famous, though not necessarily the best region, is along the course of the Nepisiquit River. Excellent sport has been obtained within 20 miles of Bathurst. Mr. Reynolds, in his "Gun and Rod" in New Brunswick, cited the instance of a man who, in 1896, had but a few days to spare, and decided to try his luck at Gordon Brook near the Grand Falls of the Nepisiquit, about 20 miles above Bathurst. In a week he succeeded in getting a moose, two caribou and a bear. The hunting region, as far as big game is concerned in the County, is in its extreme western portion; though the eastern section of the County, around the head-waters of Lord and Foy's Brook, and the north branch of the big Tracadie River, have seen some excellent sport. The County of Gloucester, however, is chiefly famed for its wild fowl shooting; the number of geese, brant and ducks which are to be seen in the proper seasons along the coast, being almost unbelievable. On the Baie des Chaleur side, on Nepisiquit Bay and in the region of Caraquet Harbour, enormous numbers of sea ducks are to be found every Spring and Autumn, but one must go to the Islands of Miscou and Shippegan to thoroughly appreciate the numbers of birds which pass through the Straits of Northumberland on their northward and southward migrations. Almost without exception the birds breed in Labrador, and from the beginning of April until well on in June, and from the beginning of September almost to Christmas time, a continuous stream of wild fowl pour to and from the cold, bleak shores of the Peninsula, on which are their breeding places. Probably nowhere in the world can finer brant and goose shooting be obtained than in Tracadie Lagoon. October is the finest month for shooting these birds, employing the method common in this section of the country. A "sink-box" consisting

of a coffin shaped box, just sufficiently deep to hold a man, without his being visible, which is sunk flush with a raft, some 12x9 feet in size, is anchored out on the feeding grounds of the birds, and around it are anchored a large number, 70 or 80 decoys. As the tide falls, allowing the birds to get at the eel grass which forms their principal food, they fly to the feeding grounds in smaller flocks, invariably swinging in and alighting in the centre of a flock that may be there. This continues until three or four thousand birds will be found on one feeding ground. If, however, the first flock on the ground happens to be the sportsman's flock of decoys with their owner carefully concealed in the centre of the flock, the birds swing in as usual, and, just as they are about to alight, the man sits up and fires. The result may be four or five birds at a single shot, though this is, of course, exceptional.

Let me give an actual instance of a day's shooting on one of these lagoons in the middle of October:—You have arranged with your Acadian guide the day before, and long before the first streak of dawn, you are eating a breakfast of baked beans accompanied by big mugs of coffee, and a few minutes more sees you ready for the fray. The guide has turned up half an hour before, and has been patiently smoking in front of a big open fire place. Your companion, who is going to try beach shooting, which consists of crawling into a hole dug in the sand and waiting for the incoming birds to fly over you—is working away with a rag covered with vaseline, putting the finishing touches on his gun. You have collected a bag of shells, looked at it thoughtfully for a minute or two, and finally decided to add yet another twenty-five to the number already enclosed; and the precaution is a wise one. A moment afterward and three men are wending their way through the intense darkness that comes before the dawn, down to the point on the beach where the guide has left his pirogue, a peculiar, staunchly-constructed dug-out, much in service around the north shores of New Brunswick. In the bow are piled an enormous flock of wooden decoys, with their anchor lines attached, and apparently in imminent

danger of getting inextricably tangled. You step in, and as the peculiar craft moves off, propelled by the powerful arms of the descendent of the Acadians, from out the dark to the eastward, you hear one of the strange, wild calls from some stray brant, that sets your blood boiling and makes every nerve alert. You reach the feeding ground where the "sink-box" has already been anchored without incident, and step in. The wood is cold and damp, and you place your makinak blanket over the grating in the bottom of the box, get your shell-bag and gun in a convenient position, and sit on the edge of the box watching the Acadian as he places the decoys here and there, until his artistic eye is satisfied with the group. Everything is still dark, and the whole performance is a rather showy one. Then with mutual wishes for good luck, you and your friend part and he is soon in his hole on the sand bar. The Frenchman retires around a convenient point, gets in a comfortable position in the bottom of the pirogue, and proceeds to smoke like a furnace. Before this has been accomplished, the black has turned to grey, and the grey is slowly brightening in the east. There is no wind, and all is quiet except for the occasional bark of a great Black-backed Gull, or the still more occasional pur-r-r-r-r-p of a brant. The notes from the seaward become more frequent as the light brightens, and suddenly there is a flash and bang from the beach which causes you to retreat in good order into your trenches. No splash follows the shot, however, and you "hallo" through the darkness, and ask "what luck?" "Couple of geese," comes the reply, "but missed 'em both, too dark to see yet." Then there is another shot and a bird falls very near your own box. None, however, seem to be coming your way, and shot after shot rings out from the beach. By this time it is thoroughly light, and the birds can be seen coming in from the open sea in great flocks and alighting in different parts of the lagoon. There is yet an hour before the tide will have fallen sufficiently on your particular section of the feeding ground to attract many birds to the spot, and you fill the interval with an occasional shot at a black duck that swings

in to your decoys, mistaking them, in the uncertain light for his own kith. A little later and, in a blaze of red and gold, the sun climbs above the waters of the Gulf outside the beach, and lights up the tops of 'the ripples causer' by the little breeze that has "risen with the sun."

The tips of the eel grass are now visible around you, and you duck your head just too late to deceive a flock of ten or twelve birds that were coming whistling down behind you. With a warning note or two they wheel and make for another part of the lagoon, and properly rebuked, you keep your head where it should be. Your chance soon comes again, however, and behind you you hear the rustle and swish of wings. Your box is faced down the wind, however, and you know that they will come round to the leeward of your decoys before attempting to alight. Round on your right they come. They swing out for sixty or seventy yards and you feel that you have lost them. Then with wings set, they wheel again and come straight for your feet. Eighty, seventy, fifty, thirty yards and you sit up, and, as their under coverts flash in the morning sunlight, as they attempt to turn, you pour one barrel after another of No. 4 shot into the group. Splash, splash, splash, in rapid succession, and one spreads his wings and comes down three hundred yards away, not however, without having been marked by the keen eye of the Frenchman who is peering over the beach a good third of a mile away, with a grin that can almost be seen at this distance. Ten minutes more and the fun is fast and furious, and you become an expert at leading in a reclining position, while a flock that has just visited your decoys, minus two or three of their former numbers, races off down the wind at a speed of eighty miles an hour. And so it continues until the tide has risen again. The flocks have been small, from seven to possibly fifteen birds, and, so far, not a Canada goose to be seen. Now two or three of them in their turn swing into the decoys, and you get one of them. Later another pair come in unsuspectingly; you nerve yourself for the attempt; fire at the right hand bird, and swing to the left, you fire the second barrel without

having waited to see the effect of the first, and when the smoke has cleared away, you find, much to your edification, that you have got them both. The tide is now too high for anything further, but a chance shot, and you stand up in the box and wave your hat in the direction of the worthy on the beach whose head is by this time a complicated map of dead birds, tidal currents and probable drifts. He comes out and the pirogue moves into all sorts of impossible positions each time, however, emerging with a dead bird. By the time he has arrived at the box, having called for your friend in the meanwhile; you have calculated that you should have 23 brant and three geese, and find that your calculation is verified. Your friend, in a less favoured position, has gotten but 14 birds, but his goose record is far ahead of yours, and his total foots up 22, giving him 8 of the most magnificent of game birds, the Canada goose.

It would take far more than the lifetime of even the longest lived sportsman to forget such a day's shooting as this, and when you reach home in the middle of the afternoon, your bliss is completed by finding that some of your old-time rivals in the art have turned up to try their luck, and are standing on the veranda as you stagger up under your load of birds.

Mr. D. G. Smith, in "Gun and Rod" in New Brunswick, aptly gives an idea of the extent of waters suitable for brant and goose shooting throughout this section of the Province, by saying that Caraquet, Pokmouche, Miscou and Shippegan have shooting grounds of the kind described "where a thousand men may shoot without interfering with each other" and he might have added that if the thousand men continued shooting for several days, it would probably be difficult to distinguish the diminution in the enormous flocks of birds along this coast.

With regard to the fishing in the County of Gloucester, trout and salmon can be obtained in great quantities. Trout fishing can be found in practically every stream, large and small. Mr. Smith speaking of one of the rivers of the County already mentioned says: "Tracadie River is, I

believe from my experience on it, the best sea trout stream in Canada, not even excepting the Tabusintac which is next south of it. The numerous small lakes in the County also afford excellent trout fishing, and the Nepisiquit and Pokmouche are favorite salmon streams, the former having long been famous as a rendezvous of the king of game fish.

The beauties of the Nepisiquit River, deserve very much more time and space given to them than I can afford. On October 4, 1899, I drove from Bathurst to a point a short distance above the so-called Pabineau Falls, though they might be more correctly termed Pabineau Rapids, which I have preferred calling them in view of the general characteristics. An excellent road runs from Bathurst to these rapids, and a very good portage road runs twelve miles further on the west bank of the river to the Grand Falls of the Nepisiquit. The scene at the Grand Falls from the descriptions and photographs which I have seen, though I have never been there personally, must be one of extraordinary beauty. Here the river plunges over a vertical fall into a deep gorge around which it is necessary to portage in traversing the river by canoe. The lower portion of the Nepisiquit, two or three miles above Bathurst, is known as the "rough-waters," the whole bed of the river being strewn with boulders, through which, at first, it would seem impossible for a light birch bark canoe to pick its way. Under the skilful handling of the guides, however, the difficulties are surmounted most effectually. Above this point the stream presents a clear channel, until the Pabineau rapids are reached, eight miles from the mouth of the river. Here the stream descends in a series of leaps, the impassable water being over three hundred yards in all. The spring floods have carved the rocky ridge into a thousand picturesque forms, and here are presented some excellent examples of what are known among geologists as pot-holes. These are caused by a few moderate sized stones getting in some depression in the rock, and there being whirled round and round by the waters which form over them. The result is that deep, smooth sided wells, three or four feet in diameter, are cut vertically in the solid

rock down until the level of the river below is reached. Several of these pot-holes of the Pabineau rapids are practically perfectly symmetrical, and excellent examples of their kind. The top of the rocky ridge has been flattened off, until in some places it presents a table-like surface, the edges of which are cut down vertically to the water. When the water is low, during late Summer and early Autumn, the entire volume of the river rushes through a narrow gorge, and plunges roaring and seething, finally into a salmon pool of great depth at the foot of the rapids.

Unlike the Restigouche the Lower Nepisiquit runs through a comparatively flat country, and for the beauty you are more dependent upon the river itself than on its surroundings. The upper portion of the Nepisiquit River will be mentioned when speaking of Northumberland County.

A number of three-pound trout had been taken out of the pool below the Pabineau Rapids the day previous to my visiting it.

NORTHUMBERLAND COUNTY.

The County of Northumberland, the largest in the Province, lies south of Gloucester, north of Kent; is bounded on the east by the Gulf of St. Lawrence and on the west by several of the St. John River Counties. According to Mr. Lugrin, it contains 2,756,000 acres. It embraces a considerable portion of the central part of the Province, the greater part of it being heavily timbered, and containing a game area of nearly four thousand square miles. The most important industry in Northumberland County is that of lumbering. Enormous drives of logs come down the various branches of the Miramichi River every Spring, though a considerable quantity is brought round the shore from the mouth of the Tracadie River, by the largest operator in the Province, whose mills are situated here. I refer to Senator Snowball.

The chief, and for that matter, the only harbor having any considerable depth of water in the County, is that of Chatham. Chatham harbor has situated in it three towns in the following order as one proceeds up stream: Chatham on the left bank, Douglastown on the right bank, five miles above Chatham; Newcastle on the right bank. Chatham harbor is the second shipping port in the province, St. John, of course, taking the lead. The greater portion of Northumberland County, for that matter the greater portion of central New Brunswick, is drained by the Miramichi River and its tributaries. Through the northwest and extreme northern portion of the County runs the Nepisiquit River, emptying into Bathurst harbor in Gloucester County. The ramifications of the Miramichi are simply innumerable, as are also the small lakes about its headwaters. The result of this is that Northumberland vies with Restigouche County on the north, and the eastern part of Victoria County on the west, as a game country. At the extreme head of Nepisiquit River is Nepisiquit Lake, while just across the border in Restigouche County, lies Nictor Lake, spoken of in the description of that County. Between fifteen and twenty miles to the eastward, barely within Northumberland County, lies Upsalquitch Lake, at the headwaters of the Upsalquitch River, while south of these three throughout the main western portion of Northumberland, lie a perfect host of others. These will be referred to more at length later. As in the case of Gloucester County, the greater portion of the farming area lies along the sea coast, though some is to be found along the upper waters of the southwest Miramichi, where are situated Boistown and Doaktown, farming industries on the interval land which is found here.

The description given of interval land on the St. John River, will serve very well for that in this County, the same conditions obtaining; while the description of the farming land of Gloucester County will serve for the coastal portions of Northumberland. The most finely developed part of this coastward farming country is to be found at Napan, on the south side of the Miramichi, a short distance east of Chatham.

Here along the Napan River is situated a well-tilled piece of country where a considerable stock is to be found, and which shows the effects of the rapid advance in methods now so noticeable throughout the Province. Like Gloucester, this part of the County has no great elevations, consisting, for the most part, of rolling uplands, continuing its excellent quality of soil back to the edge of the forest; down past little Branch, Bay du Vin, Hardwicke and Hardwood settlements out to where Point Escuminac light throws its glare out over the broad waters of the Gulf of St. Lawrence, trying to outdo the light on the north point of Prince Edward Island. Fifty miles to the eastward stretches the same type of farming country, and the same is the case along the north shore of the Bay down to Oak Point, thence to Burnt Church; through the little French village of Nequac, and finally up past Tabusintac Lagoon, are dotted the farm houses. With the exception of the towns on the southwest Miramichi, the population of Northumberland County is concentrated almost entirely throughout this eastern section. The two most important towns are Chatham and Newcastle. Newcastle, the shiretown, is situated on the main line of the Intercolonial Railway, at the head of deep water navigation of the Miramichi River. The town lies on a gentle slope on the north side of the river, between the railway and the harbour's front. On climbing to the top of the beautiful stone school building, (Harkin's Academy,) situated in the upper part of the town, the first impression that comes home strongly, as a result of the scene that is spread before you, is that you are in the centre of what is essentially a lumber country. To the westward stretches the forest to the horizon, and for several miles in a southward direction, the broad Miramichi winds glittering away until it is lost to sight in the woods above.

A mile or two up stream, on the other side of the river, lies the little village of Nelson, its immense lumber mills puffing away and sending enormous clouds of smoke and steam into the quiet air. Down river, out on a point, lies Douglas-town, practically a village of lumbermen, where are situated

the great mills of Mr. Ernest Hutchison, who gives employment to practically the entire population of the little town, and still farther beyond, part of it seen over Douglastown, lies Chatham, on the opposite bank of the river five miles away, with its saw-mills and pulp-mill, the smoke from which drifts slowly across the placid bay below to where on the opposite side of the river, the Dominion Pulp Company's factory adds its quatum to the whole.

From your feet stretches Newcastle to the bank of the river, along which are still other lumber mills, and a little up river lie the piers that support the great booms full of logs in the spring. Nearly everywhere you look there is a wharf in sight, that wharf is piled with deals ready for shipment to Great Britain, and in another part of the river front, if the season is the same as in which I visited this section—late September—preparations will be in progress for making the next season's cut of logs; supplies will be en route up stream, the same method as is used in the Restigouche, being employed here, and with the tidesmen everything will be stirring. So great is the pressure on the lumber mills in this region, that they are generally kept running night and day; electric light being used at night to obviate any danger of fire. These mills brilliantly lighted up can be seen from the river throughout the night, and the roar of the machinery, the backward and forward rattle of the carriage, and the droning hum of the circular saw are never still except on Sunday, and bespeak an industry which though large, will stand much greater development. The market is always good, but in the season of 1899 it was especially good. One of the chief operators in this section, speaking of the lumber conditions a short time since, said: "We lumbermen feel like millionaires this year." The most imposing buildings in Newcastle are,— the school building, the Dominion building and one or two of the banks. The hotels are excellent, the dwelling houses, for the most part unpretentious but substantial. So much has been said of the beautiful situation of various Maritime Province towns, that it may seem to the reader who has never seen for

Himself, that this phase of the descriptions is somewhat exaggerated; such, however, is not the case.

Both Chatham and Newcastle are situated on a broad, winding estuary, the towns themselves sloping up prettily from its shore. Newcastle is particularly well situated with regard to the drives which may be taken from this point as a centre. Two miles above the town is the junction of the northwest and southwest branches of the Miramichi. Roads run up both branches for some distance, and also up the more important of the side streams. A mile below the town is the mill cove, where a streamlet winds its way through a deep, wide gorge, from the upper part of which can be obtained one of the finest vistas in the Province, looking out on the Miramichi River. The road to the east passes through Douglastown, and away along the north shore, one branch running up through the most beautiful woodland, through Bartibog and on toward Bathurst. Bartibog is the centre of the finest caribou country in the eastern part of the Province. The mill cove is of especial interest, from an economic point of view, from the fact that here is situated one of the finest freestone quarries to be found—Fish's quarry. From this ledge of rock came the stone from which the Dominion Parliament Buildings at Ottawa were constructed. The quarry also produces fine quality grindstones and pulp mill stones. This section is exceedingly thick, and some very large monoliths can be taken out. The Intercolonial Railway is most conveniently situated for shipment, as it passes the head of the quarry itself. This part of Northumberland County seems to be especially favorable to the growth of white birch; nowhere have I seen the tree attain finer development than here.

Chatham, a town of about 7,000 inhabitants, lies on the southeast side of the Miramichi, five miles below Newcastle. It has every natural advantage that a modern town requires for rapid advancement, being situated on a fine harbor, the finest in the Gulf of St. Lawrence, at the head of Miramichi Bay. Newcastle and Chatham hold the key to the shipment of the vast quantities of lumber that

come every season from the interior of New Brunswick. No town in the Maritime Provinces, with the exception of St. John, leaves the visitor with the impression that it is more thoroughly alive than does Chatham. As is the case throughout the Maritime Provinces as a whole, a great interest is taken in educational matters. The school buildings are rapidly being improved, and the number of pupils speedily increasing. Here is situated the Miramichi Natural History Society, conducted much on the lines of the Natural History Society of New Brunswick, at St. John. It is an excellent institution; has the support and co-operation of the best people of the town and Province, and a most efficient staff of scientists in connection with it. Dr. Baxter, the Ornithologist, Mr. J. B. D. F. MacKenzie, the Entomologist, and Dr. Philip Cox the Ichthyologist, being the most prominent. The public buildings are a credit to the town, the Municipal Building being a fine example. It contains a spacious and beautiful Council Chamber, at one end of which is a mounted caribou head, which I shall never forget, it being one of the finest specimens I have ever had the good fortune to see; a library which is rapidly growing, and several other departments connected with the city's work. On the first floor is situated the fire apparatus, embodying the latest improvements in modern machinery of the kind. The building itself is a handsome brick and stone structure. I may say that the tendency throughout the Province is one of pride towards public works and buildings. The town hall at Chatham, though typical of what we should like, is above the average decidedly. The streets in this delightful town are well laid out for the most part, and throughout the resident section are lined with shade trees. Practically all religious denominations are here represented; the town being the seat of a Roman Catholic bishop. The climate is delightfully cool in Summer, and though cold in Winter, is not subject to rapid changes.

On week days the sing of the mills is ceaseless, and several other industries of no mean size, are in full operation. It is a great distribution point for fishery products, and is

connected with the Intercolonial Railway; while on the south side of the Miramichi River, lies twelve miles distant, a portion of the Canada Eastern connecting with the Intercolonial Railway at Chatham Junction. Trains from Chatham connect with every important train running down the Intercolonial Railway. If any other method of reaching this railway is desired, one may take the steamer—in the Summer time—which runs between Chatham and Newcastle, the latter town lying directly on the main line.

An industry which has developed entirely in the last few years in New Brunswick, and promises to assume proportions so gigantic as, at present, to be only faintly estimated, has chosen Chatham as one of its headquarters for the present. Here are situated the factories of the Dominion Pulp Company and the Maritime Sulphite Fibre Company. The latter factory is situated in the town of Chatham itself, while the former lies just across the stream about a mile distant. Let me give a short description of the works of the Maritime Sulphite Fibre Company: The main factory is situated near the water's edge in the down river portion of the town, and is a very extensive brick and steel structure. The "barking mill," where the bark is stripped from the blocks of spruce used in the manufacture of pulp, is situated in the higher portion of the town, between a quarter and a half a mile from the main factory, with which it is connected by a tramway. From this, a branch of the Canada Eastern runs down to the boom of the Company, where the large quantities of wood are hauled after being brought down stream, and where is situated a steam haul-up. The flat cars which are to take the logs up to the barking mill, are backed in beside this haul-up, and the logs are rapidly drawn up the incline by the powerful engine from the boom below, and rolled on to the cars. The speed with which cars can be loaded with heavy logs by this method is simply marvellous. From here the cars are taken to one side of the barking mill, about half a mile distant, where they are rolled off ready for further operations. In this mill they are cut up into three-foot lengths and the bark removed.



Canoeing at Campbellton, N. B.

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Canoe with Shoes on.



Hero's Rapids just above Chain of Rocks, Restigouche River.



Restigouche River a short distance above Red Pine Brook, looking up.



Part of Campbellton and Restigouche River.

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Morrissey Rock and Tunnel of Intercolonial Railway of Canada, Restigouche River,



Tom Ferguson's Rapids, Restigouche River, with Birch Bark Canoe coming through.



Shives' Mill and Lumber Yard at Campbellton.



Supply Scows going up to Lumber Camps.



Cross Point, Restigouche River.

After this process is finished (the improved machinery in use accomplishing it in a very short time) the blocks are taken by a conveyor which runs high in the air some distance from the mill, and at proper intervals, topples over, where they form an enormous pile over a hundred yards in length. Here they get pretty thoroughly dried, after which they are taken in small cars prepared for the purpose, down the tramway by a little locomotive, which is puffing its way back and forth all day long, the piercing shrieks of its shrill whistle being constantly on the air. These blocks are received in the wood-room of the pulp mill, where, by the aid of powerful machinery, they are torn up into small chips, ready to go to the digestors. These digestors are enormous iron affairs capable of holding seven tons of pulp at a time. Here the chips are boiled for a long time with sulphurous acid, which the Company makes itself by the aid of special furnaces and acid. From the digestors, the whole mass is allowed to flow into the digestive pits, where a portion of the sulphurous acid is reclaimed and the pulp thoroughly washed. By repeated treatment with water, the product then is of a light, yellowish white colour and very finely divided. From here it is ready to go to the elevators, and to them it is transported in little cars. The elevators carry it to the top of the building, and from here, until the completion of the process, the pulp is transported entirely by flowing water. Down it goes through floor after floor until it finally emerges from the steam-heated drying cylinders in a broad web almost as white as snow. There are various processes involved in the meantime, which—though they are of the utmost interest, even to one not scientifically interested—I must leave out on account of lack of space. The product, as we now have it, is ready for the paper makers, and it remains but to cut it and bale it properly, and it is ready for the market.

The Maritime Sulphite Fibre Company turns out no less than fifty tons (100,000 pounds) of pulp per day.

A short distance westward, on the opposite side of the street from the Sulphite Fibre Company's mill, is situated the lumber mill of Senator Snowball, the largest operator in

the Province, as before mentioned. The great proportion of the logs that come to this mill are towed in from other portions of Miramichi Bay, a considerable amount coming down the Tracadie River in Gloucester County. Senator Snowball has cut no less than forty million feet of lumber in a single year, this requiring the employment of about a thousand men. This, of course, is a very exceptional cut, it being estimated that the cut this year will not exceed twenty million feet. Mr. Ernest Hutchinson, at Douglstown, on the other side of the river, cut no less than ten million feet. As Mr. Hutchinson informs me that an average of about forty men are required to get out a million feet in a season, this amount would involve the employment of no less than four hundred men in the lumber woods, by this gentlemen alone; and these are but two of the mill properties at the mouth of the Miramichi River.

There is no better way of forming some idea of the number of men employed in the lumber woods in New Brunswick in Winter, than to take a trip on some of the main or branch lines of railway near lumbering sections, during that part of the Fall when the men are gathering to go into the woods. Nearly every wayside station furnished, at least, a few. The trains are patrolled by bosses, each offering the special inducement that his company may give to the men. I remember very well a trip from Tracadie around to Bathurst, along the Gulf Shore and Caraquet Railway in Gloucester County. Prospective lumbermen get in at every station, and one portion of the single passenger car was crowded with men; some were French, a few were Scandinavian, the majority were of British extraction; some were sailors, some were fishermen and some were lumbermen by profession, that being their steady employment in the Winter, while in the Summer they shifted for themselves as best they could; not a perfectly satisfactory way of living. Others were farmers who took this method of making a little extra money during the Winter season, and, as the men are found, and as can be imagined, there is little temptation to spend any considerable amount of money—the nearest store

often being forty or fifty miles distant — they usually came out in the Spring with a tidy little sum to their credit.

The lumber camp is one of the jolliest places on earth to spend a moderate amount of time, though I cannot say that I should care to live permanently under the conditions there found. Everyone is good natured, and under the influence of the clear, cold air of the winter, of tramping round through the snow all day, and chopping, the appetites are invariably good, and the diet, which consists for the most part of pork and beans, and tea, coffee and bread, never seems to cloy. The two most important personages in a lumber camp are the cook and the fiddler; next coming the boss, and finally the men themselves. Though the fiddler is one of these latter, and usually it so happens, of Acadian extraction, his accomplishment commands the respect of everybody, the boss and cook included, and no sooner is supper over than the pipes are lighted, and amid the clouds of smoke, is scraped out every variety of music that is not included in the term classical; and the marvellous step dances that are executed by the light of the smoky camp lanterns, would turn Carmencita green with envy.

The lumber camps are solid log structures which are comfortable in the coldest weather, and what I have said of the best game regions in the Province of New Brunswick, applies to nearly the whole western section of the County of Northumberland. Throughout one section of the County, through the Great Lake regions, the moose and caribou roam supreme, and to a great extent, unmolested. No doubt there are little streamlets here which human eye has never seen, and lakelets that have never borne the weight of a birch bark canoe. Along the Big Sevogle River, on the shores of Mullin's stream lake has fallen a mighty moose. Near Winigut and Waubigut, and on the barrens around the shores of numerous little woodland lakes, in an almost untrodden wilderness, the wandering caribou has roamed a step too far and his sprightly antlers have crashed thundering down through the undergrowth never to be raised again on the proud head that bore them. Along the Tomogonops,

where little brooks wind their ways through mighty forests, strays the red deer, fleeing like a golden shadow before the hunter has even a trace of his whereabouts. But the crowning sport of all lies practically on the boundary line, where meet the two greater counties whose names are indicative of the first meeting of the rulers of the sea, with the then owners of the land, Northumberland and Restigouche. This is the Bald Mountain big game region, generally supposed to be the finest section of its area in the Province; two lakes in the wilderness, at the head waters of two rivers, the Nepisiquit and Tobique, the first flowing into the Gulf of St Lawrence, the second into the Bay of Fundy. Between them is a portage of only three miles; the road lying between two wilderness hills, Bald Mountain and Twin Mountain, south of the shores of Nictor Lake rises another, and round the bases of all three, roams for the most part unmolested, the black bear. The best time to obtain a shot at the formerly much dreaded bear, though in reality, this animal is as much to be feared, under ordinary conditions, as a well developed rabbit, is during the season when the whole base of each hill is covered with a mass of luscious, ripe blueberries. The bears then roam through blueberry barren and hillsides, and often can be seen from some distance working away briskly gathering in food to supply the present wants and to lay up fat for the coming winter.

Dr. Philip Cox once told me an amusing instance of the timidity of the black bear once so common in New Brunswick: It was in the Summer, and he and a friend were fishing on the Squatook Lake. This year a species of fish mold had caused great mortality among the fishes in the lake and they would float ashore in considerable quantities, dead or dying. The bears, which are plentiful in that vicinity, immediately appreciated the situation—for a bear is omnivorous, and is as fond of an occasional fish diet as he is of berries—and probably liking a change like ourselves, began to feed on the fish wherever they could find them. Dr. Cox and his friend had gone ashore and were seated on the bank a short

distance from the shore having a smoke, when they noticed a bear approaching along the shore of the lake, now wading in the water and now pushing his way through the tall grass, splashing through the soft mud. He would occasionally stop, and raising his nose, scent carefully for dead fish. We had noted that there was a path around the shore left by the numerous bears that had come on the same errand. The bear was down the wind, and knowing that the sight of the animal is, as a rule poor, we decided to get behind a log and see how close he would come without noticing them. This they accordingly did, crouching down side by side with their heads in full view over the log. The path led between the log and the water, which was only four or five feet distant, and the bear came snuffing along. As he was about to pass them so closely that they could almost touch his side, they both sprang up and whooped. The bear snorted, grunted and squealed; all at once fell on his side in endeavouring to turn quickly in the slippery mud, covering the two laughing spectators almost from head to foot, and by a few seconds afterward, had fled, squealing and grunting, splashing through the water, and tearing through the rushes along the shore of the lake. After he had reached a safe distance, he took to the woods and was no more seen. This recalls the never-to-be-forgotten incident described by *Nessmuk* in "Woodcraft." The old man relates how he sat on a log until a bear, which had been hunting for beech nuts, in a more or less pre-occupied way, wandered up to about ten feet from him; then leaping into the air, with a Comanche war-whoop, he threw his hat at the bear, which after falling over and squealing, retired in anything but good order, much to the edification of the man who never had to lie to tell a good story. I, myself have had the pleasure of chasing a small specimen of the same species down a wide road. The race was a short one, and I was soon left hopelessly behind.

Upsalquitch Lake lying in this county has already been spoken of in connection with the river of that name. Though I have never visited any of the three lakes, Nictor,

Nepisiquit or Upsalquitch, I believe that this latter resembles, to a great extent, the other two. If the reports given by the Indians are correct, Upsalquitch is a finer moose and caribou ground than is the Bald Mountain region. Both of these places, however, can be taken in on the one trip. Probably the most convenient way of doing this would be to leave Andover, on the St. John River, and go up the Tobique to Nictor Lake and the Bald Mountain hunting ground. Here cross the three mile portage to Nepisiquit Lake, and after leaving here, down the Nepisiquit seventeen miles to Portage Brook, and thence to Upsalquitch Lake. About twenty-five miles southeast of Bald Mountain hunting region, is to be found another Bald Mountain in Northumberland County. This is the highest mountain in New Brunswick, 2700 feet in height. The first Bald Mountain on the shores of Nictor Lake, though several mountains in the Province bear this designation, is about 2550 feet in height, standing second in the Province. The Northumberland hill, among the Indians known as the Sagamock, like many of the notable physical features of this Province, is connected with the weird, quaint, beautiful legends of Glooscap, a mythical Indian deity, immortalized in the song, verse and story of Eastern Canada. The legends of Glooscap are interesting and well worth studying, though they necessarily find no place in a work of this sort.

It was mentioned earlier, in speaking of Gloucester County, that large quantities of smelt, one of the most delicious and delicate fish inhabiting the Gulf of St. Lawrence waters, each season run up the numerous harbors and inlets. As soon as the ice is strong enough to bear a man's weight in the month of December, elaborate preparations are made for catching these fish in large quantities. Nets with good sized mouths and long trails are put down through long, narrow slits cut in the ice, before each run of the tide, and are not hauled again until the run has ceased; the number of fish obtained in this way at times is almost unbelievable. There is an instance recorded of a man getting no less than

80 barrels of fish at one haul of the net. A barrel holds about 200 pounds, so there are 10 barrels to the ton of 2000 pounds; the entire haul then, amounted to about eight tons or 16,000 pounds. These smelt sell at three cents a pound to the dealers, the price received for single haul amounting to four hundred and eighty dollars, (\$480). As far as I know this is the record. To be very conservative let us suppose that a man obtained only 500 pounds of fish per day; at three cents per pound this would net him fifteen dollars (\$15) or about three pounds sterling.

When visiting Chatham, which is a great country for the smelt fishing industry, one man informed me that, on the previous day he had gotten two tons and a half of fish. In speaking to Mr. W. S. Loggie, one of the principal shippers in that district, he informed me that the price varied between two and three cents a pound. This gentleman also told me that he shipped between eight hundred and one thousand tons per season. This will give an excellent idea of the extent of the industry.

The chief market is found at present in the United States, but the high duty which the Americans have put on, makes the industry of much less value than it would otherwise be. In the bay around Newcastle and Chatham, there are between three and four hundred men employed in smelt fishing during the season. Along through the first of the season, the men are allowed farther up into the Miramichi River, but after New Years the law requires that they move down stream beyond Chatham, so as not to interfere with the spawning of the striped bass. About this period the ice becomes very much thicker than earlier, and the weather much colder. Without shelter, smelt fishing through the ice, with the cold Winter wind sweeping across the snowy surface for miles, necessarily is found to be a very cold operation. To obviate this difficulty, the fishermen build small shanties in which they place stoves. They are dragged out on the ice to wherever the net is to be placed, and it is one of the sights of the season to see the great white stretches of ice below Chatham, dotted with shanties for miles.

KENT COUNTY.

The County of Kent, situated north of Westmorland and Queens, and south of Northumberland, is washed on the east by the waters of the Gulf of St. Lawrence. It has an area of 1,149,000 acres. The County overlies the carboniferous formation, and throughout its western section, is a great forest region, and contains but few settlements.

The agricultural districts lie, as is usual with the eastern slope counties, along the shores of the Gulf. The chief coast waters are Kouchibouguac Bay on the north, and the various harbours further south. The finest of these harbours are those of Richibucto and Buctouche, at the mouths of the rivers of the same name.

The land in Western Kent, covered to a great extent with spruce, is perhaps the poorest for farming purposes to be found in the Province: but the eastern portion of the county shows a very different condition of things. As typical an agricultural section as can be found here is in the vicinity of Richibucto and Kingston, throughout the lower stretches of the valley of St. Nicholas river. The same type of farming land as is to be found along the shores of Gloucester and Northumberland Counties, exist here.

Practically all that is said of Northumberland County, as far as its general characteristics are concerned, may be applied to Kent. It has no harbour which is to be compared with that of Chatham; the two finest being Richibucto and Buctouche. Most of the coast is enclosed in beaches, forming miles and miles of continuous break water from a mile to three miles from the shore. These beaches or bars form broad lagoons as in the case of Gloucester County, and the Tabusintac in Northumberland County, which form excellent harbours for small craft. There is not, however, any great depth of water throughout most of them. In connection with the lagoons of Northumberland and

Gloucester Counties, those of Kent, especially in Kouchibougac Bay, are fine shooting grounds, brant and geese being obtained in large quantities every year.

The chief rivers are the Kouchibouguac, the Kouchibouguacis, Aldouane, the St. Nicholas (into which empties the Richibucto) the Buctouche and Cocagne. Along the estuaries of each of these streams are situated fine farms and mill properties for a considerable distance west.

The same remarks relative to the convenience with which various marine fertilizers may be obtained that were applied to the whole eastern slope, may be applied here, and the lands show the result in many cases of careful farming. There are, however, throughout Eastern Kent County, too many farms that are operated unscientifically, and with but second rate results. The farm of Father Michaud, of Buctouche, gives a fair idea of what can be done in wheat raising throughout this section. Here is situated one of the roller mills which have done such fine work throughout the Province in the last year or so. The Government has done much to encourage the establishment of these mills, the result being that a great deal of money, which formerly went out of the country in buying flour from the West, has been kept in the Province, and the amount of flour from home-grown wheat that is now manufactured in New Brunswick, is large and rapidly increasing. Varieties are coming into prominence, which have been the result of careful experimenting as far as hybridization is concerned; the result being that the tendency to rust has been, to a great extent, eliminated, and the wheat accustomed as thoroughly as possible to the climate of New Brunswick.

Though the Province can never pretend to be a wheat-producing country, when compared with the land further west, where the great prairies are so well adapted to the growth of that cereal in large quantities, still there is no reason why it should not produce sufficient for its own consumption, and perhaps a considerable amount to export, if it can do so at prices comparing with those of the Western product.

The fishing industry of Kent County is an important one, and employs probably one thousand men. Great quantities of herring, cod, gaspereaux, mackerel, salmon and lobster are obtained. As sections of the county, notably Buctouche, produce considerable quantities of oysters, the oyster beds off the Buctouche bar are famous far and wide, and in flavor are unexcelled. These are as a rule obtained in limited quantities, and there is a great demand for them. Oysters are to be found practically everywhere along the Gulf Shore in large or small quantities, according to the locality, but nowhere finer than in Kent County.

Kent is the site of a lumber industry which is not to be despised; shipping directly from the excellent harbors. The Intercolonial runs through Kent County west of the centre of the county from north to south. It is connected with Richibucto at Kent Junction by the Kent Northern Railway. What has been said relative to the various kinds of game to be found in Northumberland County, applies equally well to Kent. The various rivers teem with fish, and many fine hauls of trout have been taken from the numerous streams in the county.

WESTMORLAND AND ALBERT COUNTIES.

The Counties of Westmorland and Albert are situated in the extreme southeastern portion of the Province of New Brunswick. The area of Westmorland County, according to Mr. Chas. H. Lugin, is 387,300 acres, while that of Albert is 435,000 acres; the former having about twice the area of the latter county. Westmorland County has two distinct types of sea coast, more distinct, with the exception of the neighbouring County of Cumberland, in Nova Scotia, than are the coasts of any other single section of country in the world. The eastern shore of Westmorland County is washed by the waters of Northumberland Straits, a portion of the great Gulf of St. Lawrence, while to the southward and westward of the County, the Bay of Fundy rushes in and out of its

terminal bays with greater rapidity than does any tide in the world. The rise and fall of tide in Baie Verte, on the Gulf of St. Lawrence side is from four to six feet, while only fifteen miles across the Isthmus of Chignecto, the difference between high and low water is no less than fifty feet, this being the greatest tidal depth in the world. To the north, Westmorland County abuts directly on Kent County; on the west on Kings, Queens and Albert; on the south, Albert County, the Bay of Fundy, and Cumberland County, Nova Scotia.

Westmorland is one of the finest farming Counties in the Province of New Brunswick. The whole eastern portion of the County from Shediac Harbor in the north, down past Cape Tormentine and around into Baie Verte, comes under what I have classified as the eastern slope of the Province. It is drained by numerous rivers, none of which, however, are large, the most important being the Shediac River, the Aboushagan and the Gaspereaux. The western portion of the County is drained on the extreme west by the Canaan River which flows into the River St. John through the Washademoak Lake, the Petitcodiac River and its tributaries, the greater portion of this river forming the boundary line between Westmorland and Albert Counties, and the Memramcook River; the last two emptying into Shepody Bay at Dorchester, the shiretown of the County. The Tantramar River, the only other river of importance, flows through the famous marsh of that name for some twenty-five or thirty miles. At the head waters of this river and along its course, there is a considerable number of marshy lakes which have long been famous for the Dusky Duck and Snipe shooting which is to be found throughout that region. As the two sides of Westmorland County are so different, so is there a decided difference in the methods of farming, and all that has been said of the eastern slope of the Province holds true in the case of eastern Westmorland County. There are a great many excellent farms, the majority of which could be very much improved by intelligent work. It is a country of inlets, creeks, lowlands and

marshes, and of white sand dunes blown up by the fresh breezes of the Gulf of St. Lawrence. The harbors are, to a great extent, shallow, that of Shediac, in the extreme northern portion of the county, being the finest; Point du Chene, with its deep water wharves, which are situated here, being the Gulf of St. Lawrence terminus of the Intercolonial Railway of Canada. From here, on the arrival of passenger trains from the west, sail a line of steamships to Summerside, in the smallest of the provinces of Canada, "the garden of the Gulf," Prince Edward Island. Along this eastern slope, the uplands (the marshes are irregular and of inconsiderable area) is of excellent quality, and two varieties of fertilizer of great value are to be obtained for the hauling. One is mussei mud, and the other consists of the enormous quantities of different varieties of seaweed, which are thrown up along the shore. This is true of the whole eastern shore of Westmorland County. In the southern portion of the county, that washed by the head waters of the Bay of Fundy, Shepody Bay and Cumberland Basin, with their tributary rivers, entirely different conditions are to be met with. Here great stretches of marsh, or more properly dike-land, for they are not marshes in the ordinary acceptance of the term, are to be found. A marsh as generally understood, refers more especially to a wet ill-drained area along the edge of a river, lake or sea shore, on which the quality of hay is far from the best, and which are considered anything but desirable or valuable properties.

The so called marsh land of Westmorland and Albert Counties, and of the adjoining County of Cumberland, which has been previously described, are in some respects the most wonderfully fertile farming lands in the world, and for their origin and fertility are dependent entirely upon that peculiar body of water, the Bay of Fundy. As a natural fertilizer in the southern section of the country, instead of the black mussel mud of the Gulf shore, the red clayey silt which forms the resistant soil of the dike-lands, and is locally known as marsh mud, is carted in large quantities on to the uplands, and seems to have a more lasting effect than

any other manure, natural or artificial, yet known. Mr. Lugin in his hand-book on New Brunswick, published by authority of the Government in 1886, gives an instance of a man in Harvey, Albert County, who manured an upland field with marsh mud; applying 240 loads of mud to a four acre field. The field was so run out when he obtained it, that it only produced two tons of poor weedy hay. It took two men and a team twelve days to apply the coating of mud during the winter, and the next summer he cut from the same field twelve tons of first-class marketable hay. From that time until the book was published, the field had been growing heavy crops, and the line of demarkation between it and the surrounding fields was visible, after it had been cropped for seventeen years without further manuring. Another farmer gave Mr. Lugin the following instance of the remarkable effects produced by this natural fertilizer which costs nothing but the labour of hauling. The man in question broke up an acre and a half of upland and sowed it with oats; from this he obtained twenty bushel. In the Winter following he spread upon the field one hundred and fifty loads of marsh mud, and the following Spring he sowed it again with oats. The yield this time was one hundred and forty bushels. Very many instances of this sort can be cited, and to any farmer who knows his business, and the comparative value of fertilizers, these facts will come home strongly. It amounts to this, that if a farmer has an upland farm situated conveniently for obtaining marsh mud, he can manure it to his heart's content for the cost of the labour required in hauling the manure.

This marsh mud can not only be obtained around the shores of the Bay, but in every creek and river that is strongly affected by its wonderful tides. The two most remarkable of these rivers are indeed wonderful sights to any one not acquainted with the tides of the Bay of Fundy. These are the Memramcook and Petitcodiac before mentioned. The Memramcook, very much the narrower of the two streams, and very much shorter river, lies wholly within Westmorland County, and though only a little over twenty

miles in length is navigable at high tide for large vessels through almost half its entire course. If our first sight of the remarkable stream happens to be when the tide is in, and we see it as it winds through the marsh somewhere between Dorchester at its mouth and upper Dorchester, between four and five miles up stream, we will note that it is a wide, placid looking river, the waters of which are rendered almost entirely opaque by the great quantity of red silt or mud held in suspension. The water throughout the headwaters of the Bay of Fundy is characterized by its comparatively brilliant, brownish red colour. We see no particular current in the river, especially if we arrive practically at high water. If we stay but a little while, however, a remarkable change becomes apparent in an almost incredibly short time; the river which before was so placid, quickly changes into a boiling, eddying, swift-flowing stream, which rushes outward, sinking in level rapidly. As it goes it swirls past every obstruction, perhaps cutting under it and carrying it along with it. If we return four or five hours afterwards, the sight which meets our eyes, is one which will always be remembered by anyone who has not been fortunate enough to have before witnessed the vagaries of the Bay of Fundy. Where, but a few hours before there was a broad stretch of water, now nothing is left but long, furrowed, shining, slippery banks running down on each side; sloping to where a diminutive creek flows bubbling along toward the great bay below, and this is all that remains of the Memramcook River. An hour or two later, and the stream will be rushing in as swiftly as a little while before it was rushing out, and by the time the twelve hours has elapsed, the river will be again deep enough to float the largest warships in the British Navy, without danger of their touching ground.

Thus, the inhabitants at the headwaters of the Bay of Fundy have mile upon mile of natural dry dock at their disposal, and when a vessel needs to have some work done on her bottom, it is only necessary that she be towed to some convenient creek on the sloping beds of which she will

rest comfortably as the tide goes down, and then listed suitably.

What we have said of the Memramcook River, applies also to the Petitcodiac, a stream which is, however, fully four times as long as the first one described, the result being that it has a very considerable deeper channel throughout its lower stretches at low tide. The Petitcodiac River possesses one of the finest examples of a rare geographical phenomenon that is to be found in the world. Following the river up from its mouth, we find that it runs uniformly in a north-westerly direction until it reaches the city of Moncton, where it bends sharply until we see that its line of flow comes from a little south of west. On account of this peculiarity, the city of Moncton, before being named in honor of Lord Monkton, was known as The Bend. The river narrows uniformly from its mouth to Moncton and some distance above, and the tide which rushes up Shepody Bay is received in the open mouth and becomes more and more compressed as the tidal wave continues up river.

By the time Moncton is reached, this wave has culminated in what is known as a bore, and as the forerunner of the incoming tide rushes up stream in a wave extending across the river, and during spring tides, sometimes attaining a height at Moncton, of seven or eight feet. This height I calculated personally, and cannot vouch for its correctness, as the instruments at hand were exceedingly crude and were washed away before the observation was completed. The beginning of the bore can sometimes be noticed as far down stream as Stony Creek, seven miles below Moncton, while it can be traced up stream at times as far as Turtle Creek, some eight miles above that city. The height of the bore varies tremendously between neap and spring tides.

This phenomenon is one which always forms an attraction for the stranger, and there are but few cases of disappointed sight-seers. Probably the most satisfactory time to see the bore is at full moon, when it is due at Moncton between nine and ten o'clock. The bore is then at its height, and the

majority of people who prefer getting the first impressions of the phenomenon by moonlight, begin to crowd the wharves by between eight and nine. The exact time of the arrival of the so-called wave is apparently somewhat of an uncertainty; no doubt it is retarded or accelerated by the direction and force of the wind in the bay below.

Some little time after nine, when every eye is turned in a westerly direction toward the bend around which the bore is ultimately to come, a low rumbling roar is heard which gradually increases, and gives one unaccustomed to the sound, a sense of insecurity. It grows louder and louder, hardly sounding like the movement of water, and in a little while the waiters see a long, low, white wall of foam rush into the silver path of the moon, and stretching from bank to bank, swing majestically around the curve in the river, covering the thousands of acres of bare, glinting mud-flats, as it foams and roars toward the wharf on which the spectators are standing. At first sight its motion does not seem to be especially rapid, but as it rushes near enough for one to see the wavelets that are thrown up on its crest, the realization of the distance which it has travelled in such a remarkably short time, comes home, and again the sense of insecurity presents itself with redoubled strength. The mis-named wave swings its right flank in, until in the midst of the roar you hear the splash as the troubled waters strike the base of the wharf on which you are standing, and looking athwart the stream you see the long, white, slightly curving front that moves on like a dozen squadrons of cavalry in line. In an instant it has passed, and behind it comes a boiling, seething flood of brown water, thick with the mud that has been washed from the flats in the up stream progress of the bore. In a minute or two the water has increased considerably in body, and the current flows more quietly though hardly less swiftly. An hour sees a remarkable change in the river, and two hours and a half after the bore has past, over the flats where it rushed lies water enough to float the largest ocean steamer.

Thus we have a tide which takes but between two and three hours to rise a distance of thirty odd feet, while it occupies nine hours and some odd minutes in reaching low water level again. It runs out until met by the incoming bore. There is slack water at high tide for a little while, and then the outward rush begins, which is far more gradual than is the inward one.

In navigating the Petitcodiac River, as is the case, for that matter, with all the tributaries of the upper Bay of Fundy, very peculiar conditions obtain. The tide always has to be consulted, as the speed of the current is so great that even if a steamer were powerful enough to make her way against it readily, it would be very poor economy, and on the other hand, when she takes advantage of it, the most remarkable runs are made, a steamer of but ordinary speed making her twenty knots an hour without difficulty. As far as time tables are concerned, these conditions are necessarily not an advantage, but in the case of either steamer or sailing vessel whose ultimate desire is to get to its destination, the high speed of the tidal flow cannot be considered an unmixed evil. The tides are so thoroughly understood by the men who navigate these waters, that it is only very rarely that an accident occurs. The currents themselves have eroded and carried away practically every dangerous reef about the headwaters of the bay, and thus Shepody Bay, Cumberland Basin and Minas Basin in Nova Scotia are nothing but vast harbours.

Distribution of Population.

Along the Gulf of St. Lawrence coast are scattered a considerable number of small towns and villages, such as, Barachois, Aboushagan, Cape Bald, Shemogue, which possesses an excellent harbour famed for its oyster beds, Bayfield and so forth. Port Elgin and Baie Verte are both somewhat larger places; the former possessing a fine woollen

mill, and both are near the best lumber section of Westmorland County. The town of Sackville is situated on the upland that rises from the northern edge of the Tantramar marsh, while ten miles from it, almost directly west across the base of Cape Meranguin, lies Dorchester, the shiretown of the County. Sackville though a representative farming centre, is the site of several industries of other kinds. Here among other manufactories is situated the Fawcett foundry. Sackville is also the site of the University of Mount Allison College.

From this town running eastward to the extreme point of Cape Tormentine runs the New Brunswick and Prince Edward Island Railway. At the point where the railway terminates, the distance across the Straits of Northumberland to Prince Edward Island is but nine miles. Dorchester, as is also the case with Sackville, was the seat of a very extensive ship-building trade, but wooden shipping has declined, and with it has declined the beautiful little town that was once the pride of Westmorland County. It stands in one of the finest situations in the Province, just at the mouth of the Memramcook Valley. Built upon a rock, it is surrounded by dike-lands, which form here as elsewhere, one of the chief sources of wealth to its farmers. It cannot be credited that a town as well situated agriculturally as is Dorchester, and having as fine a harbour, its wharves being washed by the tide of Shepody Bay itself, can much longer remain in such an unprogressive condition, as has formerly been the case. Independent of the agricultural changes that are being so rapidly felt throughout the whole Province, the awakening has already begun. Not far from the village a copper mine, which before had been worked in but a desultory manner, has been taken hold of with a will, and now thousands of tons of ore are being turned out by the large number of men there employed.

Three miles above Dorchester in the Memramcook valley is situated the small village of Upper Dorchester, also on the line of the Intercolonial Railway, while eight miles above the shiretown is Memramcook, a considerable village of

which a large number of the inhabitants are of French extraction. A short distance below Memramcook is situated St. Joseph's College, a Roman Catholic Institution which has done some excellent work.

Shediac is a beautiful little town which, of late years, has become a great favourite as a watering place. It is situated on a harbour of the same name; its port, Point du Chene, at the mouth of the harbour having before been mentioned as the Gulf of St. Lawrence terminal of the Intercolonial Railway. Petitcodiac and Salisbury, the most important towns in the Western portion of the county, are both farming centres and both are advancing, but not as rapidly as one would wish to see.

MONCTON.

In the City of Moncton, next in size to St. John, are about ten-thousand inhabitants, and it is situated on the bend of the Petitcodiac River on the north side of the stream. Moncton contains the repair shops and is the official centre of the Intercolonial Railway, consequently derives a considerable share of its importance from this fact, the railway employes and their families making up a large proportion of the population. Besides the splendid railway facilities which are afforded, the city, being at the junction between the main line of the Intercolonial Railway and the branch which runs to St. John, it is situated at the head of navigation for the Petitcodiac River, surrounded on all sides by the carboniferous formation of this part of the Province. The city lies on level ground; its two most important suburbs are Sunny Brae and Lewisville.

Its market taps an excellent farming centre along the Petitcodiac valley both up and down stream, and is conveniently situated with relation to Coverdale in Albert County across the river. The streets are wide and for the most part lined with shade trees. The places of business and the churches are solidly constructed, and give the city a modern

appearance. To the north lie a number of moderate sized settlements, among which are Scotch settlement and Irish-town.

Four or five miles down the Petitcodiac valley, on the west side, is situated Fox Creek, while directly across the river in the neighbouring county, lies Lower Coverdale. By rail it is but seventeen miles from Moncton to Shediac on Northumberland Straits, and as the city is inclined to be rather warm in Summer, many of the residents have their summer houses along the shores of the beautiful bay that forms the harbour of that pretty little town. Moncton is the site of a number of manufacturing industries, the chief among which is indicated by the presence of a large cotton factory at the lower end of the city. This industry alone gives employment to five hundred hands.

The fisheries at the head waters of the Bay of Fundy are of great value, large numbers of shad which are generally conceded to be unequalled, due no doubt to the rich food found in the muddy waters of that portion of the bay, are obtained by the drift net method boats drifting up and down with the tide attached to one end of a long flat net. On account of the high tides here, another peculiar method of fishing can be resorted to. It has so far, however, been carried on only in a desultory manner, in each case, however, giving excellent returns. At low water when the tide is perhaps two miles away from high water mark, some quick bed that winds its way up through the flats is chosen, using it as a centre, and long fences are built running diagonally in towards the mainland, forming an obtuse angle opening inward; the apex of this V is in the centre of the creek. The fence constructed of spruce boughs is usually eight or nine feet high in the centre, tapering to about the height of four feet at the ends. These weirs as they are called, are usually built by several men, six or seven. The whole take their turns as the tides come around, each man having the catch of every, say, seventh tide. The fish come over and around the ends of this fence, as the tide rises, and as it falls, and they endeavor to go out with it they are caught in the wings

and keeping close to the bottom swim down towards the apex of the V, before they know that they are entrapped—the fence being a very long affair, each wing perhaps being a quarter of a mile—the tide has fallen until the top of the weir is above the water and as it sinks lower and lower a great number of fish become huddled into the creek bed at the point of junction of the two fences. A cart is now taken out and filled with the fish that have been trapped with so little labor, great quantities being taken in this way. In one of the weirs I have seen at once four or five sturgeon, perhaps six or seven feet in length, a few salmon, perhaps a half a dozen, a considerably larger number of shad, aggregating possibly three or four dozen of fish or in some cases upwards of a hundred, a great quantity of herring and gaspereaux, often to be measured by the barrel, and a multitude of smelt, tom cods and other small fry. Among these are to be found a very large number of flounders, one of the most delicious of all sea fish, closely resembling the English sole and here but very little appreciated. I have actually seen these fish together with smelt, tom cods and sturgeon taken by the farmers and used as manure on their lands. The result on the land was necessarily very fine, but it was one of the worst types of unintentional waste. I have several times taken a half bushel basket down to a weir when the proprietor was on his way to get a cart load of fish, and filled it with flounders and smelt and other fish by simply putting them into the basket.

ALBERT COUNTY.

Albert County lying to the westward and southward of Westmorland County, is about one-half the size of the latter and not by any means as well developed. Its innumerable small rivers and streams empty into the Bay of Fundy or its tributaries, the Petitcodiac River forming two-thirds of the boundary line between Albert and Westmorland Counties. The most important town in Albert is Hillsborough, situated

about seven miles above the mouth of the Petitcodiac. Hillsborough lies on a slope on the western side of the Petitcodiac, opposite the village of Beliveau in Westmorland County, where is situated one of the finest stone quarries of the kind to be found. As is the case with most of the towns we meet with throughout the Maritime Provinces, Hillsborough is a farming centre, but it is more than this, a short distance behind the town are to be found magnificent gypsum quarries, and the quality of plaster turned from these mines is unsurpassed. But some three or four miles south of the town are situated the world-famous Albert mines, where once in great quantities was found a mineral peculiar to that region, about which geologists, mineralogists and miners all alike were puzzled. Some called it an asphalt, some a bitumen, and some insisted that the product was nothing but a petroleum oil, which had been rid of many of its volatile products through the process of distillation. The fact remains that a large seam of this peculiar product was worked for a considerable period, finding a ready market at almost ridiculous prices for a coal, and finally the seam petered out, and, as the dip was very heavy, and the depth which had been attained, very considerable, it was no longer profitable to work it, and the Albert mine closed down.

This can be mentioned as but one of the instances of the occurrence of petroleum products throughout this Eastern section of New Brunswick, if indeed they were such. Throughout various portions of Westmorland County, as well as through Albert and Kent Counties, are to be found considerable and very frequent out crop of bituminous shale. In some portions of Westmorland County, especially near Memramcook, quantities of crude petroleum have been obtained from wells bored either for that or some other purpose. None of the counties have been thoroughly explored with regard to this matter, until within the last year or so, when the Government has taken the matter in hand, and now has drills at work, with the intention of discovering the possibilities of finding petroleum in large quantities. Every tendency as far as the formation is concerned, would

lead one to suppose that it is, at least, extremely probable that oil will here be found in paying quantities.

Just outside the mouth of the Petitcodiac River, is situated the beautiful village of Hopewell Cape, the shire-town of the county. This is but twenty-four miles from Moncton by river, and, as in the case of Hillsborough, is on the line of Albert Railway. It lies on a slight slope across Shepody Bay, toward Dorchester, while behind it rises Hopewell Hill. Some distance farther down the coast, four miles or so from the village, Shepody Mountain rises to a height of a thousand feet, and from its top can be obtained what is undoubtedly the finest view which can be found by the sight-seer in the southeastern portion of the Province. To the north stretches the valley of the Petitcodiac River with the smoke that hangs over Moncton in the distance. The view of Hopewell Cape is hidden by the intervening hills, but beyond lie the mouths of the two rivers, with Dorchester nearly twelve miles distant showing up to advantage. Along to the eastward lies the low rocky shore of Cape Meranquin, while across the two extreme head waters of the Bay of Fundy, Shepody Bay and Cumberland Basin can be seen the town of Amherst twenty odd miles away. To the southward the Bay of Fundy itself stretches out to Cape Enrage, the shore of Nova Scotia looming blue in the distance. To the westward of the mountain, the forest hides the numerous little settlements, and to the eye it seems as if there stretched an unbroken wilderness to the horizon.

Between the mountain and the village lies Cape Demoiselle, where are situated the famous Hopewell Cape rocks, the high cape being cut off sharply by the fierce tides of the bay, which have modelled the rocky face into a thousand and one quaint forms, which have been admired by travellers ever since the region was known. Here quaint archways are cut sometimes so small that a man can hardly crawl through the opening, at others, large enough for a load of hay to go through untouched. Now a deep cave can be followed in by the light of a smoky flickering birch bark

torch for some distance. The largest of these caves, the Devil's Den, is popularly supposed to run in a mile or so, and to end somewhere in the bowels of the earth, under Shepody mountain. I explored the place, about which I had heard so much, by the light of a birch bark torch, which went out after I had crawled perhaps twenty-five feet through a low arched gallery, and I was left to imagine the rest. An experience somewhat similar to this, probably in some fertile imagination, gave rise to the stories relative to the tremendous depth of the cave.

Sometimes the tide cuts entirely around some portion of the cliff more dense than the surrounding stone, and leaves it standing out, larger above, and with a rounded neck below. The frost and rains may, with their weathering, supply features perhaps very grotesque or perhaps very hard to trace. A little bit of soil will nestle in some crevice near the top of the rock; and in this will grow one or two spruce trees serving for plumes in the cap, and the rough resemblance to a human head and neck will be complete. There are a thousand variations in the forms taken on by these quaint stones, and one can well spend a day in admiring the variety and beauty of this novel type of landscape. Technically these rocks stand among the finest types of one class of tidal erosion in the world.

Farther down the shore are situated Riverside, Harvey and Albert, the latter place being the home of the present Lieutenant-Governor of the Province, Hon. A. R. McClelan, while below Cape Enrage on the west side of Salisbury Bay and at the mouth of the Upper Salmon River, lies the little town of Alma, one of the most beautiful situations in the county.

Those already mentioned are the most important towns and villages on the east side of the county, while in the west section, Elgin, connected with the Intercolonial Railway by the Elgin branch, running to Petitcodiac, is a busy little rural town

**DESCRIPTION OF TANTRAMAR AND OTHER MARSHES IN
THE REGION OF THE BAY OF FUNDY.**

It would be difficult, if not impossible, for anyone not acquainted with a region of the type of that surrounding the Bay of Fundy, or for that matter, with the Bay of Fundy itself, to form any conception of what this typical dike-land or so-called marsh, which surrounds the extreme headwaters of that peculiar body of water, could be like.

To the Bay of Fundy and its peculiarities, the Tantram-mar marsh, so-called, and the other marshes like it, but of less extent, owe their origin.

The Bay of Fundy is a long arm of the sea, extending for 150 odd miles in a northeasterly direction, between New Brunswick and Nova Scotia, and narrowing from a breadth of some 70 miles at its mouth, to only two or three miles at its extreme headwaters. The shores of the Bay are comparatively smooth, the only indentations being the proportionately small mouths of the well formed harbours or inlets, thus the tidal wave of the North Atlantic is received in an open mouth which narrows gradually, running towards the head, and finally the tidal wave, which at first was low, and of great extent is heaped up into a tide that is unequalled in any part of the world.

The height of this tide culminates in Shepody Bay, at the point where the mouths of the Petitcodiac and Mcnamcook rivers converge to their junction. At the point between these rivers, the tide has a rise and fall of about 50 feet, and a few miles below this, at Buck's Flats, the distance between the extreme high and low water marks is about three miles. It is safe to say that nowhere in the world is this distance equalled.

During the spring tides, the tide in this bay, as in other cases, rises considerably above its average high water level. In this instance, of course, the difference is very much more

marked than would be the case if the rise and fall were of the ordinary type—from four to six feet. The result is that there are vast stretches of flat country, which, by the deposit of silt during the spring tides, have been raised above the level of ordinary high water mark.

It can be readily seen that by closing out the sea, by the use of sea-walls, or dikes as they are here called, which are built of sufficient height to keep out this spring tide which may have a height three, four or even six feet greater than the average, it is possible to convert the vast flats, which are subject to the inroads of the sea during spring tides, into comparatively dry plains, to which the sea may find its way, only from the breaking of the dikes, or when some special gap is opened for its ingress. The closing off of these marshes from the sea brings about a material result. The land is thus freed from salt, and, as it is naturally very fertile, is then rid from the coarse salt hay, which originally grew upon it, and which is very readily replaced by better qualities of so-called English hays, such as Timothy, Couch, Browntop, etc. In a peculiar manner, this land is self-sustaining, for the original silt is so productive of heavy growths of hays and grains, that no other manure is needed; and the only thing necessary to cover this land with the desirable coating of silt, when the other is run out is, in the fall, after the crops have been gathered, to open a way by which the sea may flow over the dike-lands, during the spring tides in winter, and deposits a fresh layer of the life-giving soil.

The greatest amount of labor, in connection with these marshes, is that entailed in constructing the sea wall to protect them along the sea front and the banks of the numerous creeks. These creeks are simply the estuaries of streams which flow down from the mainland, and after a long winding journey, course out through the flat dike lands into the open sea.

The other less onerous labor, in connection with making these marshes fertile, is that required in the draining. On account of their extreme flatness, and the lack of porosity of

their soil, the dike lands have to be carefully and systematically drained to prevent the possibility of surface water remaining for any length of time in the position to which it may flow. The drains are made at right angles to each other, sometimes as much as four feet in depth and very narrow; these lead into larger main drains, which are finally conducted into some convenient creek bed, thence out to the dikes and through the dikes to the sea.

If an opening were left in the dike, of course, the sea could as readily flow in as could the surface water flow out; to obviate this a specially constructed aboideau or sluiceway has to be devised with a swinging valve gate, which will admit of the out-flow of surface water, but which will immediately close when the tide backs up against it.

The silt of which these marshes are formed, is of a brownish red color, of a clayey constituency, and is deposited to a very considerable depth some distance from the uplands. Owing to the presence of iron salts, and to their different stages of oxidation, the clay presents a considerable diversity in color in different situations.

It may be said however, that all alike is wonderfully fertile, and on account of the ease of cultivation, the lack of any expenditure necessary in maintaining these dike-lands and keeping the dikes and ditches in repair, when coupled with the enormous fertility, necessarily renders these lands a very valuable possession to any farmer.

Suppose that during some particular winter, the water is let in on some portion of marsh to deposit its coat of silt. In the early Spring, no sooner would the breach in the dike made for the purpose of letting in the water have been closed up or the gate of the aboideau, if that were the method employed, dropped, than a crop of coarse salt hay would spring up with tremendous rapidity of growth, clothing, in a few days, the miles and miles of level brown flats, with a coat of the greenest verdure under the sun. During the first season, after the water has been admitted, the crop would be a comparatively poor one of salt hay, due to the large amount of saline elements remaining in the marsh in that season, and

not thoroughly eradicate until the next year. The following Summer, however, the newly-manured dike-lands would produce magnificent crops of the best quality of English hay. This will continue year after year until perhaps six or seven years, varying with the quality of the marsh, have elapsed. Then the crop of English hay becomes poor, and for four or five years longer the land will grow very fine and luxurious crops of broad-leaf hay. This hay often attains an average height of from four and a half to five feet, while some of the blades may attain to a height of six, seven or even eight feet. It is a very heavy grass of excellent quality.

The largest of all the dike-lands at the head waters of the Bay of Fundy, and perhaps the most typical of them all, is what is generally known as the Tantramar marsh, famous both from its agricultural and literary aspect. This beautiful stretch of hay land is situated to the south and east of Sackville, between that village and the boundary line between New Brunswick and Nova Scotia. It extends in one direction, without interruption, for $13\frac{1}{2}$ miles and varies in width from four to eight miles. This is the largest uninterrupted area of dike-land in the Maritime Provinces; another one, almost equally large, is situated on the Nova Scotia side, near the town of Amherst in that Province.

The sight on the Tantramar marsh, during the later period of the summer, near the time for harvesting English hay, is one that has but to be seen to be remembered. On the road between Amherst and Sackville, which traverses the marsh, and which is as level as a floor, one can see to the horizon, on either side, nothing but a vast plain of waving hay. From your feet stretch for mile after mile this enormous level sea of grass, undulating under the influence of the breeze that is practically always blowing from the Bay of Fundy, fresh and clear, across these great uninterrupted stretches. Here and there run the higher green ridges where the dikes are to be traced, while on every hand are seen the barns which are soon to hold the crops that are now waving before you.

Later in the year (in Autumn) the great hay-stacks—for the barns are incapable of holding the enormous amount of hay which is grown on these wonderful self-sustaining marshes—form a prominent and quaint feature of the landscape.

The average price of dike-land in this region, varies from one hundred (\$100) dollars, about £20, to one hundred and fifty (\$150) dollars, about £30 per acre, according to the situation, to the advantages in connection with the upland, and to its own fertility.

It is not to be supposed, however, that hay is the only crop that can be raised on this quality of land. Oats makes a most successful crop, as under certain conditions, do other grains.

One may safely say that one-half the possibilities of this type of land, with regard to the variety of crops which can be raised upon it, are not known. Very little experimenting has been done, and what has been done has not been carried on in a very systematic manner.

Though moderate sized marshes are to be found some distance from the head-waters of the Bay of Fundy, the largest are of necessity, to be found where the tides are the highest. There are some excellent dike lands in the vicinity of lower Albert County, and in the region around the head of Shepody Bay, especially near Dorchester, as also through the Cumberland Basin district where the Tantramar is situated. Around Minus Basin, in Nova Scotia, are to be found other very extensive marshes, much resembling those previously described. A considerable quantity of the hay which is made on these marshes, is taken immediately to the uplands; some of it, however, for convenience, is stored in barns on the dike-lands themselves, and a considerable amount on the more extensive marshes, as in the case of the Tantramar, is made into large cocks; after this has been harvested, great quantities of it are pressed at the barns on the marshes, ready for shipment. On account of its fine quality it commands a ready market, and unfortunately for the farmers in this region, furnishes a strong incentive to

make their farming consist of raising hay and selling it to the exclusion of every other branch of the industry. With facilities such as are here presented, it can be readily appreciated that no more ideal situation can be found in any country, for extensive stock raising, either for dairying purposes or for meat; and with a country now as close to the British market, and having the virtual distance shortened every day by the better facilities in steamship transportation, it is obvious that a chance such as this, should form a striking attraction for the class of farmer who knows his business and attends to it as he should.

CHARLOTTE COUNTY.

The County of Charlotte lies in the extreme southwest of New Brunswick. According to Mr. Lugin, the County has an area of 822,500 acres. The Island of Grand Manan lying well out in the Bay of Fundy together with the Wolves, Campobello and Deer Island and the host of little islets lying further inward, is a portion of Charlotte County. The County borders on the north and east of York, Sunbury, Queens, Kings and Saint John. On the west it is bounded by the Saint Croix River following the boundary between Canada and the United States at this Point. On the south of the County flow the waters of the Bay of Fundy. The agricultural sections are situated above the coast and much resemble those of western Saint John County, having a considerable area of marsh land. The shore line is cut into a large number of bays and harbors, the most important of these being Mace's Bay and Passamaquoddy Bay, the latter being defended from the sea by the great number of outlying islands, the whole forming a fine harbor. On a point running out into the bay is situated the town of Saint Andrews, the shiretown of the County. Saint Andrews is the centre of one of the largest fishing industries of the Province, the surrounding waters swarming with various varieties of fish. The canning of sardines has become

an important industry here for the last few years and is capable of great expansion. The town is situated at the mouth of the Saint Croix River and in the last few years has attained great favor as a watering place among Americans. Both here and at Campobello fine hotels have been erected, which are capable of accommodating large numbers of guests. The County has a very considerable lumber trade not however, comparing with that of Saint John or Northumberland. At Saint George, a pretty little town lying a few miles up the Magaguadavic and near here are situated fine red granite quarries, giving employment to a considerable number of men. St. Stephen, another of the more important towns of the County is situated on the Saint Croix River, opposite the American town of Calais. The interior of the County is well provided with lakes, many of which contain great numbers of fish. Throughout the northern section of the County considerable quantities of red deer are killed. The sections is well provided with railways connecting with Saint John and the Intercolonial through the Shore Line and at McAdam Junction north with the Canadian Pacific Railway, so that it is most conveniently situated as far as its transportation facilities are concerned. Besides there is every facility for transportation by water, the steamers from Saint Andrews connecting with the boats of the International Line running between Saint John and Boston. At Milltown adjoining Saint Stephen, is a large cotton mill which gives employment to a considerable number of hands.

GOVERNMENT.

THE DOMINION.

The form of government in New Brunswick and in the Dominion of Canada is modelled upon that of Great Britain, but the system of popular government has been extended to embrace municipal matters. There is no privileged class or hereditary legislature.

There are three governing bodies (so to speak) in Canada; the Parliament of Canada, the Local Legislatures and the

City and Municipal Corporations, and in the choice of the membership of these bodies, every man, practically speaking, has a voice. The system of self-government is therefore about as complete as can be desired.

THE GOVERNOR-GENERAL.

At the head of the Government of the Dominion is the Governor-General, who is the representative of Her Majesty the Queen, is appointed by the Crown, and usually holds office for five years. His powers in relation to matters coming within the jurisdiction of parliament are similar to those exercised by the Queen, but are modified somewhat by the circumstances of the Dominion, and the results to be anticipated in the independent working out in a new country of the principles of the British constitution. The official residence of the Governor-General is at Ottawa, in the Province of Ontario.

The Parliament of Canada consists of two branches: the Senate, and the House of Commons.

THE SENATE.

The members of the Senate are appointed by the Governor-General on the advice of his council. Their tenure of office is for life, or until they have become disqualified under the Act regulating their appointment. Members of the senate receive a sessional allowance of \$1,000 for each session of parliament, besides an allowance for travelling expenses. New Brunswick is entitled to be represented by twelve senators. To be eligible for appointment to the senate a person must be a male of the age of thirty years, a British subject, possessed of property, above all incumbrance and liabilities, to the value of \$4,000, and a resident of the province for which he is appointed.

THE HOUSE OF COMMONS.

The House of Commons is elected by ballot every five years, unless sooner dissolved. A candidate for a seat in the House of Commons require no other qualification than is necessary to entitle him to vote at the election of a member. New Brunswick elects sixteen members of the House

of Commons: the City of St. John electing one, the County of St. John two, the electoral district of Victoria, which includes the Counties of Victoria and Madawaska, one, and each of the other counties one. This representation is subject to increase after each decennial census until a specified maximum is reached. A member of the House of Commons receives a sessional indemnity of \$1,000 for each session besides an allowance for travelling expenses.

There must, by law, be a session of parliament once in every year.

THE MINISTRY.

The administration of the Government of Canada is vested in twelve heads of departments, with whom are usually associated the Speaker of the Senate, and sometimes one or more members without office. The Departmental Members are known as Ministers, and include the Ministers of Justice, Public Works, Finance, Inland Revenue, Railways and Canals, Militia, Agriculture, Customs, Marine and Fisheries, the Interior, the Secretary of State, and the Postmaster General.

THE PROVINCIAL GOVERNMENT.

The local affairs of the provinces, including several classes of subjects not strictly local and specified in the British North America Act, are dealt with by the Provincial Legislatures.

THE LIEUTENANT-GOVERNOR.

In each province there is a Lieutenant-Governor exercising in respect to matters within the jurisdiction of the Local Legislatures the same powers as the Governor-General exercises in respect to subjects within the jurisdiction of the Canadian Parliament. The Lieutenant-Governors are appointed by the Governor-General. The Lieutenant-Governor of New Brunswick has a salary of \$9,000 per annum paid by the Dominion.

THE EXECUTIVE GOVERNMENT.

The administration of provincial affairs is vested in an Executive Council of nine members.

The public lands are under the control of the Crown Land Department.

THE LEGISLATURE.

The Legislature consists of a Legislative Council not exceeding eighteen members and a House of Assembly of forty-one members. Members of the Legislative Council are appointed by the Executive Government. To be eligible a person must possess real estate to the value of \$2,500, be a British subject of the age of at least 25 years and reside in the Province. The term of office is for life or until the persons are disqualified under the statute creating the office.

The property qualification of a member of the House of Assembly is the possession of freehold or leasehold estate to the value of \$1,200 over and above incumbrance. A candidate must also be of the age of 21 years and upwards, and a British subject.

The members of the House of Assembly hold their seats for four years unless the House is sooner dissolved. There must be a session of the Legislature every year. Members of both branches receive a sessional allowance of \$300 besides travelling expenses.

THE FRANCHISE.

Every male person, being a British subject twenty-one years of age and possessed of real estate to the value of \$100; or personal estate to the value of \$400, or both together to the value of \$400, or an annual income of \$400 is entitled in New Brunswick to vote for members of the Assembly. This practically gives a vote to every industrious man. Any changes likely to be made in the qualification of voters will be to reduce it, so as to extend the franchise to any deserving citizens who do not come within the present qualification.

The City of Saint John elects two members to the House of Assembly; the City and County of Sariat John elect four members; the Counties of York, Charlotte, Northumberland and Westmorland elect four each; the Counties of Kings, Carleton, Gloucester, Kent, elects three; the Counties of Queens, Sunbury, Restigouche, Albert, Victoria and Madawaska each elect two.

THE MUNICIPALITIES.

The rate-payers in each county of New Brunswick are by law a corporation, and have full control of all local matters, such as in England are vested in the Courts of Quarter Session, Parochial Boards and other similar institutions. Each parish in a county elects two or more councillors, and the councillors so elected form the governing body of the county. Every rate-payer is eligible to be elected a member of the Municipal Council, and all rate-payers of the parish have a voice in the election.

The Municipal Council has, as a general rule, two sessions a year. It possesses very large local power, as it imposes the direct taxation necessary for all County purposes, such as the erection of Court Houses and Gaols, the payment of Constables and Crown Witnesses and other incidental expenses connected with the courts, the salaries of Municipal Officers and such other expenditures for municipal purposes as the Council may legally incur. It also directs the assessment of the Poor-rate when the Overseers of the poor in any Parish request that a rate shall be levied, and appoints all Parish and County officers.

It will appear from this review that the system of government in operation in New Brunswick is essentially popular, and is calculated to develop in each individual a sense of the privileges and responsibilities of citizenship. Every man who is industrious may have, if he desires it, a voice in the management of the affairs of the country, from the levying of an assessment for some trifling local service up to the determination of the most important questions affecting life

and property and the welfare of the Dominion. In no part of the world are the people more thoroughly imbued with the principles of self-government than they are in New Brunswick. By preserving the form of monarchy stability of government is assured, but by the wide diffusion of the franchise the principles of the broadest democracy have full room to play. The settler from the United Kingdom will find in the Province the same complete freedom of thought and speech as he enjoyed at home, and perhaps in a greater degree, since the traditions and family prestige, which have more or less effect in a country like Great Britain in shaping public opinion, have no influence in this Province. The fullest citizenship is a legacy which every man in New Brunswick can leave to his children.

REVENUE AND TAXATION.

The expenses of the Provincial Governments are defrayed out of subsidies, so called, paid by the Dominion Government as well as moneys received from local sources. The Provincial Governments do not impose direct taxation. In New Brunswick the principal source of revenue at present, other than the Dominion subsidies, is the Crown Lands, or more properly speaking, the lumber cut upon Crown Lands.

The following are the estimated receipts of the Local Government for the year 1899:—

RECEIPTS.

Dominion Subsidies,	\$ 483,501 07
Territorial Revenue,.....	184,984 50
Fees Provincial Secretary's Office,.....	10,291 80
Lunatic Asylum.....	6,117 91
Agriculture.....	75 00
Private and Local Bills.....	1,206 66
Taxes Incorporated Companies,.....	25,063 96
Succession Duties,.....	30,232 78
Queen's Printer,	1,157 55
Liquor Licenses.....	20,743 32
Miscellaneous Receipts.....	864 92
	<hr/>
	\$764,239 47

EXPENDITURES.

Administration of Justice...	\$ 15,909 11
Agriculture.....	34,830 72
Auditor General,.....	2,400 00
Boys' Industrial Home,.....	1,200 00
Contingencies,.....	16,830 63
Deaf and Dumb Institution, Fredericton....	500 00
Education,	202,704 61
Elections,.....	7,458 67
Executive Government,.....	30,480 00
Fisheries Protection,.....	1,477 50
Forests Fire Protection,.....	1,300 00
Free Grants Act,.,	2,036 29
Game Protection,	7,974 65
Immigration,	1,334 75
Interest (not chargeable to Special Funds)...	124,430 96
Legislature,	20,105 90
Lunatic Asylum Maintenance,.....	42,000 00
Mining,.....	738 79
Natural History and Historical Societies,....	350 00
Public Health.....	1,382 23
Public Hospitals	6,000 00
Public Printing,.....	11,785 30
Public Works,.....	197,882 62
Refunds Crown Lands,.....	148 75
Stumpage Collection.....	10,750 00
Surveys and Railway Inspection.....	2,908 52
Sportsmen's Exhibition, Boston, 1898,.....	655 25
Unforseen Expenses,.....	4,069 10
	<hr/>
	\$749,644 35

MUNICIPAL TAXATION.

The rate of municipal taxation varies in different localities, but excepting in the cities and incorporated towns is so low as to be almost nominal. In the country districts the taxes are levied, first by a poll tax equal to one-sixth of the whole sum to be raised, of which each male resident of

the county over the age of twenty-one years pays an equal proportion. This poll tax varies in different localities from thirty cents to eighty cents, or say from one shilling and sixpence to three shillings and sixpence per head. The remainder of the assessment is levied upon real and personal property, this, including assessments for all purposes, except the district assessments for schools, varies from one-third to one-half of one per cent. on a fair valuation of property; thus the taxes on property or income to the value of \$100 would be from thirty to fifty cents, or from one shilling and sixpence to two shillings and sixpence. At the same time that the county rates are collected, and included in the above estimate, a sum equal to thirty cents, or one shilling and sixpence, per head of the population of the county is collected to form what is known as the county school fund, which is disbursed on the order of the Chief Superintendent of the Provincial Board of Education to the trustees of the school districts, to assist in paying the salaries of teachers.

The rate of distribution is \$30 per annum for each qualified teacher in the district, and the balance according to the average number of pupils attending schools in the district compared with the whole average in the county.

In many Parishes there is no assessment for the support of the poor, for the reason that there are no paupers to support.

The whole Province is divided into school districts and the rate-payers of each district meet annually and by a majority vote elect trustees to manage the schools, and also at the same time determine how much money shall be raised in each district for school purposes, to supplement the Provincial grant and their proportion of the County Fund. This amount depends entirely upon the decision of the rate-payers themselves, and is large or small as occasion demands; every dollar that is thus raised is expended for the maintenance of schools in the district, and free education is given to every child whether its parents are able to pay their share of the taxes or not.

All municipal taxation, except the County School Fund assessment, is directly under the control of the rate-payers, being imposed by councillors of their own choosing.

EDUCATION.

New Brunswick maintains a University known as the University of New Brunswick, the degrees granted by which are recognized everywhere. It is established at Fredericton and is maintained by a Provincial endowment, by revenues from real estate and by fees from students. It is well provided with apparatus and has a good library. There is no theological chair and the instruction is non-denominational. In order to assist those who may not be able wholly to meet the cost of attending the University, a number of students are admitted free under certain conditions, and there is in addition an excellent system of scholarship or bursaries.

The Methodist Church maintains a college at Sackville, Westmorland County, where a course in arts or divinity is given at the option of the student.

The Roman Catholic Church maintains a college at Memramcook, Westmorland, where a course in arts or divinity is given at the option of the student. Instruction is given at Memramcook both to French or English students.

The great educational factor in New Brunswick is the Common School System, which is designed to give every child in the Province a sound English education. This system is based upon the principle that the property of the country should pay for educating the youth of the country, and, consequently, it requires every person to pay his share towards the maintenance of schools. This system has been in force for twenty-eight years, and has become thoroughly interwoven into the institutions of the Province.

At the head of the educational system is the Provincial Board of Education, consisting of the Lieutenant-Governor, the Chief Superintendent of Education, the President of the University and the members of the Executive Government.

A Normal, Training and Model School is maintained at Fredericton where teachers are trained in the theory and practice of teaching.

Although the basis for the maintenance of schools is direct taxation upon the people, the Provincial Government contributes largely towards the salaries of teachers, the Government allowance for this purpose being higher in New Brunswick in proportion to the local contributions than in any other Province of Canada. Common School Teachers receive from the Provincial Treasury, as follows:—

First-class Teachers, Males	\$135	per annum.
“ “ Females	100	“
Second-class “ Males	108	“
“ “ Females	81	“
Third-class “ Males	81	“
“ “ Females	63	“

Reference has already been made to the County School Fund from which a sum is paid to the trustees of each district to aid in the maintenance of the schools. The school districts are so laid out that the children of every settler shall have a school within convenient reach of their home. In each district are three trustees elected as already stated, by the rate-payers. One of the trustees retires annually but he is eligible for re-election. The trustees decide how many and what grades of schools shall be maintained during the year and at the annual meeting the rate-payers determine what amount to be raised by assessment upon the district, shall be appropriated for school purposes. The schools are subject to the supervision of Inspectors appointed by the Board of Education and to the general superintendence of the Board. There are special provisions in the law for cities and incorporated towns.

Fifteen grammar schools, one for each county, and nearly seventy superior schools, are provided for by law, for purposes of a secondary education, and form a part of the general school system. These, and the common schools, are provided for by legislative grants to be supplemented by

grants from the districts or towns in which they are established. The teacher of a grammar school receives from the government \$350, and the teacher of a superior school \$250, conditioned upon the payment of an equal amount by the local board.

In addition to the Provincial grants for common schools provision is made to aid poor districts, which receive to the extent of one-third more from the Provincial grants, and one-third more from the county fund. This enables the settlers in the newest and poorest settlements in the province to maintain schools during the whole year.

There is also a legislative grant in aid of school-houses for poor districts.

Under this admirable system schools have been established in all parts of the province, a large and efficient staff of teachers is maintained, and generally the whole educational service is in a most satisfactory condition. The total annual expenditure upon the common school system is fully \$500,000 and there are about 70,000 children upon the rolls, with an average attendance during the year of about 58,000. This in a country largely made up of new settlements, is a most excellent showing. The new settler in New Brunswick may rest assured that he can secure for his children, at a comparatively small cost, the priceless boon of a good education.

MEANS OF COMMUNICATION.

HIGHWAYS.

For purposes of internal and external communication New Brunswick is exceedingly well provided. The highway system is excellent, and the roads are kept generally in good repair with substantial bridges over the streams. Every settled locality has either a great road or one or more by-roads running through it, and there is not a toll-gate on either turnpike or bridge from one end of the province to the other.

The roads are maintained by grants from the Legislature and by what is known as statute labor. The money grants amount to about \$170,000 a year, the statute labor, nominally, to twice as much. The money grants are expended in part by officers appointed by the government and in part by officers appointed by the municipalities. The statute labor is a tax payable in work upon the roads in the district in which the individual resides. Every male inhabitant over 21 years of age and under 60 must do three days' work upon the roads, with an additional amount apportioned on the property of the individual. An average tax would be five day's work. This may be commuted by a payment of 50 cents in lieu of each days' work. There is also a tax of half a cent an acre upon unimproved wilderness land in certain cases. This is applied to the making of roads.

WATER COMMUNICATION.

The numerous Ports of the province are constantly visited by ships from all parts of the world, and St. John is, summer or winter, a point for the arrival and departure of sea-going vessels. A large fleet of steamers and sailing vessels maintain communication between the Province and Great Britain.

Regular lines of steamers ply between St. John and St. Stephen, St. Andrews, Eastport, Portland, Boston, Yarmouth, Digby, and Annapolis. Fine steamers go up the St. John to Fredericton, and smaller steamers run to Woodstock. Other large steamers run regularly to the Grand Lake, Washdemoak Lake and Belleisle Bay. There is steam communication between St. Stephen and St. Andrews, between New Brunswick and Prince Edward Island, between the towns on the Lower Miramichi and between several points on the Bay Chaleur. In addition to these lines of steamers a large fleet of coasters attends to local business, and gives cheap communication with the princial ports of the United States. The competition between the carriers by land and by water insures cheap transportation.

RAILWAYS.

In proportion to its population there are more miles of railway in New Brunswick than in any other state or province in America. The total number of miles constructed and in operation at present is about 1,500, or one mile to ever 250 of the inhabitants. In Great Britain there is about one mile of railway to every 3,500 of the inhabitants. About \$20,000,000 has been expended on railways in New Brunswick.

The Intercolonial Railway was built under the special guarantee contained in the Act of Union between the Provinces to give connection by rail over British territory between the Maritime and Interior Provinces of Canada. The Intercolonial extends from Quebec to Halifax and St. John, its total length with its branches being 845 miles, of which 354 miles are in New Brunswick. It extends from St. John to the Straits of Northumberland, through the Counties of St. John, Kings and Westmorland, and from the Nova Scotia boundary to the Quebec boundary, the whole length of the province from north to south, through the Counties of Westmorland, Kent, Northumberland, Gloucester and Restigouche. From St. John to Quebec, over the Intercolonial, is 779 miles, from St. John to Halifax 276. It is the great channel of trade between the interior and the Maritime Provinces, and in New Brunswick it affords a most valuable outlet for the produce of all the counties through which it passes.

The New Brunswick Railway now the Atlantic division Eastern terminus of the Canadian Pacific Railway which runs entirely across the continent from St. John to Vancouver on the Pacific slope, was originally a line from Gibson, opposite Fredericton, to Edmunston, in Madawaska County, but the company owning it have absorbed several other lines in western New Brunswick and built several branches, including one into Maine, so that it now operates 443 miles of railway. The line begins at St. John, where it connects with the Intercolonial, and extends to St. Andrews, St. Stephen. Fredericton, Woodstock, Grand Falls and

Edmunston, in New Brunswick, and Fort Fairfield, Houlton and Presque Isle, in Maine. It has a line from Woodstock to Fredericton on the eastern side of the St. John. It passes through St. John, Charlotte, Kings, Queens, Sunbury, York, Carleton and Madawaska Counties, and will probably be extended to Quebec. At Vanceboro it connects with the United States railway system, and affords the great agricultural counties of New Brunswick the best of facilities for the shipment of produce to the United States markets. At Gibson it connects with the Northern and Western Railway to Chatham on the north shore of the Province.

The Shore Line, is a railway 80 miles long running from St. John to St. Stephen by way of the coast through St. John and Charlotte Counties. It passes through the thriving town of St. George; where are very extensive quarries of red granite and at other points on its route the outlets of several rivers apply fine motive power.

The Albert Railway begins at Salisbury Station, on the Intercolonial Railway and extends to Hopewell, in Albert County, a distance of 45 miles. A branch three miles long connects the town of Harvey with this railway.

The Elgin Railway extends from Petitcodiac on the Intercolonial to Elgin, Albert County, a distance of 14 miles.

The Kent Northern extends from Richibucto, the shiretown and principal port of Kent County, to the Intercolonial. It is 27 miles long, with a branch of seven miles long to St. Louis in the same county.

The Chatham Branch connects the town and port of Chatham with the Intercolonial. It will form a part of the Northern and Western Railway now in course of construction. It is nine miles long, and now forms part of the Canada Eastern.

The Dalhousie branch is a branch of the Intercolonial, six miles long to the town of Dalhousie, the shiretown of Restigouche.

The St. Martins and Upham Railway extends from Hampton on the Intercolonial to the port of St. Martins on

the Bay of Fundy in the County of St. John. It is 30 miles long.

The Havelock, Elgin and Petitcodiac Railway, 12 miles long, connects the excellent farming district in Havelock, Kings County, with the Intercolonial.

The St. John Bridge and Railway, two miles long, connecting the Intercolonial Railway with the Canadian Pacific Railway was built in 1885. The Cantilever Bridge across the St. John is built of steel. It consists of a central span 477 feet long, and two shore spans $143\frac{1}{2}$ and 191 feet respectively in length. It rests upon granite piers, that on the east being ninety-six feet high and that on the west being fifty feet high. This bridge and railway, connecting the railway systems of the Province at St. John gives unbroken rail connection with all points on the Continent.

The Caraquet Railway from Bathurst on the Intercolonial to the harbor of Shippegan in Gloucester County is 66 miles long.

The Canada Eastern Railway runs from Gibson opposite Fredericton to the Intercolonial at Chatham Junction. It is 110 miles long. It passes across the centre of the Province through the counties of York and Northumberland.

The New Brunswick and Prince Edward Island Railway runs from Sackville on the Intercolonial to Cape Tormentine on Northumberland Straits. It is 30 miles long and runs through the finest farming lands in the Province.

The Indiantown Branch, 14 miles long from the Intercolonial to Indiantown on the north branch of the Miramichi.

The Central railway of New Brunswick runs from Norton on the Intercolonial Railway to Chipman, at the head of Grand Lake, in the County of Queens. It passes through an exceptionally fine agricultural country and terminates at an important lumber centre. At various points along the line there are extensive coal fields. It is proposed to extend this line to Fredericton through portions of the counties of Queens, Sunbury and York, thereby opening up a profitable market for the extensive coal deposits of Queens.

The Tobique Valley Railway runs along the bank of the Tobique River from Perth Station on the Canadian Pacific Railway to Plaster Rock in Victoria County, a distance of 28 miles. There is much fine land on the Tobique and at Plaster Rock there are extensive deposits of land plaster which are being worked for export. A large pulp mill near the terminus of the railway is projected.

The Temiscouta Railway which runs from Edmunston in New Brunswick to River du Loup in the Province of Quebec, connects the Canadian Pacific with the Intercolonial Railway. A branch of this line runs from Edmunston to St. Francis, an important lumber centre on the St. John river.

The principal railroad under construction in the Province at the present time is the Restigouche and Western which runs across the northern section of the Province from Campbellton on the Intercolonial to St. Leonards on the Canadian Pacific. At this point the road crosses the St. John river, and at Van Buren, Maine, connects with the Bangor and Aroostook, which gives access to various parts of the New England States. About 20 miles of the road from Campbellton, west, are completed, and it is expected the remaining distance, something over 100 miles, will be finished within a year.

The St. John Valley Railway between Fredericton and Woodstock, on the Western bank of the St. John, is another railway which opens up an important agricultural district. The surveys of this line are completed and it is expected that work will be commenced at an early day.

It will be seen from this summary that New Brunswick is exceedingly well provided for in the matter of internal communication and that the points wherein the system is at all deficient are likely soon to be supplied. A settler in any part of the Province will have the advantage of good highways giving him access either to railways or water communication and in most cases to both.

THE MAIL AND TELEGRAPH SERVICE.

There is an efficient mail service to all parts of New Brunswick. The postage on letters is two cents per half ounce.

All important towns in New Brunswick have telegraphic communication. Telephone lines run through the centre of the Province and to many points along the coast line.

MINERALS.

The dense forest which covers the greater part of New Brunswick renders a thorough geological exploration almost impossible, but enough has been ascertained to justify an expectation that the mineral resources may play an important part in the future of this Province.

The geological divisions of the Province, as laid down by the Geographical Survey, and shown upon the last map, are as follows :

Laurentine,
 " Limestone,
 Pre Cambrian,
 Cambro Silurian,
 Dolerite,
 Silurian,
 Granite,
 Devonian,
 Lower Carboniferous Laurentine,
 Lower Carboniferous,
 Middle Carboniferous,
 Triassic,
 Trachyte-Felsite.

The minerals known to exist in quantities which will pay for working are as follows:

The carboniferous formation of New Brunswick embraces an area of about 6,500 square miles, or parts of York, Sunbury, Queens, Kings, Westmorland, Albert, Kent, Northumberland and Gloucester, with several overlies in other counties. The only productive mines are those at Grand Lake—already referred to in the description of Queens County. The seam is a surface one, 22 inches thick and is known to extend over a very large area—probably at least

600 square miles. The coal is an excellent steam coal, very highly esteemed for blacksmiths' use, and is unequalled for coking. A new mine has been discovered at Dunsinune, Kings County, and is being opened up.

A very remarkable mineral known as albertite, the exact nature of which has been a source of dispute among scientists, was found in very considerable quantities in Albert County. It is a brittle, jet black, glossy mineral, free from smut. It burns readily and melts when exposed to heat under cover. Albertite is now regarded as a pure petroleum, and is of great commercial value; the probabilities of further discoveries of paying deposits are of great interest.

In Westmorland and Albert Counties petroleum springs abound. A company of capitalists working under a special Act is conducting exclusive explorations for oil in Westmorland County with good results.

The Albert shales yield from 35 to 50 gallons of oil fit for illuminating purposes to the ton. Owing to the abundance of petroleum these shales are not utilized, but it is not unlikely that they may come to possess a high commercial value.

Antimony occurs in several places in New Brunswick, but the largest deposit is in Prince William in York County, where it is found in very large quantities as sulphuret of antimony. The quality of the ore is good, and there is more or less metallic antimony mixed with it. This is one of the most important deposits of antimony known to exist anywhere, paying deposits being very few in number.

Manganese is widely distributed in New Brunswick. The best known deposits are at Shepody Mountain in Albert; near Sussex Vale in Kings; at Quaco in St. John and Tete-a-gouche in Gloucester. Mines have been opened at all these points.

Numerous deposits of iron ore are known to exist in New Brunswick. The best known of these is the deposit of red hematite in Jacksontown, Carleton County, commonly known as the Woodstock Iron Mines. The iron produced from this.

ore is of a very superior quality, its "resistance" being remarkably high. Large quantities of this ore have been mined, smelted and exported, and it has been used in the manufacture of armor plates for the British Navy. The iron is somewhat brittle owing to the presence of phosphorous, but probably means could be found to remedy this objection. Throughout Carleton County large deposits of iron ore are to be found and they always occur in connection with limestone. Being in the heart of a country where there are thousands of acres of the finest hardwood forest, for the manufacture of charcoal, they afford the elements of a highly important industry.

Bog iron ore is very abundant in New Brunswick and is found in considerable quantities near the Grand Lake Coal Mines, but whether the deposit is large enough to warrant the erection of smelting works is not at present known.

Without expressing any opinion as to the probable future value of the New Brunswick deposits of iron ore, it is sufficient to say that the distribution of excellent ores is widespread and the quantities enormous, that they are nearly always found associated with limestone, and that the fuel for smelting is always obtainable at a low price.

COPPER.

Copper ores are found in New Brunswick in considerable quantities. Near Bathurst there is a considerable deposit of the sulphuret, and in this vicinity are numerous other deposits of the same ore, which it is thought might be profitably worked. Along the Bay of Fundy coast there are numerous deposits of copper in Albert, St. John and Charlotte Counties, which only need capital to develop them. A copper mine is now operated near Dorchester, in Westmorland County. Copper ore is also found upon the Tobique River.

Of other metals and metallic ores known to exist in greater or less quantities we have lead which in the form of Galena is found in several localities. This ore occurs on the shore of the Tobique River, a few miles from St. John and

possibly in large enough quantities to have a commercial value. The extent of the deposit has not been ascertained. It occurs in Charlotte County also, in the Island of Campobello, and also near Norton, Kings County. The latter deposit probably contains a good percentage of silver.

Silver is found in several localities, the principal being the Elm Tree, in Gloucester County, near Bathurst, which it has been thought would afford a profitable investment.

Gold is very widely diffused in New Brunswick. It may be washed from the sand of many of the rivers which flow from the primary formations, but as yet no paying deposit has been discovered. It has been found in Albert County near Elgin by Dr. Bailey; Professor Hind found it in the Upsalquitch in Restigouche County; on the Nepisiquit in Gloucester County; in Campbell River, Long Lake and Blue Mountain Brook, in Victoria County; on the Little Southwest Miramichi, in Northumberland County, and at Springfield and the Dutch Valley Road, Kings County. The writer has found it on Falls Brook near Grand Falls Victoria County, on the Wapskehegan, Campbell River and Serpentine in the same County; he has good evidence of its having been found on the Muniac, Victoria County, and the Becaguimec, Carleton County. Gold bearing quartz is said to have been found on the Tobique River. The conclusion of all observers relative to the existence of gold in New Brunswick is that in the present state of our knowledge of the country it is not judicious either to affirm or deny its existence in paying quantities. Several excellent specimens of gold bearing quartz have been seen by the writer and their owners have affirmed that they were discovered in New Brunswick. As in every case the parties were not financially able to thoroughly prospect the county where the precious metal was alleged to be found, the value of their discovery, if discovery it was, has never been shown. There are many persons who are confident that gold will be found in paying quantities in New Brunswick.

Various other metalliferous ores exist in the province, such as ores of zinc and tin, but only in small quantities.

As stated at the outset of this chapter the wilderness condition of the greater part of New Brunswick presents an almost insurmountable obstacle to thorough prospecting. In a country where the rocks are covered with soil or with moss, it is impossible to say what mineral wealth may not remain concealed. The best authorities hesitate at expressing any opinions, but the most general, such, for instance, as that of the distinguished Prof. Hitchcock, who in his report on the geology of Maine, alludes to the district on the east of the St. John, drained by the tributaries of the Tobique, as a most promising field for investigation; or of Prof. Hind who, while expressing his high estimation of the mines already worked, said that the development of the coal, copper, iron and gold deposits were worthy of further enquiry, and of Dr. Bailey who said it is impossible to speak of the productive capacity of the metalliferous rocks with certainty until their yielding powers had been fairly tested. Yet enough is known to justify an expectation that in time the mineral deposits may become a source of great wealth to the Province.

In addition to the metallic ores there are other minerals such as plumbago, which is found near St. John in large quantities and of very good quality. It is mined on a limited scale for export. Near Sussex, Kings County, there are Salt Springs. In Charlotte County is a deposit of Anthracite Coal of unknown extent. Gypsum is found in inexhaustible quantities in Albert, Westmorland, Kings and Victoria Counties. Limestone of excellent quality is abundant. Red, Grey and Bluish Granite can be had in unlimited quantities, and the Freestone Quarries are inexhaustible. A mere catalogue of the minerals of economic value with the localities in the Province where they occur would fill many pages. In fact for a Province of its area it contains a remarkable variety of mineral deposits of greater or less value. Capital and energy have, in the mineral resources of New Brunswick, an extensive and almost unexplored field.

THE FOREST.

Next to agriculture the chief industry of New Brunswick is the manufacture and export of lumber. No country in the world is probably more densely wooded than New Brunswick, the area of land in a wilderness state not covered with forests being so small as to be merely nominal. Every acre of improved land in the province, except the diked lands, was at one time covered with a dense growth of trees, and there are yet millions of acres upon which the forest is unbroken.

The total cut of lumber, not including timber, averages 200,000,000 superficial feet.

The most valuable of the New Brunswick forest trees is the White Pine, so-called, from the whiteness of its wood when freshly cut. It is soft, light, free from knots and easily wrought. Its principal use is for the interior finish of houses, but it is adapted for many purposes. Red Pine is also found in the Province, and is almost as much esteemed as the White Pine.

There is an extensive young growth of Pine, and under a judicious system of forestry, the consumption would probably be exceeded by the annual growth.

Black Spruce furnishes most of the deals for export. Thirty years ago it was estimated to constitute one-third of the forest, but this would now be considered an over-estimate. The annual cut has been very great; but the supply is yet large and will probably never be exhausted, or so reduced as to render the manufacture and export of Spruce anything other than an important industry. The Black Spruce attains a height of from sixty to eighty feet and a diameter from eighteen to thirty inches. Its chief properties are strength, lightness and elasticity. It is largely used for building purposes. For export it is sawn into deals, which are three inches thick, 7, 9 and 11 inches wide and of various lengths. Other

dimensions are also exported. Black Spruce makes valuable "piles," and is now being extensively used in the manufacture of wood pulp. There are now four pulp mills in New Brunswick and others projected.

"Spruce logging," as it is called, is a great industry in New Brunswick. It is prosecuted chiefly in the winter season when the snow affords roads by which the logs can be hauled to the banks of the streams. When the spring freshets come the logs are floated or "driven" as the expression is, to the booms when they are put together into rafts and are taken thence to the mills to be sawed. This industry gives employment to a great many men and horses and furnishes a market for large quantities of farm produce.

White Spruce is a smaller tree than the Black Spruce and its wood is not so highly esteemed. The supply is large and it is cut and used indiscriminately with Black Spruce.

Balsam Fir.—This is a common tree. It is quite resinous, producing what is known in the arts as "Canada Balsam," which exudes through the bark. It is lighter in weight than either of the spruces and is used to some extent in building.

Hemlock Spruce is larger in size than the Black Spruce. It is a firm, coarse-grained wood, lasting remarkably well under water or when kept thoroughly dry. Being very tenacious of nails it is much used for boarding in buildings. In the shape of logs it is much esteemed in wharf-building and in mining. The Hemlock is a widely diffused wood and is found in great quantities in several counties of the Province. Its bark is valuable for tanning purposes. In addition to the bark exported and that used in the country, there is an annual export of extract of the bark to the value of about \$200,000. The natural grain of Hemlock, when varnished, is very pretty, and the wood is becoming fashionable for the interior finish of dwellings. Hemlock makes excellent packing boxes.

Hacmatac or Larch is one of the commonest trees. It grows tall and straight to a height of eighty feet or more. The butts of the tree and one of the principal roots form a

"knee" and are in great request in shipbuilding, forming an important article of export. Tamarac timber was much used in ship building, but what is known as Bay Spruce has now largely taken its place, most of the large tamarac having been cut. There is yet much of smaller growth in the country, and, as it is a rapidly growing wood, it might be planted with advantage.

Cedar is one of the most widely distributed and valuable of New Brunswick woods. It grows in wet ground and river valleys; sometimes in a swamp of 50 or 100 acres in extent will consist of cedar trees standing so close together that their foliage is scarcely penetrable by the sunlight. It grows to a height of forty feet and large specimens are two feet or more in diameter, but the majority of trees do not exceed a diameter of twenty inches, if measured a few feet from the ground. The wood of the cedar is light, soft, fine grained and easily wrought. It has a pleasing, aromatic odor, which it does not lose if kept dry, and hence is much esteemed as a material for closets. It is practically indestructible by the weather, and will stand a succession of moisture and dryness for many years. Made into shingles it will last upon the roofs of buildings for upwards of thirty years, and its durability, when used as fencing, is even greater. Its lightness causes it to be esteemed by boat-builders. It is well adapted for household utensils as it becomes whiter and smoother by use. On nearly every farm sufficient cedar will be found to provide all requisite fencing, and this is a very important consideration to the settler. The principal use to which cedar is put, except for fencing, is for railway ties or "sleepers," bridge piers, telegraph poles and shingles. The export of this wood is large and is chiefly to the United States. Shingles are of two kinds, shaved and sawed, the former are made by hand, the latter by machinery.

Cedar makes a handsome hedge and is of rapid growth. This is not the true cedar; it is the *Thuja Occidentalis* of Linneus, and is also called the *Arbor Vitæ*.

Black and Yellow Birch may be considered together as they are exported indiscriminately under the name of Birch.

The grain of Black Birch is very fine, close and pretty; it takes a bright polish and is used to some extent in furniture and the interior finish of houses. It is practically indestructible under water, and therefore is admirably adapted for piles and wharves. These birches grow upon the best of soils and the supply in the Province is yet very great, although, in many districts, the larger trees, suitable for heavy timber, have been cut. The birch makes excellent fuel.

White Birch and Paper or Canoe Birch, though sometimes confounded are really different varieties. Owing to the vast supply of superior wood these birches are not much used except for the manufacture of show cases, spools, bobbins, brush backs, &c. It is from the bark of the Paper Birch that Indians make their canoes.

Two varieties of Beech grow in New Brunswick, the red and the white. The Red Beech is a valuable wood. It is imperishable when kept perfectly dry or constantly wet. Being a hard wood and susceptible of a high polish it makes excellent tool handles, shoe lasts, mallets and the like. For agricultural implements or any purpose where strength and durability are required, Red Beech is admirably adapted. It makes excellent flooring and is annually becoming more popular for this purpose. Red Beech forms a considerable part of large forests and is becoming an important article of export. This tree produces very palatable nuts every second year.

One of the most useful, beautiful and common trees in New Brunswick is the Maple. There are several varieties of Maple, but in general they may be described as lofty, well shaped trees, with beautiful foliage; they are of quick growth and as they bear transplanting very well are greatly esteemed as shade trees, especially as they do not injure the grass growing beneath them. Their presence in the forest indicates the best quality of soil.

Rock Maple is the king of the deciduous trees of North American forests; sometimes it grows nearly one hundred feet in height with corresponding proportions. In summer when clothed in green it is beautiful to look upon, and in

autumn when its leaves change to blood-red, golden-yellow, brown and many other colors its appearance is magnificent. The wood of the Rock Maple is white when freshly cut, but becomes slightly reddish with exposure. The grain is fine, close, silky and very pretty, especially in the accidental, though common varieties, known as Curled Maple or Bird's Eye Maple. Maple is adapted for all the purposes that Beech is, but the more beautifully grained wood is much sought after by cabinet-makers and others desiring a light wood of attractive appearance for finishing purposes. The Bird's Eye Maple makes excellent violin backs. The ordinary Maple is now sawn into various dimensions for builders' uses, and its popularity is on the increase. As a fuel Rock Maple is superior to all other woods; it makes the best charcoal, and its ashes are rich in alkali.

The Rock Maple is also known as the "Sugar" Maple, because of the richness of its sap in the saccharine principle. Maple Sugar is a regular article of commerce, the quantity produced in New Brunswick annually being about half a million pounds. It is made from the sap of the Maple which begins to flow in the month of March. Syrup made from the sap is preferred to the finest grade of West India molasses.

There are two species of Elm in New Brunswick, the white and the red. Both are beautiful shade trees. The White Elm often grows to the height of one hundred feet, its branches are long and pendulous, its foliage rich and pleasing in shape. It grows wild on the low, deep soiled intervals, and the quantity available for commercial uses is limited. The wood is strong, tenacious and elastic, does not split easily and bears the driving of bolts and nails better than any other wood. It is durable if kept either constantly wet or constantly dry, but decays rapidly when these conditions alternate. It is used in making ships' blocks, and for other purposes in which wood of its peculiar properties is required.

The Red Elm does not grow to as great a size as the White Elm. Its wood possesses the same properties as

that of the White Elm but is somewhat coarser and more durable. Its home is on dry elevated situations.

Ash is found in New Brunswick in several varieties, the white, black and yellow chiefly, the wood of each differing according to the soil and situation where it is grown. The White Ash is a common tree growing to the height of sixty feet with a diameter of eighteen inches or more. Its growth is rapid and its foliage beautiful, the trunk is perfectly straight, the wood strong, tough and elastic. Black Ash is a smaller tree than White Ash and its wood is somewhat coarser. It is a fashionable wood for bedroom furniture, its texture being very pleasing and is used for a variety of purposes in first-class buildings. Being already a valuable article of commerce, its supply will probably not long keep pace with the demand; its cultivation will likely be profitable. It is used by the Indians in the manufacture of baskets, for which it is admirably adapted. The Yellow Ash is similar to the Black Ash but is lighter in color. The Red Ash is somewhat similar to the White Ash.

Oak is found in New Brunswick in three varieties, the white, the red and the grey. The wood of the latter is very durable. The supply is limited.

Cherry is found in abundance. The fruit is small and slightly bitter. None of the varieties attain sufficient size to possess much commercial value.

Poplar occurs in two varieties, the Aspen and the Balsam Poplar, or "Balm of Gilead." Poplar wood is very white and of light weight. It becomes hard and tough when dry and takes a high polish. Its principal commercial use at present is in the manufacture of what is known as Excelsior, an article used for mattress making, upholstering and packing purposes, the wood for these purposes being cut into long shreds. The demand is large and increasing. The lightness, whiteness and durability of Poplar are causing it to become very much esteemed for many purposes. It makes an excellent paper pulp.

Basswood is found in considerable quantities. Its

properties are somewhat similar to those of Poplar. The natural color of the wood is pale yellow.

Hornbeam and Ironbeam are tough, heavy woods capable of sustaining great weight. These trees do not attain a large size.

THE FISHERIES.

The fisheries of New Brunswick are among the most important of its industries. They include not only exhaustless supply to be drawn from the Bay of Fundy, Bay Chaleur and the Gulf of St. Lawrence, but the yield of so many streams and lakes that a mere catalogue of the names would be wearisome. The enormous amount of a most excellent article of food available from this source and its comparative cheapness is not the least advantage which the population of New Brunswick enjoy, and in a commercial point of view the fisheries are of incalculable value. The deep sea fisheries furnish employment to a large number of people, and the inland fisheries, besides being in some degree a source of food to the people, attract hundreds of sportsmen annually to the Province, and the number is rapidly increasing.

The annual catch of fish is worth, according to the average price at which the fish exported are valued, over \$2,300,000.

The export of Canned Lobster has been prosecuted largely in some years, and has assumed large proportions. The market is in Great Britain, the United States, Australia, France and elsewhere.

The export of fresh fish, principally Salmon, Smelt and Bass to the United States, has already reached large dimensions, and is growing every year. The fish are frozen before shipment or are shipped fresh on ice. They are taken on the North Shore rivers and are sent to their destination by rail.

The principal fish taken in the Bay of Fundy are the Cod, Pollock, Hake, Haddock, Herring, Shad and Mackerel.

The fishing grounds extend down to the entrance of the Bay and around the islands of Grand Manan, Campobello and the West Isles and into the estuaries of the principal rivers. The Cod of the Bay of Fundy are a large fish, quite equal to any taken in American waters. The Pollock, the Hake and the Haddock are also very abundant. The Haddock is eaten fresh but is generally preferred when slightly salted and smoked; it is then known in commerce as "Finnan Haddy." The Bay Herrings are of medium size but of good flavor. The Bay of Fundy Mackerel are small, but very much esteemed. The Halibut is a large fish of the Flounder species. Its flesh is white and firm, and though somewhat dry is highly thought of when fresh. When slightly salted and smoked it is very palatable. The Bay Shad is perhaps the most delicious fish produced in New Brunswick waters. The average weight is about three pounds. The Gaspereau or Alewife is a small species of Shad, caught in large quantities. The Bay of Fundy fisheries are prosecuted at all seasons of the year.

The fisheries in the Gulf of St. Lawrence can only be prosecuted from April until November, both inclusive, owing to the presence of ice. The principal catch is of the Cod. The Gulf Cod is somewhat smaller than the other varieties taken on the North American coast, but is of excellent quality. Hake and Haddock abound in the Gulf. Herrings are found in countless shoals, and in the fall they are very fat and of excellent flavor. This branch of fishing is capable of indefinite expansion, and as the quality of the "fall herrings" is very high, its extensive prosecution would probably be found profitable. Mackerel, Gaspereaux and Stripped Bass are abundant, and the quantities of smelts taken are prodigious. There is, apparently, no limit to the supply.

Of shell-fish there are found on the Gulf Coast, Oysters and Lobsters of excellent quality. Other fish are taken on the North Shore, but those above named are the principal, except the Salmon.

Salmon of the finest description are taken in the estuaries of all the principal rivers flowing into the Gulf and Bay Chaleur. The fish are large and of admirable flavor, commanding a ready sale. They are exported fresh, frozen, smoked, salted, spiced and pickled, and the demand seems to keep pace with the supply. On the two principal rivers, the Miramichi and the Restigouche, hatcheries for the propagation of fish are maintained by the Dominion Government.

INLAND FISHERIES.

While, as has been already mentioned, the Inland Fisheries of New Brunswick are of some value to settlers as a food supply, their great importance is due to the fact that they attract to the country many sportsmen who expend large sums of money on their excursions. The Salmon fishing on the Restigouche has a reputation which is almost world wide, and every year distinguished visitors from Great Britain and the United States may be found spending a holiday in the glorious sport afforded by this noble river. Other streams in the Province are almost equally good, but none are quite as celebrated. On the tidal portions of the streams the Dominion Government grants fishing leases. On the non-tidal portions the right to lease is vested in the Local Government as riparian proprietor in the case of ungranted lands and in the riparian proprietors in the case of granted lands.

The right of surface fly fishing on waters under control of the Provincial Government is granted to the highest bidder at a public sale, whereof due notice is given. Leases will not be granted for a longer term than five years. The leasee is bound to keep at least one efficient guardian of the fishery within the bounds of his lease. Short term leases may be obtained on application to the Surveyor-General.

THE JUDICIARY OF NEW BRUNSWICK.

The Judiciary of New Brunswick is modelled after that of England with such changes as are necessary to adapt it to

the requirements of a new country or as experience has shown to be desirable.

The Supreme Court has jurisdiction over all causes civil and criminal, and is the Court of Appeal from inferior tribunals. From its decision an appeal lies to the Supreme Court of Canada and to the Judicial Committee of the Privy Council sitting at Westminster. The Supreme Court has jurisdiction both at Law and Equity. It consists of a Chief Justice and five puisne judges, one of the latter being called the Judge in Equity and being specially charged with the Equity business. One or more Courts of *Nisi Prius* are held every year in each county and the Court sits *en banc* four times a year. The salaries and travelling expenses of the judges are paid by the Dominion Government with which is also the right of appointment.

The County Courts have jurisdiction in actions of contract to \$400, in actions of tort to \$200, and in criminal matters they have concurrent jurisdiction with the Supreme Court, except in capital offences. The Province is divided into six districts with a judge for each district. Two or more sittings of the County Court are held in each county every year. These judges are appointed and paid by the Dominion Government.

In all the cities and towns are local courts of limited jurisdiction, and in each parish are one or more commissioners having jurisdiction in contract cases to \$80 and in tort to \$32. Justices of the Peace have jurisdiction in contract to \$20, in tort to \$8, and in respect to criminal offences they have limited powers.

Trial by jury is provided for in all cases, but under certain circumstances, if the parties so desire, the jury may be dispensed with.

Admission as an Attorney of the Supreme Court is allowed after four years study with a barrister and after the applicant has passed an examination. Students holding a degree from a recognized college or university are admitted after three years study. Attorneys are called to the bar after one year's practice.

MILITARY ORGANIZATION.

The only military organization is the Militia, and compulsory service is a thing unknown. Volunteer Companies of Militia are enrolled and are expected to perform certain requirements as to drill. The number of these Companies is limited. A Military School is maintained at Fredericton by the Dominion Government. Members of the School corps enlist for three years' service.

THE NATIONALITY OF THE PEOPLE.

About one-sixth of the population of New Brunswick is of French extraction. They reside principally in Westmorland, Kent, Gloucester and Madawaska Counties; the population of the latter being nearly all French. The majority of the French people speak English, although among themselves they use French exclusively.

The Settlement of New Denmark consists exclusively of Danes, who number about 900.

There are several Indian villages, but the number of aboriginal inhabitants remaining in the country is comparatively small. They are an inoffensive race and have assumed the habits of their white neighbors. They represent three tribes, the Micicete, Micmac and Passamaquoddy.

In the centres of population there is a small proportion of people of African descent, and also a few representatives of other nationalities, but practically speaking, all the people of New Brunswick, except the French, are of English, Scotch or Irish descent.

THE RELIGION OF THE PEOPLE.

There is no State Church in New Brunswick, all denominations being equal before the law.

The Anglican church has a Bishop, whose See is Fredericton. Its governing bodies are the Diocesan Church Society and the Diocesan Synod.

The Baptist church (Calvinist) are a large body. For purposes of the local church government this denomination divides the Province into three districts, governed.

respectively by the Eastern, Western, and Southern Associations.

The Roman Catholics divide the Province into Diocese of St. John and the Diocese of Chatham. They have two Bishops. They maintain besides numerous church and eleemosynary societies and Memramcook College, already referred to, a hospital known as the Hotel Dieu, at Chatham, and convents and academies at St. Basil, Madawaska County; at Newcastle, Northumberland County, at Bathurst, Gloucester County; at St. Louis, Kent County; at Caraquet, Gloucester, and at St. John.

The Methodists are well organized. The governing body of this church is the Conference of New Brunswick and Prince Edward Island, subject to the supervision of the General Conference of Canada.

The Free Baptists have forty-three Clergymen. Their governing body is a General Conference. In educational matters they co-operate with the Calvinist Baptists.

The Presbyterians have Church organization in many sections of the Province. They divide the Province for the purpose of government into the Presbytery of St. John and the Presbytery of Miramichi.

There are several Congregational Churches in the Province.

BEGINNING A FARM.

When a settler goes upon a new farm he will, in most cases, find the forest upon it unbroken. In rare instances there may be a small clearing where a logging camp has been, but in the great majority of cases he will find the great hardwood trees standing on all parts of his lot, interspersed more or less thickly with Spruce, Fir and, in most places, Cedar. He can hire men who will cut down as much of this forest as he wishes, burn off the cut trees, and prepare the land for a crop for \$12 per acre. Of course if he does part of the work himself the cost will be less. The trees are cut at a convenient height above the ground, the branches trimmed off, and the trunks cut up so that they will be

readily handled after the first "burn." In localities where there is a demand for "cordwood" for fuel, the trunks and larger limbs may be cut up for this purpose. In the fall or spring, as the case may be, when the cut trees have become sufficiently dry and the weather is favorable, fires are set in the bush heaps and the "fallow," as it is called, is burned over. If the "burn" is a good one, nothing will be left but the stumps and larger portions of the trees. The latter are rolled together, piled up and burned, and the ashes scattered. The stumps are not removed. The land is now ready for a crop, and its yield is usually surprising. Most beginners will sow wheat or oats over the greater part of their clearing and seed down to grass, and allow the field to remain in grass until the stumps become easy to remove, when it may be plowed up, and its fertility will be found fully equal to what it was when the land was first cleared. The clearings may be added to every year.

In the matter of buildings the settler will consult his pocket and his taste. Most of the early settlers were compelled to build log houses, and many yet build them from choice. They are made by laying the logs upon each other, notched so as to fit closely, the interstices being filled with moss and clay or mortar. The interior may be finished by simply planing the logs smooth, or may be lathed and plastered if desired. Such houses are warm and cheap, and by no means unsightly. Log barns may also be erected. Of late years, or where roads are made in advance of settlements, so that manufactured lumber can be got to the new farms, many settlers build themselves snug framed cottages and framed barns. This is a matter, which every settler, going upon a farm, will decide for himself after he has come to the country. In any case he can provide himself with comfortable buildings at a very reasonable price.

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