

## CANADA.\*

The great basin of the St. Lawrence, in which the province of Canada is situated, has an area of about 530,000 square miles. Of this, including the gulf of St. Lawrence, the river, and the great lakes, to Lake Superior inclusive, about 130,000 square miles are covered with water, leaving for the dry land of this basin an area of 400,000 square miles, of which about 70,000 belong to the United States. The remaining 330,000 square miles constitute the province of Canada. With the exception of about 50,000 square miles belonging to Lower Canada, and extending from the line of New York to Gaspé, the whole of this territory lies on the north side of the St. Lawrence and the great lakes.

On either side of the valley of the lower St. Lawrence is a range of mountainous country. These ranges keep close to the shores for a considerable distance up the river; but about 100 miles below Quebec, where the river is fifteen miles wide, the southern range begins to leave the margin, and opposite to Quebec is thirty miles distant. From this point it runs in a more southwestern direction than the river valley, and opposite Montreal is met with about fifty miles to the southeast, where it enters Vermont, and is there known as the Green Mountain range, which forms the eastern limit of the valley of Lake Champlain. In Canada, this range, stretching from the parallel of 45° north latitude to the Gulf, is known as the Notre-Dame Mountains, but to its northeastern portion, the name of the Shichshock Mountains is often given.

The flank of the northern hills, known as the Laurentides, forms the north shore of the river and gulf, until within twenty miles of Quebec. It then recedes, and at the latter city is already about twenty miles distant from the St. Lawrence. At Montreal the base of the hills is thirty miles in the rear, and to the westward of this it stretches along the north side of the Ottawa River for about 100 miles, and then runs southward across both the Ottawa and the St. Lawrence, crossing the latter river a little below Kingston, at the Thousand Islands, and entering New York. Here the Laurentides spread out into an area of about 10,000 square miles of high lands, known as the Adirondack country, and lying between the Lakes Champlain and Ontario. The narrow belt of hill-country which connects the Adirondacks with the Laurentides north of the Ottawa, divides the valley of the St. Lawrence proper from that of the great lakes, which is still bounded on the north by a continuation of the Laurentides. The base of these from near Kingston runs in a western direction, at some distance in the rear of Lake Ontario, until it reaches the southwest extremity of Georgian Bay on Lake Huron; after which it skirts this lake, and Lake Superior, and runs northward into the Hudson Bay Territory. This great northern hill-region consists of the oldest known rock-formation of the globe, to which the name of the Laurentian system has been given, and occupies, with some small exceptions, the whole of the province northward of the limits just assigned. We shall designate it as the LAURENTIAN REGION. Over a small portion of

this area, along Lakes Huron and Superior, and farther eastward on Lake Temiscaming is another series of rocks, to which the name of the Huronian system is given. But as the country occupied by these rocks is geographically similar to the Laurentian, it is for convenience here included with it.

To the south of this region the whole of Canada, west of Montreal, with the exception of the narrow belt of Laurentian country described as running southward across the Ottawa and St. Lawrence Rivers, is very level. The same is true to the eastward of Montreal until we reach the Notre-Dame range of hills, already described as passing southward into Vermont, and in its north-eastern extension as bounding the lower St. Lawrence valley to the south. This valley may be regarded geographically as an extension of the great plains of Western Canada and central New York, with which it is connected through the valley of Lake Champlain. This level country to the south of the Laurentides in the two parts of the province is occupied by similar rock formations, and constitutes the CHAMPAIGN REGION of Canada, the surface of which is scarcely broken, except by a few isolated hills in the vicinity of Montreal, and by occasional escarpments, ravines, and gravel ridges farther westward.

The next area to be distinguished consists of the Notre-Dame range on the south side of the St. Lawrence, which forms the belt whose course has just been described, with an average breadth of from thirty to forty miles. To the south and east of this, is a district of undulating land, which extends to the boundaries of the province in that direction. These two districts may for convenience in farther description be classed together, and they embrace the region which is generally known as the EASTERN TOWNSHIPS. By this term they are distinguished from the SEIGNIORIES, which bound them to the north and west. To the north-east, however, along the Chaudiere River, some few seigniories are found within the geographical limits of this third region.

The whole of the province is well watered with numerous large and small rivers, and in the mountainous districts there are great numbers of small lakes, more than 1,000 of which are represented on the maps.

We have in the preceding descriptions divided the country into three distinct regions, and have next to consider the geological structure of these as related to the soil and to agricultural capabilities.

## I.—The Laurentian Region.

The great tract of country occupied by the Laurentian rocks has for its southern boundary the limits already assigned, and stretches northward to the boundary of the province, which is the height of land dividing the waters of the St. Lawrence basin from those of Hudson Bay. Its area is about 200,000 square miles, or six tenths of the whole land of the province. This region is composed exclusively of crystalline rocks, for the most part silicious, or granite like in character, consisting of quartzite, syenite, gneiss and other related rocks. These are broken up into ridges and mountain peaks, generally rounded in outline and covered with vegetation. The summits in the neighbourhood of Quebec are some of them from

\* From sketch by J. Sterry Hunt.