

2,000 to 2,500 feet in height, and in other parts attain 4,000 feet or more; but the general level of this region may be taken at about 1,500 feet above the sea, although it is much less in the narrow belt which crosses the province east of Kingston. Through the hard rocks of this region run numerous bands of crystalline limestone or marble, which from their softness give rise to valleys, often with a fertile soil. The hill-sides are generally covered with little else than vegetable mould, which sustains a growth of small trees, giving them an aspect of luxuriant vegetation. But when fire has passed over these hills, the soil is in great part destroyed, and the rock is soon laid bare. In the valleys and lower parts of this region, however, there are considerable areas of good land, having a deep soil, and bearing heavy timber. These are the great lumbering districts of the country, from which vast quantities of timber, chiefly pine, are annually exported, and constitute a great source of wealth to the province. These valleys are in most cases along the line of the bands of limestone, whose ruins contribute much to the fertility of the soil. Lines of settled country running many miles into the wilderness are found to follow these belts of soft calcareous rock.

The settlements in this region are along its southern border, and at no great altitude above the sea. In the higher parts, the rigor of the climate scarcely permits the cultivation of cereals. It is probable that no great portion of this immense region will ever be colonized, but that it will remain for ages to come covered with forests. These, if husbanded with due care, will remain a perpetual source of timber for the use of the country, and for exportation; besides affording, with proper facilities for transportation, an abundant supply of fuel to the more thickly settled districts, where the forests have nearly disappeared, and where, from the severity of the long winters, an abundant supply of fuel is of the first necessity. There are other reasons why this great forest-region should be protected. The vegetation, and the soil which now cover the hill-sides, play a most important part in retaining the waters which here fall in the shape of rain or snow. But for this covering of soil, the rivers and mill-streams which here take their rise, would like the streams of southern France, and of the north of Italy, be destructive torrents at certain seasons and almost dried-up channels at others. The effect of this great wooded area in tempering the northern winds, and moderating the extremes of climate, is not to be overlooked in estimating the value of the Laurentian region; which, moreover, as will be shewn farther on, contains inexhaustible mines of rich iron ores, besides copper, lead, marbles, and other mineral substances of economic importance.

## II.—The Eastern Townships.

Under this head, as already explained, is included the belt of hill country south of the St. Lawrence, with the region on its southeast side extending to the frontier, and forming a succession of valleys, which may be traced from the headwaters of the Connecticut northeastward to the Bay of Chaleurs. It is true that the Eastern Townships, as now known, do not embrace this

northeastern extension; but as it belongs to them both geographically and geologically, it may be conveniently included with them.

The area whose limits are thus defined forms about one-tenth of the province. The hills of the range which traverses it are composed, like those of the Laurentian region, of crystalline rocks; but these are softer than the greater part of the rocks on the north shore, and yield by their wearing-down a more abundant soil. Some of the hills in this range attain an elevation of 4,000 feet above the sea, and the principal lakes in the valley on the southeastern side, Memphremagog, Aylmer, and St. Francis, are from 750 to about 900 feet above the sea level. This region is well wooded, and when cleared is found in most parts to have an abundant soil, generally sandy and loamy in character, and well fitted for grazing and for the cultivation of Indian corn and other grains. Great attention is now paid to the raising of cattle, and the growing of wool, and within the last few years the best breeds of sheep have been successfully introduced from England and from Vermont. Draining and improved methods of farming are in many parts practised, and the agricultural importance of the southern portions of this region is yearly increasing. The Eastern Townships moreover abound in metallic ores, marbles, slates, etc., which will be noticed in their place.

## III.—The Champaign Region.

The limits of the great plains of Canada have already been defined in describing those of the two preceding regions. These plains, which may be called the champaign region, occupy about three tenths of the province, and are, as we have seen, divided into two parts by a low and narrow isthmus of Laurentian country, which runs from the Ottawa to the Adirondacks of New York. To the eastward of this division, the present region includes the country between that river and the St. Lawrence, and all between the Laurentides on the north and the Notre-Dame hills on the south-east; while to the westward it embraces the whole of the province south of the Laurentian region, including the great area lying between the Lakes Ontario, Erie and Huron, generally known as the southwestern peninsula of Canada. The whole of this region from east to west is essentially a vast plain, with a sufficient slope to allow of easy drainage. The distance from Quebec to the west end of Lake Superior is about 1,200 miles, yet this lake is only 600 feet above the sea level, while Lake Erie is 565 feet, and Lake Ontario 232 feet above the sea. The land on the banks of the St. Lawrence and its lakes, either near the margin, or not very far removed, generally rises to a height of from fifty to one hundred and fifty feet, and from this level very gradually ascends to the base of the hills which bound the region.

Unlike the two regions already described, these great plains are underlain by beds of unaltered Silurian and Devonian rocks, consisting of sandstones, limestones, and shales. These are but little disturbed, and are generally nearly horizontal; but over by far the greater part of the region they are overlaid by beds of clay, occasionally inter-