

Weymontachinque, the most northerly point to which the explorations have yet been carried, is in latitude  $47^{\circ} 50'$  and longitude  $73^{\circ} 50'$ , and sixty-three miles in a straight line north-west from Rat River. Its altitude above the latter is nearly two hundred and twenty feet, or about five hundred and fifty feet above the sea.

Observations have shown that the mean annual heat at Rat River does not differ essentially from that of Three Rivers. The temperature falls lower in the winter,—in some instances as low as  $40^{\circ}$ ,—but rises higher in the summer; and as the summer heats regulate the culture of grains and the growth of plants generally, the severe winters do not cause a scanty vegetation. Thus every grain that ripens on the St. Lawrence, between Quebec and Three Rivers, comes to an abundant maturity at Rat River. The deepest snows (which usually occur in the month of March) rarely exceed three and a-half feet, and until the middle of January the common depth is not over two feet. With some slight modification, caused by peculiar formation, difference of altitude, and nature of the soil on long slopes, the foregoing remarks will apply equally to the whole Territory.

The soil of the St. Maurice is exceedingly varied in its qualities, being derived from the crumbling and decomposition of rocks, with a mixture of vegetable and animal remains. Soils generally bear a resemblance to the rocks over which they lie, so that a knowledge of the one is said to afford a key to the character of the other: thus, in a country of sandstone and sandbeds, we shall find the soil sandy; in one of limestone, more or less calcareous; in one of slaterocks, more or less clayey. But this connection is modified by so many circumstances that it is impossible, by the mere study of the geology of one or several parts of a large district, to form an accurate judgment of its agricultural character, especially if this study be confined to only one or two of its principal rivers; for, even in tracts of the same geological formation there exist great differences in the upper stratum, arising from the prevalence of one or other members of the series, or from the greater or less inclination of the strata. The action of the water also in denuding the surface at one part and carrying the debris or earthly particles to another, exercises every where an important influence on the character of soils. The absence of a just attention to these practical facts caused the government expedition of 1830, under Messrs. Ingall and Nixon, to arrive at erroneous conclusions. They decided that the whole territory was sterile, unfit for settlement, and bore no good timber; a statement which has been thoroughly disproved by experience.

Alluvial tracts of the finest quality are found on the banks of the rivers and lakes, and in the swamps and low grounds; and these constitute the richest and most valuable soil for the agriculturist. The Rivers Bastonais, Mekinak, Croche, Flamand, Rat River, Wessoneau, Vermilion, and tributaries, and the Shawenegan, afford instances of such tracts.

As the Geological Survey of the Province has not yet been extended up the river, our knowledge of its mineral resources is very limited; the principal ores known to exist are the following:—iron, the bog or swamp ore, the magnetic ore, sulphurets of iron and copper, lead, nickel, and cobalt, and graphite or black lead.