

wards beyond the borders of Pennsylvania, where in the line of section they reach a height of 1000 feet above Lake Ontario.\* These rocks belong to the Devonian series of English geologists, and lie immediately under the old red sandstone, which begins to cover them beyond the Pennsylvanian border—further towards the south than the map or section extends.

The district occupied by these groups of rocks presents a complete contrast to the wheat-region—a contrast rich in evidence of the close relation between geological structure and agricultural capabilities. When first cleared the virgin surface produces crops of wheat, but after the first crops—as is the case in many parts of New Brunswick, which rest upon similar rocks—winter wheat becomes uncertain, and spring grain only can be sown. Being thus found naturally poorer, it is less cleared and cultivated than the more favoured land in the plains which border the lakes. Like poor land among ourselves also—I may say like poor land in all countries—it is occupied for the most part by a poorer race of cultivators, who direct their chief attention to the rearing of stock and to dairy husbandry.

The cross section, taken along the line N S in the map (p. 48), exhibits at a glance the relations—physical, geological, and agricultural—of this interesting district. It commences from Lake Ontario on the north, and is continued nearly to the Pennsylvanian border on the south.

The above section sufficiently explains itself. It exhibits in brief what in the preceding pages it has been necessary to state verbally a little more in detail. The points it is intended chiefly to illustrate are—

a. The physical and geographical position of this celebrated wheat-region in reference to Lake Ontario.

b. The special agricultural relations of the several groups of rocks which in this district form the Silurian system of English geologists.

c. The sudden and striking change of produce and capability which manifests itself when we ascend from the calcareous soils of the lower region, to the stiff clays of the more elevated Hamilton group of rocks. The wheat region, par excellence, is then entirely left behind, and a dairy country commences. And

d. The still further contrast presented by what in our island would be the heathy hills and moors of the Portage and Chemung groups—destined, like our own poorer hills and highlands, to rear the hardier breeds of stock.

On all these points I have already dwelt probably in sufficient detail.

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\* Ontario itself is 231 feet above tide-level.