

ARTICLE XXV.—*On Some of the Glacial Phenomena of Canada and the north-eastern Provinces of the United States during the drift period.* By Professor ANDREW C. RAMSAY, F.R.S., F.G.S., Local Director of the Geological Survey of Great Britain.

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*Glacialized condition of the Laurentine Mountains; and the drift-deposits of Montreal.*—In the Straits of Bellisle, the barren coast of Labrador consists partly of low patches of red sandstones, &c., lying almost horizontally on the Laurentian series—that most ancient system of gneiss and granite which forms the eastern extremity of the great Laurentine chain. These gneissic rocks are rounded and largely mamillated, as if by the action of ice; and all the distant hills, quite bare of trees, possess the same sweeping contours. The gnarled strata of the lofty Bellisle itself, to the very summit, show unequivocal signs of the same abrasion, their well-worn outcrops presenting none of those jagged outlines that all highly-disturbed beds are apt to assume when exclusively weathered by air, rain, and open frost. Similar forms prevail far up the St. Lawrence, on its north shore, easily distinguishable in spite of the forests which, before we reach the Saguenay, rise to the tops of the mountains, leaving here and there unwooded rocky patches. Further up the river, by the Isle aux Coudres (about 50 miles below Quebec), I became more and more impressed by similar appearances. Not a peak is to be seen; and to the top every hill seemed *moutonnée*. Like much of Wales, Ireland, and the Highlands of Scotland, the country appeared *moulded by ice*.

On the south side of the river the country is low, being formed of Silurian strata chiefly covered with drift from the Laurentine chain; and the vast quantity of boulders and smaller stones that cover the land help to impress on it a poor agricultural character.

Approaching Montreal, the gneissic mountains recede to the northwest; and both banks of the river are low, except where an occasional boss of greenstone pierces the Silurian strata. Montreal Mountain, about a mile behind the city, is one of these, rising boldly out of the terraced drift of the plain.

This drift consists of clay, with Laurentian boulders and boulders of greenstone from the mountain, both mixed with subangular gravels of Utica slate and Trenton limestone, which formations rise on its flanks. Many of the boulders and smaller stones are grooved, or more finely scratched, in a manner undistinguishable from the scratched stones of the British and Alpine drift or of Alpine