

The Canadas possess peculiar interest as including the great chain of fresh water seas of the Saint Lawrence,—monuments of the last deluge among a thousand others, illustrative of the history of countries whose more early civilization has destroyed these remarkable vestiges. Lake Superior itself, as well as all the other lower Lakes, has been vastly larger than at present, as is indicated by ancient beaches rising above each other on successive high plateaux, which nearer or more distant surround that body of water. They are formed of sand, clay and rolled materials, and in Lake Huron contain layers of the fresh water shells which now inhabit its rushy shallow bays. The valley of St. Etienne, six miles long at Malbay affords on a small scale, an excellent example of these appearances. It has been the bed of a narrow Lake, with a depth at first of 400 or 500 feet, but which, thrice has suddenly lowered in level on the destruction of its barrier being as often repeated. These events, and their magnitude, are marked by three embankments, which, together with the middle of the valley, rough with the oblong mounds deposited by conflicting currents, now constitute the farms of a contented peasantry.

It becomes desirable to investigate the geology of Canada from its including the vast spur or offset (for want of a better term) from the primitive mountains of Labrador and Hudson's Bay, which, extending to the head of the Mississippi, divides the waters flowing into the Hudson's Bay, from those of the St. Lawrence, and penetrates from east to west for nearly 2,000 miles into the greatest secondary basin in the world. This basin consists of alternating beds of sand-stones and lime-stones, placed horizontally. Its boundary skirting the west side of the Alleghanies, pass from the Canadas to the gulph of Mexico. then direct their course westward to the rocky mountains and northwards along their base at least as high as the Peace river or the Slave Lake; properly named "The Lake of Outcasts." From thence it trends irregularly eastward, and occupies all or most of the Lakes on the route to Hudson's Bay, great part of whose shores are composed of calcareous rocks.

To convey an intelligible account of the geology of so vast a region as Canada requires volumes. We shall proceed to sketch a few of its more instructive localities: commencing with one in our own immediate neighborhood. We shall not stop to describe scenery with which we are all familiar; but at once observe that the beautiful group of rounded woody eminences in the rear of Montreal with rough sloping sides, and here and there an interrupted cliff, partly in ruins, consists chiefly of crystalline homblende, massive, shapeless and without a trace of stratification, except the feeble intimations afforded by a few perpendicular fissures. This rock is one of the Trap family, which we believe is correctly supposed to be a lava of a very distant date, an idea much strengthened by appearances now to be described. It underlays the greater portion, if not the whole of the triangular space, included by Montreal, St.