

range formed, from Labrador to the Arctic Sea, the northern shore line of the ocean during the Lower Silurian period. The land to the north, being thus above the level of the sea, would receive no deposition of Lower Silurian strata; but an after movement of depression must have ensued during the Upper Silurian epoch, bringing down this northern district beneath the sea, and so enabling the sediments of the latter period to be laid down upon its area.

5. *Great Southern Basin of Canada: Its subdivisions*.—The southern geological area of Canada, is in itself divisible into three smaller basins: (1) the Basin of the lakes; (2) The Basin of the St. Lawrence; and (3) The Eastern or Metamorphic Basin. The two first of these are separated from each other by the gneissoid belt of the Upper St. Lawrence alluded to above; whilst the third or Eastern Basin is separated from the St. Lawrence area by a remarkable dislocation, accompanied by physical and chemical changes of great moment. This dislocation is evidently connected with the elevation of the Appalachian mountain chain. As traced in Canada by Sir Wm. Logan, it runs from near the northern extremity of Lake Champlain in a general north-easterly direction to the St. Lawrence, which it crosses immediately above Quebec; and then turns to the east, traversing the northern part of the Island of Orleans and passing down the river into the Gulf, from whence it appears to re-enter the south shore a few miles above the mouth of the Magdalen River in Gaspé. The strata within the area circumscribed by this dislocation, are thrown up generally into highly inclined beds; and they exhibit, in other respects, many signs of the action of powerful disturbing forces. See under the head of the "Calcareous Formation," on a preceding page. In the more central portion of the area, also, they are much altered, or converted into crystalline schists, &c., and rendered metamorphic by metamorphic agencies. The strata of the Lake and St. Lawrence Basins, on the other hand, betray few signs of these disturbing influences, except in the case of the upper copper-bearing series of Lake Superior, and in parts of Gaspé, as described fully in a preceding division of this Essay.

6. *The Lake Basin of Canada*.—Of this geological basin, properly speaking, only the north-eastern and northern portions actually occur within the boundaries of the Province. It includes all the area to the east or left of the Laurentian district marked 1—1 in the sketch-map fig. 243. Though affected here and there by slight local disturbances,