

the north, and from the Reparation chapel near Bout de l'Isle, to Bas au Sault, so that an almost continuous band of Trenton limestone is exposed. South and west of Mount Royal, the boulder clay runs to the Rivière-des-Prairies and to Ste. Anne-de-Bellevue, covering the whole surface of the island with a few exceptions to be mentioned below (under Leda clay, etc.), and excepting the Palæozoic outcrops at Bordeaux, Cartierville, Saraguayville, near Ste. Geneviève, Point Claire, and at several points between Beaconsfield and Ste. Anne-de-Bellevue.

The upper surface of the boulder clay is very uneven. The exposed surface is one produced by erosion and so is of fairly uniform nature, but the surface of the boulder clay on which the Leda clay was deposited, was very uneven. This is very well indicated by the outcrops immediately north of Strathmore. Again, at Lakeside, at the Terra Cotta Lumber Company's plant the railway runs upon boulder clay, whilst at the plant itself, Leda clay is found to a depth of 26 feet below the surface. These inequalities of the surface of the boulder clay are probably attributable both to original inequality of deposition and to subsequent erosion, but most of it to the former cause.

VARIATIONS.

By the gradual reduction of the size and number of the boulders, the boulder clay may pass into a variety which has the appearance of an unstratified Leda clay. When such a clay is exposed in an excavation it is difficult to interpret it properly, unless there are other varieties exposed along with it. Thus in many of the excavations in Westmount it is difficult to determine whether the clay exposed is Leda clay or boulder clay. When such a boulderless variety is merely exposed on the surface its simulation of Leda clay is even more strong and it is often a matter of the utmost difficulty to place a geological boundary on that account.

Again, by the suppression of the boulders and of the clayey part of the matrix a variety is produced, composed almost entirely of fine grains of quartz, together with a small quantity of clay. This may be called a quicksand, because it has the property of running or flowing when it contains a certain percentage