

sand and gravel along with released boulders would be a pretty continuous one from the northern to the southern limit of the moving ice-field.

At the terminals, which would be legion, as the ice-field retreated northward, the deposits would have a peculiar formation. First and farthest from the actual bend of the ice-field, the finer and lighter soil would be spread gently over great areas or small in still water; second, great mounds of coarser material or sand would be thrown up by the torrential rush of the under-glacial waters; third, flanking this sand-hill and somewhat mingling with it on the north, would come a deposit of still coarser material or gravel; and, fourth, a deposit of greater or smaller rounded boulders, dropped from the retreating ice and probably rolled over and over many times by the might of the flood.

It is not at all difficult to find almost anywhere in our own province examples that nearly perfectly illustrate these necessary results of glacial retreat; but unfortunately, in most cases, there is the missing link.

Perhaps one of the best illustrations of this action in this province may be found on the south side of the Ottawa, at a point some ten or twelve miles above Ste. Anne de Bellevue.

Here, at Hudson Heights, we have "Mount Victoria," a hill of almost pure sand, clearly thrown up by some torrential stream carrying a large amount of sediment.

Two or three miles farther up we have the deposit of rounded boulder, stretching beyond Rigaud, where on the side of Rigaud Mountain, in what is called "The Devil's Garden," we have

one of the most remarkable collections of rounded boulders found on this continent.

South-west of Mount Victoria, which runs off in that direction with a very moderate slope, we have sand, then clay, then deep black humus with a clay sub-soil, reaching far down the river; but north of Mount Victoria, instead of the expected gravel before the boulders, we find a deposit of almost pure clay adjoining the sand and reaching north into the boulder belt for miles.

This region I have examined with much care and find so many points in which it differs from the ideal clay, sand, gravel and boulder deposit of a retiring glacier that I am compelled to look for some other cause of the phenomena.

Let us now return to the round-headed valley in which some twelve years of my life were spent.

This valley, as I have said, is almost surrounded by a crescent of high hills, through which, toward the south, a large creek has worn its way to the lake beyond.

The larger part of the valley is flat, covered to a moderate depth with a fine alluvial soil, under which are gravel and boulders.

North-eastward we find sand and gravel mixed, sometimes thrown up in low hills, much like the sand dunes of the coast of California or western Europe; and still farther north-east is the long field of rounded and striated boulders, packed closely together and reaching to an unknown depth.

*(To be continued.)*