mark the spot where it once stood. How little do the many who resort to its verdant slopes, and feast their eves on the magnificent river-the fertile fields, and the busy city spread out before them-know that the very rocks they tread were surging and boiling in a molten state, in the heart of the mountain : that it was a volcano. rivalling Vesuvius in the violence of its eruptions: that where these fields are. stretched a boundless waste of dark waters; and that over the foundations of these towers and palaces, hung a deep canopy of impenetrable cloud. But let no one fear for our city a fate similar to that of the towns nestling. unconscious of danger, round the foot of the apparently harmless Italian volcano; for the fires of Mount Roval have been too long dead ever to be resuscitated, until the last great day. when the "earth shall be burnt up, and all the elements melt with fervent heat." It is also to this eruption that we owe the Lachine Rapids, and the velocity with which the river flows past our doors. The filled up rents in the limestone, called trap-dykes, being much harder, do not so quickly wear away by the action of the water. These dykes in course of time stand above the softer trocks and act as a kind of dam, over which the water flows with increased velocity. Any one may observe this in the current just below the bridge. where one of these dykes stretches obliquely across the river. Moffat's Island opposite the city is an immense specimen of ancient lava flows; there may be seen two or three different layers of lava alternating with thin beds of Utica shale. St. Helen's Island, a mass of volcanic rejectementa, was then the outer edge of the mountain. During this period our record shows no such profusion of life as in those before; for these rocks are formed principally of a kind of hardened limey clay with only a solitary fossil here and the Carboniferous, for the future use

we have only the root, so to speak, to there. From this we are led to infer that the sea had again become shallow, and that turbid streams carried down great quantities of sediment from the land; this sediment was spread over the bottom of the sea as a fine clay. The prevailing form of life seemed more plant-like than animal; being always attached, it resembled a leaf growing on the bottom. It has received the name of Graptolite, meaning stonewriting, from the resemblance a number of them have to an inscription on the rock. Now from these names, so dry to both student and professor, and that are the excuse of those frightened from the study, we are taught one or more of the animal's characteristics, enabling us the better to remember it. Thev are in fact a great help to those who are thoroughly in earnest about mastering the science.

Here another break occurs in our history; for, with the single exception of the veriest fragment of a page occurring on St. Helen's Island, we have nothing extant of our history until near its close. From this fragment, belonging to the Lower Helderberg, we learn that the sea, although near our borders, was pushed beyond them. It was teeming with the forms of life common to those earlier seas. Our volcano. still active, had nearly exhausted itsself; it soon after became extinct, and . ever since has conducted itself quietly.

And now occurs a great gap, for we have no record by which we may learn anything of our history during the most interesting geological periods. What little was recorded has been entirely constant swept awav. Elsewhere. changes were going on; seas giving place to continents, and continents being swallowed up by seas; vast mountain chains were raised on high. Thegreat oil reservoirs of the Devonian were formed in the West. Then the first fish ploughed the deep; next exhaustless stores of fuel were laid up during