of Tertiary age. They are highly crystalline and do not appear to contain any glassy base. As yet no olivine has been observed either in them or the diabases, but very few sections have been examined, and possibly it will be found on further study. In No. I, a mineral has been observed with the characters of sanidin, and no doubt other minerals will yet be detected.

The order in which the different minerals have solidified is a matter of interest, apparently not being that of the fusibilities of the constituent minerals before the blowpipe. In the diabase and dolerite it is evident that the apatite has been the first to solidify; the plagioclase appears to have come next, then the magnetite, and last of all the augite. Mr. J. Clifton Ward gives an interesting example of the apparent order in which the minerals constituting a leucitic basalt near Naples have solidified, which may be noticed in this connection. The minerals are leucite, magnetite, magnesia-mica, feldspar and augite. Of these five minerals the only infusible one is the leucite, and yet Mr. Ward thinks that the last four "were held in solution by leucite in a state of fusion; and that instead of this mineral crystallising out first, it deposited in succession the magnetite, the mica, the feldspar and the augite, and last of all probably solidified quickly, enclosing within its crystals glass- and stone-cavities, and magnetite and feldspar crystals."

It is evident that No. V is a very different rock from any of the others described. In some respects it resembles the so-called melaphyres, but contains much more mica than is found in any of which I have seen descriptions. No. VI is as already stated a diorite and needs no further remark here.

The slight amount of alteration exhibited by some of the ancient dolerites in the Grenville region would no doubt be surprising to some, but is not so much to be wondered at when we consider that they occur in highly crystalline rocks, which would serve to a great extent to protect them from the agencies which have brought about decomposition in dykes cutting the unaltered strata of some more recent formations.

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* Quart. Jour. Geol. Soc. 1875, p. 396.