which many changes in conditions occurred, as shown by the changes in character of the rocks.

Closely involved with these rocks are others which would seem to be of igneous origin, so far as may be judged from their composition. The great changes which they have undergone have destroyed their original characters utterly, and they have been stretched out into bands parallel with the associated sediments, causing them to appear as an integral part of the series. It seems quite certain that they are, in part at least, igneous, and that they must be somewhat younger than the sediments, except in so far as they may possibly represent subaqueous surface flows; yet they can not be greatly younger, since they have undergone much the same changes, both in kind and in degree, that the sediments have experienced. Wherever the sediments occur, these igneous rocks are sure to be found associated with them, thus indicating widespread and profound igneous activity at the time.

Rocks of doubtful age. In many parts of the region, and running in a broad belt across Clinton and Franklin counties, is found a group of old rocks, profoundly changed from their original condition, which seem to be wholly of igneous origin, so far as can be judged from their composition; at least no rocks similar to those of the preceding group and which are judged to be sediments occur with them. They have been equally, if not more changed from their original condition than have the rocks of the preceding group, and all traces of their original structures have been destroyed. It is by no means impossible that they are older and represent the rocks of the floor on which that group was laid down; indeed, if any remnants of that floor remain, we have them here. But, since similar rocks, in general not to be distinguished from them, occur associated with the sediments, where they are clearly as young, or younger, these may represent great masses of such rocks, massed in such amount as to have wholly displaced the sediments. We are not able to decide these questions as yet. If but one rock group is represented, it is no older than the sediments. If more than one be present, one may be older. But, if so, we as yet lack the means of discriminating between them.