

guishable from true segregated veins which accompany them, penetrate the schists in all directions to a distance of several hundred feet.

7. Large detached blocks, of various sizes up to two or three feet, but usually angular and sometimes rectangular, are enclosed in the granite, and produce the appearance of a coarse granitic breccia.

To the above it may be added that small patches, sometimes not more than a few yards or feet in extent, of gneissic or schistose rock, are occasionally met with resting upon, but inseparable from, the granite, at very considerable distances from the nearest exposures of such schistose rock, while smaller masses, which are evidently detached fragments, occur in all parts of the granite area, often retaining the same features of texture, foliation, and even of colour, presented by the main body of such rocks.

From a consideration of the above and other facts, the conclusion seems to be fairly established that the granites in question are intrusive or exotic, and that the alteration of the associated rocks was an accompaniment, if not an effect, of such intrusion. It may be added that while the several belts of slates and schists, north and south of, or central to, the granite, have been variously described as wholly or partly of different age or origin, recent minute examinations of the region show beyond question their essential identity,—the same crystalline and semi-crystalline rocks always appearing where the granite is approached, whether from the southern, northern or eastern side, while in the opposite directions these as invariably graduate into the upper and comparatively unaltered argillites and greywackes. At what period the extravasation of the granite occurred is less certain. As far as yet observed in Carleton County, no veins of the latter are to be found penetrating the Upper Silurian, although veins of syenite and diorite are common; but the fact observed in the southern counties, that the conglomerates older than the Lower Carboniferous are destitute of granitic pebbles, while those of the latter formation abound with them, taken in connection with the evident similarity of the granites in the two regions, and the precisely similar effects accompanying them, appears to indicate that both are of synchronous origin and both Devonian. In either case the amount of erosion which has since occurred is sufficiently indicated by the facts already stated, the whole granitic area, with a superficies of several hundred square miles, having been evidently laid bare by the denudation of beds (schists, slates and sandstones,) which, though now miles apart, were at one time continuous over it, and which, to judge from their highly inclined attitude and vast thickness, must have buried it to a very considerable depth. The fact that the granite areas are usually lower than those of the bordering schists would also seem to indicate that erosion has been more extensive and complete along these areas than in the regions adjacent to the latter; while the much greater breadth of the region of metamorphism and foliation on the northern side of the granite, than on the southern, would appear to indicate a much more abrupt descent in the junction line of the granitic mass on this latter side than upon the opposite. It is to the contrasts thus produced that the different views, which have been advanced by different observers as to the relations of the strata in the district, are to be ascribed.

I pass now to the contacts of the Devonian. In the southern counties the rocks of this age, so far as they have been certainly identified, are of very limited distribution, and rest only upon rocks of Cambrian or pre-Cambrian age, a portion of these latter, by an overturn and fault, being also brought to rest, in a position of comparative conformity,