

determination of the relations between the two, and the writer is in doubt concerning them. But whether this is the same rock or a different granite, it is so like the other in appearance and in amount of metamorphism, being mostly fairly coarse and with numerous feldspar augen, that there can be little doubt of the close relationship of the two rocks, and it may be safely stated that the two, if distinct, have arisen from the same parent magma and are not far separate in time. It is simply a question whether differentiation has taken place where the rocks now lie or has taken place beneath.

Running northeast from Litchfield park are two big rock ridges, pitching northwardly with gentle slopes, but breaking down in tremendous cliffs on the southwest, which are constituted of a reddish, coarsely gneissoid rock, grading locally into green patches of unmistakable syenite, which the field relations and the thin sections show to be nothing but an extra acid phase of the syenite [pl. 17]. The rock approaches granite but is not as decisively granitic as the previous rocks. It is however another instance of the passage of the syenite into a granitic rock, and the special interest which attaches to it comes from the fact that it is surrounded on all sides by ordinary syenite and hence seems clearly a central, acid differentiation of a syenite mass.

Occasional local reddish gneisses appear in the syenite of somewhat different nature from the foregoing, and in these the color change is not accompanied by much increase in acidity. A case of the sort is met in the section at Little Falls, the rock in question being a syenite full of feldspar augen, which has locally been so mashed and stretched that the augen have become nearly or entirely crushed, the product being a granular red feldspar which has been squeezed out into flat lenses, often tailing out into the rock as thin sheets of considerable extent. In some of these a bit of uncrushed feldspar still remains, and all stages between this extra mashed condition and the ordinary rock can be observed, so that there can be no question of the origin of the granular red feldspar; the origin of the color change is not manifest however, since the augen themselves are by no means red. Furthermore, the red color is confined to this portion of the rock, and the remainder is still of the gray green of the ordinary syenite. It is