quartz diminishes, but it does not disappear, and the plagioclase remains acid, albite to oligoclase, instead of the labradorite of the gabbros. The affiliations of the rock therefore remain with the syenite, and it does not become a true gabbro. Chemical investigation brings out the same features, as will be later shown.

Of equal interest is the passage of this syenite into a red gneiss. In one direction the passage is into a finely granular red gneiss, which Smyth states to differ from the main rock only in a more complete granulation of the constituents, the formation of a little hematite, which causes the color change to red, and an increase in the amount of quartz. In another direction the transition is into a coarser red gneiss which contains a conspicuous amount of hornblende.

Besides these important evidences of great variation in the syenite mass, the Diana area is noteworthy in yet another respect. It borders a long belt of Grenville rocks for several miles; and Smyth has presented in great detail the perfectly clear evidence that it cuts the Grenville rocks intrusively, since it contains abundant inclusions of them, and since it cuts them out along the strike.[1] These relations are here shown in greater perfection than in any other locality so far described in the Adirondack region, and seem to the writer to show not only that the syenite is younger than the Grenville rocks, but also that it is considerably younger. The less severe metamorphism which it has suffered, as evinced by the considerable extent to which it retains original textures which definitely show its igneous character, when compared with the completely crushed and recrystallized condition of the Grenville sediments and associated igneous gneisses, as well as with much of the Saranac gneiss, would seem to demonstrate this clearly, and to show that, so far as age is concerned, their condition of metamorphism would require their classification with the anorthosites, rather than with the Grenville and Dannemora rocks.

Other syenite areas. So far as the Adirondack region has been studied, these syenites seem to be more abundant and important rocks in Franklin county than elsewhere, though it is possible

[1] 17th An. Rep't State Geol. p.474–81.