as to the age relations as are the Diana exposures, but which nevertheless presents some interesting features, as indicated by the accompanying section [fig. 2]. The augite syenite constitutes the center and south end of the section. It is more thoroughly granular and gneissoid than in the neighboring exposures. Separating the two syenite areas is a mass of banded gneiss 12 feet in thickness [pl. 3]. Above is a 2 foot layer of a white, granular rock composed of quartz and white pyroxene in the proportion of 1 to 2. This is followed by layers of black pyroxene granulite and light colored quartzose rocks, the latter consisting essentially of quartz and alkali feldspars in the proportions of 2 to 1. The structure and composition indicate the sedimentary origin, and identical gneisses are found elsewhere in intimate association with limestones. The section is cut at but a small angle with the strike, and but one of the contacts is exposed.

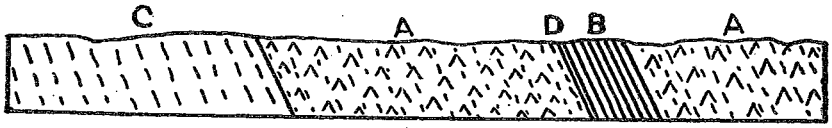

Fig. 2 Section in railroad cut near Loon lake, N. Y. *A*, augite-syenite. *B*, well banded quartzose gneisses. *C*, quartzose gneisses. *D*, biotitic sheared strip—strike north 10 degrees west. Dip of bedding and foliation 65 degrees to the west.

This is parallel to the foliation and bedding and appears like a shear zone, marked by abundant development of biotite. Beyond this middle mass of syenite fine grained, red, granitic gneisses come in, which are likely igneous but quite like rocks often closely associated with the Grenville. The contacts of this rock with the syenite are not exposed. All the rocks have a common foliation, which is also parallel to the banding of the banded gneiss.

While the field relations are not well shown, the fact that the syenite extends unbroken for some distance on all sides of the exposure, and that no Grenville rocks are elsewhere exposed, makes it evident that we are dealing with but a small mass of these rocks wholly surrounded by syenite and hence of the nature of an inclosure in it. Many examples of precisely similar nature may be cited from the areas occupied by the great intrusions.

Relations of syenite and anorthosite. Just as the Diana syenite belt, because of juxtaposition to a considerable area of the Grenville rocks, has furnished conclusive proofs of the age relations