

date; the uncertainty connected with the matter arises from the fact that in no case has it so far been possible to trace these dikes to any connection with the near-by larger masses, of which they are thought to represent offshoots, so that the correlation between the two depends merely on rock similarity. At the one or two exposed contacts it seems quite certain that the anorthosite is the older rock, but here again there is some question as to the actual identity of the rock which cuts it.

At two localities near the anorthosite boundary, border rocks have been discovered which, instead of exhibiting the ordinary change to anorthosite gabbro, disclose a gradation toward syenite. Such have only been noted in localities where the anorthosite is bordered by a syenite which is thought to be younger, and the rock represents a transition stage between the two, though much closer to anorthosite than to syenite. The precise significance of these rocks is not known, the field exposures not being sufficient to give any idea of the relationships to the two rocks, and, since the presence of an intermediate rock of this sort can be accounted for in several ways, and gives no evidence as to the relative age of the other rocks, speculation on the subject is of no value, in the lack of corroborative field evidence.

Anorthosite outliers. In the northern Adirondacks there are two considerable anorthosite outliers in Clinton county and two very small ones in Franklin county. Not unlikely other small ones will be discovered when the region is mapped in detail, work of this sort on the Long Lake sheet of the new topographic maps during the past season having first brought to light the two Franklin county outliers mentioned above. Kemp has mapped several on the south in Essex and Warren counties.

The two Clinton county outliers are those at Keeseville and Rand hill. The former is not strictly an outlier but rather a tongue-like offshoot from the main mass, the connection being bared by erosion. As in all the outliers, the rock here exhibits the characters of the border portions of the main mass rather than of its center, in other words is anorthosite gabbro, not so coarse grained as, but more gneissoid than the usual rock, with from