

much more abundant than hypersthene. There is great variation in the relative amounts of augite and primary hornblende, and sometimes the latter preponderates.<sup>1</sup>

The two outliers in Franklin county are very small, each only a few square rods in extent. The one is about 6, the other some 8 miles distant from the edge of the main mass. Considering their small size, they are rather surprisingly coarse, that is, on the hypothesis that they were intruded into the surrounding rocks, yet much of the rock is very gneissoid. In the one case the surrounding rocks are thought to be later eruptives, the observed contacts seeming to bear out that view, so that the anorthosite is in the nature of a huge inclusion in these eruptives. But there are some difficulties in the way of this interpretation, and, till the material is more thoroughly studied, it can not be positively stated that it is the true one.

About the other outlier there are no exposed contacts with the surrounding rocks, which are gneisses of uncertain nature and origin, and the relations between the two are wholly uncertain.

At Rand hill magnificent contacts of the anorthosite gabbro with gneisses thought to belong to the Dannemora formation, are shown and definitely prove the anorthosite to be the younger rock.

Whiteface type of anorthosite. This name has been proposed by Professor Kemp for a peculiar type of rock, rather uncommon in the Adirondack region, which reaches a considerable development on, and in the vicinity of, Mt Whiteface. The main mass of the rock is in Essex county, but it gets over the border into Franklin at Franklin Falls, and into Clinton county on Wilmington and Catamount mountains. In both of these situations it becomes much involved with other rocks, and about Franklin Falls it often appears so interbanded with Grenville rocks as to seem like an integral part of the series.

The rock has the mineralogy of anorthosite, or rather of anorthosite gabbro, though quite a different-looking rock from the ordinary types. It is mostly quite thoroughly gneissoid and characterized by the color of the feldspar, which is milky white, even when perfectly fresh and unaltered. In the writer's exper-

<sup>1</sup>For a more detailed description of this rock, see 19th An. Rep't N. Y. State Geol. p.152-159.