by no means rises to the dignity of an essential constituent but is much more abundant and attains a larger size than in the usual igneous rock. The syenites contain quartz almost without exception, and the amount increases toward the acid end of the series, the calculation of the analysis of column 14 showing 14% of that mineral.

Analysis 10 is of a green gneiss which occurs associated with granite and granitic gneiss near Piercefield. Its field relationships to the syenite are not plain, and the doubt about its properly belonging with them is not cleared away by the analysis, which falls slightly out of the series in its magnesia-lime ratio and in its total magnesia. The rocks nearest it in silica percentage, 8 and 9, have this ratio, 1:3 and 1:3.5 respectively, as against 1:1.7 in 10. Its ratio is nearest to that of 13. On the other hand, it can be argued that its general great similarity in composition would seem to ally it closely with the syenites, and that these show a great variation in the magnesia-lime ratio, even though it approaches so near to equality in no other.

General characters of the Adirondack eruptives. The analyses in the preceding table are thought to be sufficiently numerous to furnish a very fair representation of the general characters of the Adirondack eruptives, except for the lack of analyses of the granites. The latter vary greatly, ending with very acid rocks composed almost wholly of quartz and feldspar. It is quite safe to say that they will reach 75% of silica and probably higher, and that, since their feldspar is universally microperthite, the ratio of soda to potash will remain substantially as it is in the syenites.

The gabbros and anorthosites are quite normal representatives of these groups. But in the transition rocks between these and the syenites we find low magnesia, low ratio of lime and magnesia to alkalis, and approximately equal amounts of soda and potash, and these characters continue to the end of the series. The soda-potash ratio is a slowly changing one, the potash being at first below, but eventually overhauling and passing the soda in the more acid rocks. In these respects the syenites, and probably the granites, depart somewhat from the corresponding rocks of the Ekersund-Soggendal area in Norway, which also ac-