

The other minerals call for no special comment. An augite which is light green in thin section, is next in abundance to the feldspar. Orthorhombic pyroxene is in general not so prominent. It is usually hypersthene but sometimes bronzite. Ilmenite always occurs with these, but in the normal anorthosite all these are in small quantity, constituting ordinarily less than 5% of the rock.

Texture. The original anorthosite must have been extremely coarsely crystalline, and likely coarsely porphyritic. Under metamorphism the rock has been granulated in varying degree, here but little, leaving the rock still very coarsely crystalline, there excessively, producing a finely granular rock, all intermediate gradations between the two being found. In the coarser rocks the large feldspars are often from 2 to 5 inches in length and are universally dark colored, often showing straining and bending as a result of metamorphism. The granular feldspar is lighter colored and in thin section does not show the opaque rods which characterize the other. It has plainly originated from the crushing, in whole or part, of the large feldspars, crushing under such great load of overlying materials as to cause the rock to remain firm and resistant during the entire process; in fact, the granulated rock is often stronger than the other.¹

Differentiation. As the borders of the anorthosite are approached, the rock invariably shows some variation in character,

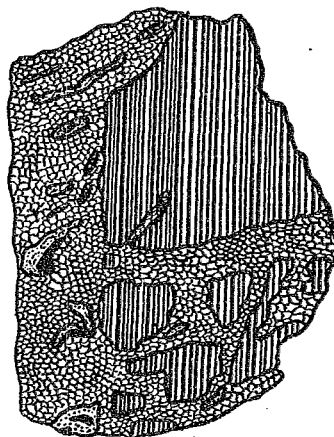


Fig. 1 Drawing of a portion of a hand specimen of anorthosite gabbro from near Keeseville, showing a large labradorite crystal which has been broken into several pieces, these being forced apart and granulated around their edges and the gaps filled by granulated material, the rock remaining firm and tough throughout. The black mineral is ilmenite, and the dotted is granular garnet. The uniform cleavage and twinning of the fragments of the large crystal demonstrate their identity.

¹For detailed descriptions of these textures, see Adams, F. D. Geol. Sur. Can. An. Rep't. v.8. pt J. p.108-15.