

In thin section, feldspar is always largely in excess of the other constituents, and in some instances constitutes ninety to ninety-five per cent. of the entire rock (113, 148, 205). These are the bostonites. In an average specimen (No. 103) feldspar occupies about three-fourths of the field and occurs in small columnar crystals of uniform size and parallel arrangement, and a few larger individuals which are scarcely distinct enough to be called phenocrysts. They conform to the parallel arrangement of the lath-shaped microlites, which gives to the rock a decided flow structure.

Slender prismatic sections of hornblende and a little biotite can be recognized in ordinary light, as well as a few grains of magnetite, and a considerable amount of granular ferro-magnesian material. The hornblende is brown, and in a few instances shows pleochroism.

Some of the largest feldspars show very clearly a cross parting similar to that already noticed in the phenocrysts of pulaskite.

In those specimens in which the dark minerals are unimportant, or altogether wanting, the trachytic is less plainly shown. A dyke at the head of Plamondon's wood 'slide,' (No. 113) while it still shows a tendency towards parallelism of the feldspar, microlites, agrees in all essential respects with the typical bostonite of Marblehead Neck, Massachusetts. Another (No. 205) from the vicinity of the outlet of Couplands lake, also agrees very closely with this in the hand specimen, but under the microscope it shows a somewhat coarser texture.

A quartz-free porphyry from Range III Lot 24, of the Township of Shefford, a distance of about four miles from Shefford mountain, which was fully described by Dr. F. D. Adams (Report of Progress, Geological Survey of Canada, 1880-1-2, pp. 10-11 A) undoubtedly belongs to the intrusive masses of Shefford and Brome mountains. It probably agrees more closely with the dykes which are sent out from the nordmarkite mass, than with any of later age. Like certain nordmarkite dykes (No. 188, 135, 131) it is free from bisilicates and contains a little quartz. It differs from them chiefly in its porphyritic structure, which, however, is a feature largely dependant on the conditions of cooling.

Dr. Adams thus interestingly describes it :

"This rock occurs associated with chloritic schists, and is so far as can be ascertained, conformable to these in strike and dip. In a section it is seen to be composed of a microcrystalline groundmass,

Bostonites.

Quartz-free porphyry.

Described by Dr. Adams.