of the dyke material. In the case of several dykes of nordmarkite (131, 135 et al.), which cut essexite, narrow off-shoots, scarcely a quarter of an inch in width, strike off for a distance of twenty to twenty five feet, but are scarcely less coarse in structure than the dykes themselves, which are from three to five feet wide. In neither the dykes nor their off shoots is there any approach to a porphyritic structure.

The same character of crystalization appears in the later dykes as a rule, the chief exception being in the case of dykes probably belonging to the pulaskite mass. These, like the contact facies of that rock, have either a porphyritic or, more commonly, a porphyritic trachytic structure.

Dynamic Metamorphism.

Regional metamorphism.

All the igneous rocks composing the mass of Shefford mountain, with one possible exception, display more or less distinct foliation in a direction parallel to the folding of the sedimentary rocks of the district. Foliation is frequently best developed in bands a few yards in width, while the much wider intervening areas are much less altered. In the foliated bands an almost perfect or slaty cleavage is developed, and in much of the less altered portions of the rock there is a slight 'rift' or tendency to cleave, always in the same direction.

In thin sections from the least altered parts of the rock-feldspar crystals are occasionally found which are distorted and which show distinct strain shadows, thus attesting to the subjection of the rock to metamorphic agencies, at least in the final stages of the Appalachian folding.

The dykes also show evidence of subjection to pressure since their solidification. A slaty cleavage is more or less perfectly developed in both classes of dykes. That this is due to pressure is shown by the microscopic sections in which distorted crystals and grains having a wavy extinction occasionally appear. The cleavage is best shown in dykes which run obliquely to the axis of foliation. In such cases an apparent differential movement of the side walls has produced a peculiar twisted fracture crossing the dyke obliquely that is easily noticed, plate II.

Cleavage.

Faulting too is well seen in numerous narrow vein-like dykes which appear in the essexite in Lavignes brook along the mountain road.

Faulting.