variety all gradations are seen down to that composed of individuals of microscopic size. The finer examples on fresh fracture still show the crystalline structure, but the mottled appearance is entirely lost, partly owing to the fineness of texture, but perhaps more in consequence of discoloration of the feldspar. This type is common and fairly fine examples are the rule, no very coarse diorites being seen in the region.

Diorite occurs in large dykes traversing the country rock in all directions, and also frequently in irregular masses forming the summits of hills; in some instances the intrusive mass has lifted the country schists to the summit of the hill, while the diorite appears on the flanks. By far the most general manner of occurrence is in bands of varying thickness, conformable with the strike and dip of the schists, which is generally at a high angle. These thin bands are invariably fine-grained and almost black in colour. Many of them towards their borders have entirely lost the crystalline structure and are homogeneous to the naked eye; the microscope, however, reveals some traces of crystallization in ill-formed hornblende and magnetite crystals, due, of course, to the more rapid cooling of the exterior of the mass. An important consideration now confronts us. Are these interbedded diorites contemporaneous with the schists, are they subsequent eruptions, or are the schists themselves derived from the diorites? It is probable that all these cases occur. The diorite can thus be divided into three classes, (1) massive eruptives, (2) contemporaneous diorites, (3) diorites passing into diorite schists.

(1) The class of massive eruptives can be recognized by a distinct crystalline structure nearly always increasing in fineness towards the borders and *on both sides*. All the irregular masses that form hills, the large dykes crossing the country rock, and many of the interlaminated sheets show this peculiarity. As far as the last variety is concerned, the bilateral symmetry of the mass can be accounted for on no other assumption than that of subsequent injection. The accessory evidence of a sheet of diorite breaking across from one plane of stratification to another has not been observed here, although it is well known to occur.

(2) Contemporaneous diorites are generally less crystalline, more easily weathered and more inclined to show irregularities of colour and structure. If these rocks were originally overflows