

homogeneous for considerable distances, but more usually it consists of differently constituted layers.

The gneiss everywhere shows, in spite of a frequent persistence of strike and dip, that it has been subjected to intense and repeated dynamic action. This is apparent in the larger features of its structure, in its generally crumpled, gnarled and twisted character, and in the profound metamorphism, amounting to almost complete recrystallization, which has gone on within it. No certain traces of clastic origin have ever been detected in the Maryland gneiss, although its sedimentary character may be inferred from its rapid alternation of beds of different composition and from the nature of other rocks intercalated in it like the marble and quartz-schist.

The color of the more massive gneisses varies from white to a dark gray or blue. The more micaceous and hornblendic varieties are dark brown or green. The mineral composition and structure are quite normal for gneisses elsewhere developed. Superficial exposures of the gneiss are very rarely fresh. This wide-spread decay extends also for a considerable distance below the surface, at least in an incipient form, as may be seen from the very rapid disintegration in road and railroad cuttings of rock that is sufficiently hard to require blasting.

**THE QUARTZ-SCHIST.**—This type forms but a small portion of the rocks of probable sedimentary origin included within the eastern division of the Piedmont Plateau. It is more interesting from its influence on the topography, since it causes the low ridge extending along the south side of Green Spring and Mine Branch valleys known as Setter's Ridge, than it is from its areal extent or even its mineralogical composition. The quartz-schist rarely attains any considerable thickness, but instead seems to be closely related to the underlying gneiss into which it grades by imperceptible transitions. Between the schist and the marbles there is a sharp break, and it has been considered probable that this formation is in some way the result of fumerole action in the gneiss. This conclusion is borne out by the mineralogical composition. The most abundant constituent is quartz, which occurs divided into fine beds of varying thickness by parallel