

edly their foliation (pp. 183, 304). They have usually a more or less conspicuous crystalline structure, though occasionally this is associated with traces, and even very prominent manifestations, of clastic ingredients (pp. 312, 1040). Their foliated or schistose structure varies from the massive type of the coarsest gneiss down to the extremely delicate arrangement of the finest talcose or micaceous schist. They occur sometimes in monotonous uniformity: one rock, such as gneiss or mica-schist, covering vast areas. In other places, they consist of rapid alternations of various foliated masses—gneiss, mica-schist, clay-slate, actinolite-schist, and many other species and varieties. Lenticular seams of crystalline limestone or marble and dolomite, usually with some of the minerals mentioned on p. 264, sometimes strongly graphitic, not infrequently occur among them, especially where they contain bands of serpentine or other magnesian silicates. Thick irregular zones of magnetite, hæmatite, and aggregates of hornblendic, pyroxenic, or chrysolitic minerals likewise make their appearance.

Another characteristic of the schists is their usual intense crumpling and plication. The thin folia of their different component minerals are intricately and minutely puckered (Figs. 36, 37). Thicker bands may be traced in violent plication along the face of exposed crags. So intense indeed have been the internal movements of these masses, that the geologist experiences great and often insurmountable difficulties in trying to make out their order of succession and their thickness, more especially as he cannot rely on the banding of the rocks as always or even generally an indication of consecutive deposition. Such evidence of disturbance, though usually strongly marked, is not everywhere equally so. Some areas have