

been more intensely crumpled and plicated, and where this is the case the rocks usually present their most conspicuously crystalline structure.

A further eminently characteristic feature of the schists is their common association with bosses and veins or bed-like sheets of granite, syenite, quartz-porphry, diorite, gabbro, or other massive rocks. In some regions, indeed, so abundant are the granitic masses and so coarsely crystalline or granitoid are the schists, that it becomes impossible to draw satisfactory boundary-lines between the two kinds of rock, and the conviction arises that in some cases they represent different conditions of the same original material, while in others the result is due to granitization (p. 1002).

The question of the formation and geological age of the crystalline schists has given rise to much controversy. Some geologists have maintained that these rocks are to be regarded as portions of the early crust of the globe which consolidated from a molten condition. Others have regarded them as original chemical deposits on the floor of a primeval ocean. These writers, justly repudiating the exaggerated views of those who have sought by metamorphic (metasomatic) processes to derive the most utterly different rocks from each other (for example, limestone from gneiss and granite, granite and gneiss from limestone, talc from granite, etc), have insisted that the crystalline schists, in common with many pyroxenic and hornblendic rocks (diabases, gabbros, diorites, etc.), as well as masses in which serpentine, talc, chlorite, and epidote are prevailing minerals, have been deposited "for the most part as chemically-formed sediments or precipitates, and that the subsequent changes have been simply molecular, or at most confined in certain cases to reactions between the mingled elements