

abundant in mica ; and he notices the addition of hornblende as characterising the most modern granites. As before observed, the three granitic masses in the midst of the Cumbrian mountains present as many distinct sorts of granite, and each belongs to a distinct place in the series of slates. The Skiddaw granite is quartzose and micaceous, and underlies the lowest slate rocks ; the Eskdale granite is quartzose with little or no mica, and lies among green slates of the middle division ; the Shap granite contains but little quartz, is porphyritic in structure, and lies near the base of the upper Cumbrian series of slates. Whether these granites are of the same or very different geological eras, cannot be known without the most careful study of the district undertaken for the purpose.

Those geologists who think that the culmiferous strata of Devon form part of the carboniferous system of England, which overlies old red sandstone, may believe the granite of Dartmoor to have been erupted since the age of the mountain limestone ; for the culm measures are greatly contorted where they approach the igneous rock.

At Weinbohla on the Danube, according to professor Weiss, confirmed by many subsequent authorities, occurs a real superposition of granite (or sienite) on chalk and green sand, which strata, usually horizontal, dip suddenly beneath the granite in some places, and rest upon it in others. (See De la Beche's Manual, for a detailed account.)

In the Pyrenees we learn from M. Dufrenoy, that granite sends veins into chalk, and converts it into granular crystallised limestone, and generates in it valuable veins of iron ore. This range of mountains is remarkable for showing contacts of granite with calcareous beds of the several eras of transition rocks, lias, and chalk, and in each of these cases the limestone become crystalline and metalliferous.

Our view of the history of igneous rocks will be both more complete and accurate by considering them in connection with the lines and points where the strata