

Scotland. Mica, readily, separates or divides into thin transparent laminæ; and where the plates are very large, as in the Siberian granite, it is used instead of glass for windows. This variety is improperly called Muscovy talc. Talc resembles mica, but is much softer. When the grains of felspar and other minerals are very minute in granite, it can scarcely be distinguished from sandstone.

Beside the three minerals, quartz, felspar, and mica, which were formerly considered as the essential constituent parts of all true granite, whoever has attentively examined various granitic districts, must have frequently observed, that other minerals occupy the place of mica, either in part or entirely. Thus, near the summit of Mont Blanc, the granite is composed of felspar, quartz, and talc or chlorite, the latter mineral supplying the place of mica. To this variety of granite the name of protogene has improperly been given, whereas *talc* or *chloritic granite* would at once convey a distinct idea of its nature. In some instances, hornblende supplies the place of mica, or is intermixed with it. To this rock, the name of sienite was given, because a granitic rock of this kind from Sienna, in Upper Egypt, was much used by the ancients for obelisks.

The following varieties of granite are often associated in the same granitic mountains, and may be regarded as contemporaneous with it, being, essentially, the same rock, accidentally modified, by an admixture with other simple minerals.

*Common Granite*.—The felspar, white or red, composed of quartz, felspar, and mica.

*Porphyritic Granite*, in which large crystals of felspar occur in a small-grained granite. The granite near Shap, in Westmoreland, offers an excellent type of this.

*Sienite* or *Sienitic Granite*, in which hornblende, either wholly or in part, supplies the place of mica. The granite of Malvern, and of the Charnwood Forest hills affords specimens of this granite.

*Talc* or *Chloritic Granite*.—Quartz, felspar, and talc or chlorite. Many of the granitic mountains, in Savoy, are composed of this granite; and loose blocks of it are scattered over the valleys and on the sides and summits of the calcareous mountains, in the countries to the north and north-west of the Alps. This granite is by some writers called protogene.

*Felspathic Granite*, in which the felspar is the principal ingredient, and the quartz, and particularly the mica, very rare; larger crystals of felspar occur in it. It is, frequently, nearly white. To this variety, Werner has given the name of white stone, and the French, eurite. It occurs in beds, in common granite, in Cornwall. In its most compact form, it becomes a porphyry, and in Auvergne, is closely allied to volcanic rocks. Indeed I observed the common granite of Auvergne to be composed chiefly of felspar and quartz without mica; in some parts, the mica was replaced, by the mineral called pinite.