

Granite occurs in masses of vast thickness, which are commonly, divided, by fissures, into blocks, that approach to rhomboidal or pretty regular polyhedral forms. Sometimes a columnar structure may be observed in granitic mountains; in other instances, where the quantity of mica is considerable, granite divides into parallel layers or plates, that have been mistaken for strata. Granite is, occasionally, found in globular masses, which are composed of concentric spherical layers, separated by granite of a less compact kind, and enclosing a hard or central nucleus. These globular masses are, often three or four yards, or more, in diameter, and are either detached or imbedded in granite of a softer kind; this structure is not peculiar to granite.

The aspect of granitic mountains is extremely various: where the beds are nearly horizontal, or where the granite is soft and disintegrating, the summits are rounded, heavy and unpicturesque. Where hard and soft granite are intermixed in the same mountain, the softer granite is disintegrated and falls away, and the harder blocks remain piled in confusion on each other, like an immense mass of ruins. Where the granite is hard, and the beds are nearly vertical, and have a laminar structure, it forms lofty pyramidal peaks or *aiguilles*, that rise in enormous spires; such are the *aiguilles* in the vicinity of Mont Blanc, which are far more interesting, both to the picturesque traveller or the geologist, than Mont Blanc itself. The *Aiguille de Dru* is perhaps, the most remarkable granitic mountain at present known; the upper part or spire, rises above its base nearly to a point in one solid shaft more than four thousand feet; the summit is eleven thousand feet above the level of the sea.*

It has been observed in so many situations, that it may perhaps be regarded as a general law,—wherever granite rises high above the surface of the earth, the strata of limestone or other rocks in its vicinity rise towards it. Numerous instances of this occur in the Swiss Alps. In the higher part of the valley of Lauterbrun, in the Canton of Berne, I have seen a bed of limestone in immediate junction with granite, in a perfectly vertical position, like a wall built up against it; but both rocks were cemented together without any perceptible line of parting. The limestone was extremely hard, but the parts in immediate contact with the granite did not differ in appearance from the other parts of the bed.

In many of the highest mountains in the northern or Swiss Alps, granite is seen only near their bases; the summits are composed of immense beds of limestone, and secondary stratified rocks. In the southern chain, or the Savoy Alps, the highest summits are granite; indeed, the highest known point at which granite has been observed, in any part of the world, is Mont Blanc in Savoy, the loftiest moun-

* A short description of this mountain, with a plate, is given in the 2nd Vol. of "Travels," by the author.