

(*On Volcanos*, p. 51.), after describing the cellular character of the lava, and the way in which it is related to the present form of the surface, observes, "It seems difficult to reconcile the hypothesis of Von Buch with the age which we are compelled to assign to the volcanic operations here, as well as in other parts of the Eifel. As it is evident that no foreign ingredient could penetrate the substance of the rock in its present hardened condition, so as to unite with the other constituents, and diffuse itself uniformly through the mass, it seems necessary for Von Buch's hypothesis to suppose the limestone to have previously been at least softened by the heat, which occasioned the sublimation of the magnesia. Hence we should be obliged to fix the period at which this process took place as antecedent to the formation of the valleys, for these would be necessarily obliterated by any softening of the limestone which now overhangs them.

"Indeed it would be necessary to carry back this supposed softening of the calcareous rocks to some period antecedent to the retirement of the ocean, when sufficient pressure might be exerted to prevent the carbonic acid from being driven off from the limestone when exposed to the heat required for softening it.

"But all this is contradicted by the phenomena of the volcanic products in question, the cellular appearance of which plainly indicates the absence of pressure, and which even seem, from the existence in them of craters, and by the manner in which they have accommodated themselves to the present slope of the valleys, to have been formed since the commencement of the present order of things."

Dolomitic limestone is not at all common among primary strata, though these early limestones often contain serpentine in strings and veins, augite (as at Tíree), mica, and other magnesian minerals.

Generation of New Minerals.

Perhaps no more interesting or satisfactory evidence