but the lines of deposition are not wholly effaced, they are denominated *metamorphic* (*transformed*) rocks. When all traces of organic remains and of sedimentary deposition are lost, and the mass is crystalline, and composed of substances which are known to be the products of igneous action, such rocks are named *plutonic*, as granite, sienite, and the like. Lastly, rocks resembling the lavas, scoriæ, and other substances emitted by burning mountains still in activity, are called *volcanic*.

The original sedimentary character of the most ancient crystalline rocks is, of course, hypothetical, since all evidence of aqueous origin is wanting, and the minerals (mica, quartz, and felspar) of which they are so largely constituted, are not readily soluble in water under ordinary circumstances. But rocks unquestionably sedimentary, when exposed to intense heat under great pressure, assume a crystalline structure, (*Wond.* p. 751.); and a series of changes, from a loose earthy deposit, to compact volcanic lava, may be traced in numerous instances, so as to leave no doubt that all the rocks formerly called primitive and primary, *may* have originally been either argillaceous, siliceous, or calcareous strata, teeming with organic remains. (*Wond.* p. 704.) These igneous crystalline masses have been produced at successive periods; for granite is found of all ages, occurring in the most ancient, as well as in the comparatively modern epochs. The difference between the composition and aspect of these rocks, and those of recent volcanic origin, is attributed to the circumstance of the