Uniformity of mineral character in Hypogene rocks. — Humboldt has emphatically remarked, that when we pass to another hemisphere, we see new forms of animals and plants, and even new constellations in the heavens; but in the rocks we still recognize our old acquaintances, —the same granite, the same gneiss, the same micaceous schist, quartz-rock, and the rest. It is certainly true that there is a great and striking general resemblance in the principal kinds of hypogene rocks, although of very different ages and countries; but it has been shown that each of these are, in fact, geological families of rocks, and not definite mineral compounds. They are much more uniform in aspect than sedimentary strata, because these last are often composed of fragments varying greatly in form, size, and colour, and contain fossils of different shapes and mineral composition, and acquire a variety of tints from the mixture of various kinds of sediment. The materials of such strata, if melted and made to crystallize, would be subject to chemical laws, simple and uniform in their action, the same in every climate, and wholly undisturbed by mechanical and organic causes.

Nevertheless, it would be a great error to assume that the hypogene rocks, considered as aggregates of simple minerals, are really more homogeneous in their composition than the several members of the sedimentary series. In the first place, different assemblages of hypogene rocks occur in different countries; and, secondly, in any one district, the rocks which pass under the same name are often extremely variable in their component ingredients, or at least in the proportions in which each of these are present. Thus, for example, gneiss and mica-schist, so abundant in the Grampians, are wanting in Cumberland, Wales, and Cornwall; in parts of the Swiss and Italian Alps, the gneiss and granite are talcose, and not micaceous, as in Scotland; hornblende prevails in the granite of Scotland—schorl in that of Cornwall—albite in the plutonic rocks of the Andes—common felspar in those of Europe. In one part of Scotland, the mica-schist is full of garnets; in another it is wholly devoid of them: while in South America, according to Mr. Darwin, it is the gneiss, and not the mica-schist, which is most commonly garnetiferous. And not only do the proportional quantities of felspar, quartz, mica, hornblende, and other minerals, vary in hypogene rocks bearing the same name; but what is still more important, the ingredients, as we have seen, of the same simple mineral are not always constant. (p. 463 and table, p. 104).

The metamorphic strata, why less calcareous than the fossiliferous.— It has been remarked, that the quantity of calcareous matter in metamorphic strata, or, indeed, in the hypogene formations generally, is far less than in fossiliferous deposits. Thus the crystalline schists of the Grampians in Scotland, consisting of gneiss, mica-schist, hornblende schist, and other rocks, many thousands of yards in thickness, contain an exceedingly small proportion of interstratified calcareous beds, although these have been the objects of careful search for economical purposes. Yet limestone is not wanting in the Grampians, and it is