

nexion between the recent coarse shales and the sandstones to which they belong. The whole of the association, indeed, between quartz rock and argillaceous schist, bears a striking resemblance to that between shale and sandstone in the secondary class. Of the connexion between quartz rock and the primary red sandstone I must speak immediately.

The external character which quartz rock gives to a country, and particularly to the mountains composed of it, is generally remarkable, and leads to its detection, even at a distance. Such hills are commonly of a conoidal shape; and, under any form, are bounded by a smooth flowing outline, rarely disturbed by the asperities so generally characteristic of micaceous schist. They are commonly also covered, on the steeper parts, with fragments, on which no soil accumulates; their naked whiteness being seldom concealed, even by the growth of a lichen. From this whiteness, often so dazzling in the sunshine as to emulate the effect of snow, the composition of these mountains can often be conjectured at a distance. Although these ruins bespeak the degradation of the strata, the disintegration of the rock itself is everywhere scanty; the soil being consequently thin, and consisting of little else than sand mixed with a portion of the black earth of vegetables. Hence they form the most sterile of all the soils of Scotland; while the same character appears to belong to this rock wherever it has been observed.

The theory of quartz rock is sufficiently obvious. Its regularity of stratification bespeaks its aqueous deposition, as does its mechanical structure in the cases already described. Where this structure is combined with a chemical or crystalline texture, we have only the same difficulties to contend with as in the