

der, where the red marle skirts round the southern base of the Derbyshire mountains, thence pursuing the course of that formation to the north along the western base of the same chain, and afterwards returning to the central plain in our progress to the south. (C.)

Pursuing this order, we shall first have to describe the northern border of the great central plain which may be conveniently taken as the tract included between the Trent and the mountains on the north of Ashborne in *Derbyshire*. This tract is uniformly occupied with strata of the red marle formation, with the exception of some very inconsiderable and insulated patches of the older rocks, which, in one or two places, emerge from beneath the covering: of this we have examples at Wild park near Brailsford, eight miles north-west from Derby, and Birchwood park near Roston, four miles south-south-east from Ashborne, where the *older* variety of magnesian limestone associated with the carboniferous or mountain limestone, are thus thrown up; and in a line between the two points, coal-measures have been proved at Spring hall near Edmaston and Darley moor near Yeavely in *Derbyshire*. To the north-west of the latter place, a white gravel rock has also been found not far from the banks of the Dove near Snelston, &c. which, however, very possibly belongs to the conglomerates of this formation; and, with these exceptions, *the whole of the district above stated is occupied by strata of the present formation (C)*, among which are visible some fine-grained micaceous *gritstone* beds, of considerable thickness, which occasionally are sandy, as at Normaton, south of Derby, &c. From the more clayey parts of this stratum, bricks and tiles are made. Occasionally it encloses streaks, or thin beds, of light blue or greenish blue earth, or marle. These are common in the red marle of *Nottinghamshire*.

In *Derbyshire*, some considerable deposits of gypsum have been found in the red marle, and some of them are worked for that mineral. Chellaston is about five or six miles south-east of Derby, and it appears that on the south-east of that town there are several quarries: part of Chellaston hill would present a naked and water-worn rock of gypsum, were it not for the alluvial clay that covers it. Near Alston, also, which is somewhat further on the south-east, and formerly at Ballington hill near Ambaston, there were other quarries: gypsum has also been seen in other places. It should seem that it occurs only in particular patches or nodules, where it occasions a rise or isolated hill, by the additional thickness which it gives to the stratum of marle in those places; but it occasionally forms very thin beds or layers, which sometimes are finely striated trans-