

and often very considerable angles, and towering into lofty groups and chains of mountains, around which the Red Marle skirts, occupying the extended plains at their base: so that the appearance of the whole may be described by the figure of a sea composed of horizontal beds of red marle, &c. surrounding elevated islands consisting of rocks of the coal-formation, or carboniferous mountain limestone, old red sandstone, transition slate, and greenstone, all variously and irregularly stratified. (C)

To trace this formation, as before, in its course from the north-east to the south-west; the first mountain chain thus skirted by it is the long mountain range which pervades the counties of Northumberland, Durham, York, and Derby, and joins on the west to the Cumberland mountains. (C.) It first occurs on the east side of this chain at the mouth of the Tees, where it appears as a fine-grained sandstone of a brick-red colour, which effervesces with acids; its limit on the north-east is a little above the northern bank of the Tees. The strata are numerous, and consist (as far as one can judge from the miner's language) of white, grey, or red sandstone, with occasional interposed strata of a more compact nature, red or blue shale (slate clay), coaly matter in thin layers, and gypsum in nodules and in beds of from one to three feet in thickness. The lowest bed in two of the deepest workings, was a white rock of a calcareous nature. (G. T. vol. 4. p. 2.)

It thence proceeds due south by the city of York to Nottingham, following the vales of the Ouse and the Trent. Through this part of its course, it has a pretty uniform breadth of from eight to twelve miles, and is regularly accompanied on the west by its attendant magnesian limestone. Gypsum occurs plentifully in the isle of Axholme, and various other places in Nottinghamshire. A considerable district occupied entirely by quartzose gravel occurs in the latter county, between the marle and magnesian limestone. Deposits of this kind extend to the depth of 200 or 300 yards, and are often consolidated into a soft pudding-stone, an example of which may be seen in the Castle hill at Nottingham. Although this gravel has been referred by some writers to a recent alluvial origin, it seems more probable that it is a form of the conglomerate rocks so generally attendant upon this formation. It constitutes the prevailing stratum throughout Sherwood forest. (C.)

To the south-west of Nottingham the district covered by the red marle expands into that vast tract of nearly level country which occupies the greater part of the midland counties. But before proceeding to the general description of this central plain, it will be more convenient first to trace its northern bor-