

that the physical features of England and Wales present masses of Palæozoic rocks, forming groups of mountains in the west, then certain plains and undulating grounds composed of New Red Sandstone, Marl, and Lias, and then two great escarpments, the edges of tablelands, which rise in some places to a height of more than a thousand feet: the western one being formed of Oolitic, and the eastern of Cretaceous strata, which, in its turn, is overlaid by the Eocene series of the London and Hampshire basins. *See fig. 57.*

If we now turn to the north, what do we find there?

Through the centre of this part of England a great tract of Palæozoic country, more than 200 miles in length, stretches from the southern part of Derbyshire to the borders of Scotland, and joins with the hilly ground of Berwickshire. It consists of Carboniferous rocks, ranging from the Carboniferous Limestone up to those that pass beneath the base of the Permian strata. Further west, between Morecambe Bay and the Solway, lie the Silurian and Carboniferous rocks of the Cumbrian area, separated from the Carboniferous formations of Northumberland, Durham, and Yorkshire, by the Permian beds of the Vale of Eden.

As far as the north borders of the Lancashire and Yorkshire coal-fields, the Carboniferous rocks lie in the form of a broad *anticlinal curve*.

At the southern end of this area, a wide tract of Carboniferous Limestone hills ranging up to 1,200 feet in height, occupies the centre of the anticlinal curve, on each side of which, the Yoredale shales and thick strata of Millstone grit dip east and west as the case may be. The latter, being interstratified with comparatively soft beds of shale, run in long bold escarpments (fig. 63), that often trend north and south both on the west and east sides