

Charnwood Forest hills, the sienitic greenstone of Warwickshire, the transition rocks of Dudley, the Malvern Hills, and the trap rocks of Gloucestershire, Somersetshire, and Devonshire, were probably parts of one range, and were much loftier than at present. It may deserve notice, that the granitic rocks, in this range, are closely allied to rocks now generally supposed to be of igneous origin.

It was this range that appears to have determined the extent of our island in that direction, and to have formed the western border of an ancient sea or lake, in which the upper calcareous strata of the midland, eastern, and southern counties were deposited. It also appears to have determined the extent of the upper calcareous strata, that cover the eastern side of England, and are bounded by the line A A A. This boundary marks the direction of a range of calcareous hills, that extends through England in a waving line, from the western extremity of Dorsetshire, to the eastern side of the county of Durham. East of this line, there are no beds of good mineral coal in any part of England. Between the line A A A and the Alpine districts (coloured red), we have the under secondary strata (coloured green.) All the principal coal formations in England occur in different parts of this district, which, for the sake of distinction, we shall call the *middle district*: it is however partly covered by beds of red marl and sandstone. *The upper calcareous district*, east of the line A A A (and coloured yellow in the map), is in some parts covered with beds of clay and sand of a more recent formation, belonging to the tertiary strata: they are coloured brown, and are bounded in the map by the lines o o o o. Other low parts of this district are covered by alluvial depositions, and marked I I I.

England and Wales may thus be divided into three geological districts:—the Alpine district, consisting of primary and transition rocks,—the Middle district, comprising the coal formation and the lower secondary strata of new red sandstone,—and the Upper Calcareous district, comprising the lias, the oolite and chalk formations; the latter partly covered by tertiary formations. Each of these districts has its appropriate characters and mineral productions. In order to give the reader a clear idea of the relative position of the rocks and strata of these three divisions, let him take three sheets of paper, and cut out the form of England in each. Let the lower sheet be red; cover this with green paper, cutting out all the parts on the western side, which will leave the parts marked red in the map uncovered, and also the small parts where the Malvern Hills and Charnwood Forest hills are situated. Cut out the third sheet of yellow paper, so that its edge may correspond with the line A A A. Then cut out pieces of darker-coloured paper, and place them over the parts marked 2 2 2, for the tertiary strata; and place dark patches on the parts marked I I I, for alluvial and diluvial depositions; raise the western edge a little, so as to make the sheets of paper incline to the south-east;—and we shall then have a model of the geology of England, which would be more complete, provided we could raise the parts marked red above the level of the green paper. The red paper, which spreads under the whole, and represents the primary and transition rocks of the Alpine districts, may be conceived to extend under the