

the larger river valleys, there is a great deal that is difficult to account for. One thing is certain, that before the Glacial epoch the greater contours of the country were much the same as they are now. The mountains of Scotland, Wales, and of Cumberland, and the great Pennine chain, existed then, somewhat different in outline, and yet the same essentially; the central plains of England were plains then, and the escarpments of the Chalk and Oolites existed before the Glacial period. All that the ice did was to modify the surface by degradation, to smooth its asperities by rounding and polishing them, to deepen valleys where glaciers flowed, and to scatter quantities of moraine-detritus, partly in the shape of boulder-clay and of marine boulder beds, and sands and gravels, over the plains that form the east of England, and the Lias and New Red Sandstone in the middle.

If we examine the valley of the Severn from Bristol northwards through Coalbrook Dale, we find that for a large part of its course the river runs down a broad valley, between the old Palæozoic hills and the escarpment formed by the tableland of the Cotswold Hills which are highest in the neighbourhood of Cheltenham. That valley certainly existed before the Glacial epoch, because we find boulders and boulder-drift far down towards Tewkesbury; and therefore, I believe that before the Glacial epoch this part of the Severn ran very much in the same course that it does at present. During part of the Glacial epoch the country sank beneath the sea, and Plinlimmon itself, where the river rises, was perhaps buried in part beneath the waters. When the country again emerged, the old system of river-drainage in that area was resumed; and the Severn, following in the main its old course, cut a