

(where there appears to be a fault), we enter on the elevated Weymouth district, which we have before had occasion to describe, in treating of the Portland beds and coral rag. At Abbotsbury the coral rag advances close to the curve of the coast, so that we lose the beds of the present oolitic system for a time; but they reappear a little to the south in Fleet down, where they form a saddle extending across the head of the Weymouth æstuary near which it terminates, being encircled (as was formerly stated) by collateral zones of Oxford clay, coral rag, &c.

(e) *Height of hills.* As has been stated in the preceding article, the whole course of this system across the island is marked by an almost continuous range of hills. Sometimes, however, the whole escarpment of these hills is formed by the inferior oolite, and the great oolite forms a slight upper terrace ranging at a distance inland. In Yorkshire, we are inclined to attribute the eastern moorlands to the inferior sands, and the escarpment which skirts them on the south to the great oolite; but this, being a point open to controversy, must be considered accordingly. Crossing the Humber through Lincolnshire, the hills are low; they gain greater height in Rutlandshire, Northamptonshire, and Oxfordshire, but the highest points in this district are the summits rising near the edge of the escarpment, (as Arbury and Epwell hills) which belong entirely to the inferior sands, the great oolite ranging considerably on the south-east. In Gloucestershire, however, the great oolite, always crowns the brow of the escarpment, and gains its greatest height: the loftiest point of these hills is Cleeve hill, near Cheltenham, which is 1134 feet above the level of the sea; the next, Broadway, is 1086; Stow in the Wold is 883, and Landsdown near Bath is 813 feet.

These hills, thus breaking down with an abrupt escarpment to the north-west, fall with a very gradual declivity to the south-east. This circumstance is common to the chains formed by all the beds above the new red sandstone, and arises from the cropping out of their strata in the former direction against the older rocks of the north and west. An observation of Gilpin's, in his tour to the Wye, strikingly illustrates this inequality of fall on the opposite sides of the watershed of this chain. Standing on the high grounds between Cirencester and Cheltenham, where the head waters of the Thames take their rise on the back of the Cotswolds, he remarks that while on the one hand this river wanders to the east through a course of more than 150 miles before it reaches the level of the tide at Richmond, on the other the Severn, flowing within 12 miles of this point at the western foot of the hills, is already a tidal river.