

North Downs of Surrey and Kent. This chain bounds the London basin on the south, as the former did on the north; the hills composing it descend with a gentle slope along the back of the strata, towards the basin; but on the opposite or southern side, are broken down into a steep escarpment facing the older ranges of the Weald. This range is broadest at its western termination, where its strata have the least inclination, and consequently occupy by their basset the greatest horizontal space. It is here not less than ten miles across. On the other hand, at its western extremity near Guildford, where the beds are considerably inclined, it forms a narrow and steep ridge known by the name of the Hog's-back, which cannot exceed half a mile in breadth. The escarpment of this chain ranges from west to east by the following towns; Guildford, Dorking, Seven Oaks, Maidstone, Folkstone; the cliffs in the neighbourhood of Dover, which will hereafter be particularly described, are formed by the section of this chain against the coast.

This chain is broken through by all the rivers which run northwards from the Weald, viz. the Wey, the Mole, the Darent, the Medway, and the Stowe; which thus form a system of transverse valleys, crossing at right angles the great longitudinal valley which extends along the foot of its escarpment. These circumstances will be more fully described in treating in the Sixth Book of the Phænomena connected with Vallies.

The chain attains its greatest height at Botley hill.

The Isle of Thanet, which consists entirely of chalk, placed near the north-east chain, is not in fact connected with it; being separated by a trough occupied by the upper strata, from beneath which its strata rise towards the north-east.

Another corresponding chain (forming the lower branch of the k), is thrown off from the south-east angle of the central mass near Petersfield. The escarpment of this chain looks northwards, skirting the district of the Weald (occupied by the inferior strata) on the south, as did the preceding chain on the north. The line of junction at the foot of the hills, passes south of Midhurst, north of Arundel and Lewes, to the sea at Beechy Head; between which point and Brighton, the section of the chain against the coast exhibits a magnificent range of chalky cliffs, resembling those presented under similar circumstances by the section of the North Downs. On the south, this chain gently descends beneath the superstrata, occupying the basin of the Isle of Wight, which it bounds on the north-east.

This chain is known by the name of the South Downs, as contradistinguished from the North Downs before described. Its average breadth is about five miles: it is broken through, like the North Downs, by a series of transverse vallies, which