

the dip is gentle to the south-east; while on its southern side, the dip is to the north and north-east. At High Clere in Wiltshire and Farnham in Surrey it is towards the north (G. Notes), but at Dover towards the north-east, less than one degree (P.); the general dip of the North Downs, extending from Dover to Guildford, varies from  $10^{\circ}$  to  $15^{\circ}$ ; in the narrow ridge of chalk termed the Hog's back, extending from Guildford to Farnham in Surrey, the dip is very considerable, being above  $45^{\circ}$ . (G. T. vol. 2.)

The strata of which the range of hills called the South Downs are constituted, and extending from Beechy head on the coast of Sussex to Dorchester in Dorsetshire (and which therefore form the greater part of the external limit of the *Isle of Wight basin*) dip generally from  $5^{\circ}$  to  $15^{\circ}$  to the south; the inclination varying in different places (G. T. vol. ii. p. 171); and as the beds of chalk in the hills constituting the southern limits of the chalk basin of London dip towards the north, we might by analogy assume those of the southern limits of the Isle of Wight basin to have the same direction; but a remarkable deviation from that position occurs both in the Isle of Wight and on the coast of Dorsetshire, for there the beds are nearly vertical; but the phenomena there exhibited will be better understood by referring this consideration to the detailed account of the sections presented by the chalk cliffs on the south coast in the following section. (P.)

(h) *Agricultural character.* Messrs. Cuvier and Brongniart represent sterility as one of the most decided characters of a chalk deposit, and mention Champagne as an instance of its soil being in some cases absolutely uninhabitable. In this country I should suppose the population of the chalk district less than of any other secondary rock in proportion to its size, but though a large part of the chalk land lies in common, I believe there is none absolutely unproductive; but Dunstable Downs and Luton Downs in Bedfordshire, and the Warden White hills form a tract of 4000 acres almost in a state of nature. The vallies are often extremely fertile, so much so that in Kent and Surrey many hop grounds are situated upon this description of soil, and the downs afford excellent pasturage for sheep. A chalk soil is favorable to the growth of saufoin and clover, and if well manured, becomes good land for turnips, barley, and wheat. The red chalk of the Wolds north of Louth in Lincolnshire is considered excellent for turnips and barley. (G. Notes. Linc. Agr. Survey.) The beech is the tree best adapted to a chalky soil. It may be seen growing in great luxuriance at Knockholt, Tring, Henley, Farnham, Norbury, &c. Hunmanby is well wooded notwithstanding its proximity to the sea.