

the present form of the ground. Thus after the formation of the marine plain *pp*, the Chalk being comparatively hard, has been partly denuded, and now stands out as the bold escarpments of the North and South Downs. The soft clay of the Gault has been more easily worn away, and forms a hollow or plain between the Chalk and the Lower Greensand. The Lower Greensand, full of hard calcareous bands and ironstone, more strongly resisting denudation, forms a second range of scarped hills, overlooking the more easily wasted Weald Clay, which makes a second and broader plain, from under which rise the subdivisions of the Hastings Sands, forming the undulations of the hills of Ashdown Forest, and other places, in the broad centre of the low anticlinal curve. The absence of flints over nearly the whole of the Wealden area, excepting near the Downs, is easily explained by this hypothesis, *for the original marine denudation had removed all the Chalk, except near the margin (see fig. 73), long before the rivers had begun simultaneously to scoop out the valleys of the interior, and to cut the transverse valleys across the North and South Downs.*<sup>1</sup>

Given sufficient time, I see no difficulty in this result. But the question arises, how much time, in a geological sense, can be given?

It is believed that, excepting for a few feet close upon the coast, this southern part of England was not depressed beneath the sea during any part of the Glacial period. It has, therefore, been above water for a very long time. On the edge of the North Downs there are

<sup>1</sup> The original sketch of these views was published in 1863, and enlarged and much improved in 1864, in a second edition of this work. For greater detail on the same subject, see Foster and Topley, 'Journal of the Geological Society,' 1865, vol. xxi. p. 443.