of some beds of gravel, loam, or drift in the southeast of England, to imagine important dislocations of the chalk and local changes of level since the Glaoial period, such speculations are in harmony with conclusions derived from independent sources, or drawn from the exploration of foreign countries.

It was long ago observed by Dr. Mantell that no vestige of the chalk and its flints has been seen on the central ridge of the Weald or on the Hastings Sands, but merely gravel and loam derived from the rocks immediately subjacent. This distribution of alluvium, and especially the absence of chalk detritus in the central district, agrees well with the theory of denudation before set forth ; for, to return to fig. 321 (p. 273), if the chalk (No. 2) were once continuous and covered everywhere with flint-gravel, this superficial covering would be the first to be carried away from the highest part of the dome long before any of the gault (No. 3) was laid bare. Now, if some ruins of the chalk remain at first on the gault, these would be, in a great degree, cleared away before any part of the lower greensand (No. 4) is denuded. Thus in proportion to the number and thickness of the groups removed in succession, is the probability lessened of our finding any remnants of the highest group strewed over the bared surface of the lowest.

But it is objected, that, had the sea at one or several periods been the agent of denudation, we should have found ancient sea-beaches at the foot of the escarpments, and other signs of oceanic erosion. As a general rule, the wreck of the white chalk and its flints can only be traced to slight distances from the escarpments of the North and South Downs. Some exceptions occur, one of which was first pointed out to me in 1830, by the late Dr. Mantell. In this case the flints are seen near Barcombe, three miles from the nearest chalk, as indicated in the annexed section (fig. 331). Even here it will be seen that the gravel reaches no farther



Section from the north escarpment of the South Downs to Barcombe.

A. Layer of unrounded chalk-flints.
1. Gravel composed of partially rounded chalk-flints.
2. Chalk with and without flints.
8. Lowest chalk or chalk-marl (upper greensand wanting).
4. Gau't. 5. Lower greensand. 6. Weald clay.

than the Weald clay. But it is worthy of remark, that such depressions as that between Barcombe and Offham in this section, arising from the facility with which the argillaceous gault (No. 4, map p. 272) has been removed by water, are usually free from superficial detritus, although such valleys, situated at the foot of escarpments, where there has been much waste, might have been supposed to be the natural receptacles of the wreck of the undermined cliffs. The question is therefore often put, how