signs of partial disturbance in these beds; the whole appears therefore to have been moved together."

Close adjoining the vertical strata on the northern side of the island, occurs a series of horizontal strata, which are distinctly visible in a hill called Headon :—these strata consist of an alternating series of fresh water and marine deposits, bearing a striking similarity in their fossil contents, to the strata in the vicinity of Paris. According to Mr. Webster, they consist of

- 1. A calcareous stratum, containing only fresh water shells.—Upper fresh water.
- 2. Greenish marl with marine shells .- Upper marine.
- 3. Marl with fresh water shells.-Lower fresh water.
- 4. Dark blue clay without shells.-Lower marine.

Thus, we have over chalk four distinct formations. No. 4. A lower marine formation, which includes the London clay. A lower fresh water formation, No. 3. The strata of this formation consist of sandy, calcareous and argillaceous marl; some of them appear to be formed, almost wholly, of the fragments of fresh water shells, without any mixture whatever of marine shells. "From the quantity of these shells, and the regularity and extent of the strata we are compelled" says Mr. Webster, "to admit, that the spot where they now are, was once occupied by fresh water, in which these animals existed in a living state. Over this fresh water occurs an upper stratum, No. 2, which contains a vast number of fossil shells wholly marine. Again, over this marine formation, in the same hill, is a calcareous stratum, fifty five feet in thickness, No. 1, every part of which contains fresh water shells in great abundance, without any admixture of marine exuviæ. Many of the shells are in high preservation; and the animals must formerly have lived in the very spots where they now are, the shells being so fragile, that they could not have been removed from their original situation without breaking. Part of the stone of this formation is very hard and compact, and has long been used extensively for building stone. This stratum appears to have extended over the whole of the northern part of the Isle of Wight; but it has not yet been discovered in any other situation on this side of the water: it may be considered as the latest formation of rock with which we are acquainted in England, and it agrees in many of its mineralogical characters, and the fossils it contains, with the fresh water limestone calcaire d'eaux douce, in the vicinity of Paris, they are different from any other known rock." But nowhere has there been discovered, in the series of freshwater strata in England, any trace of the remarkable beds of gypsum containing bones of unknown genera, and species of quadrupeds, similar to the gypsum of Montmartre.

During a recent visit of the author to the Isle of Wight, he was induced to conclude, that some of the remarkable phenomena which this island presents, would admit of a more simple explanation than

234