

Siebengebirge, and raised up that portion of the coal-beds which reposes on the flanks of those peaks. The gravel covering the lignite, must have been strewed over the plain previously to this elevation, for it is found on both sides of the river at a great height, and not in the intermediate plain. These inductions are so evident as to require no comment.

The ancient alluvium, the *loess*, very much resembles a bed of loam which occurs in some parts of Lewes Levels, and incloses fresh-water and land shells of many existing species; it rarely contains bones of quadrupeds; a few remains of the horse and mammoth have however been discovered.* From the extensive distribution of this deposit, and its occurrence at various elevations, in some instances on the flanks of mountains 1,200 feet above the level of the sea, at others spread out over the gravel of the vast plain of the Rhine, it is inferred, that although the *loess* has been deposited since the existing system of the hills and valleys of the country, yet that changes must have taken place in the physical geography of the district, subsequent to its original formation; and there is reason to conclude, that since the deposition of this fluviatile loam all the land between Switzerland and Holland has suffered a subsidence, and a subsequent elevation, to the amount of many hundred feet.†

* Principles of Geology, vol. iv. p. 33.

† Ibid.; read with particular attention, pp. 36 and 37.