

6. *Upper fresh-water marls*, with interstratified layers of flint, containing seed-vessels of aquatic plants (*Charæ*), and animal and vegetable remains. These beds are attributed to lakes or marshes, which existed after the marine sands had filled up the basin.

From this rapid sketch, we perceive that the strata which occupy the Paris basin, have been produced by a succession of changes that readily admits of explanation by the principles so ably enforced by Hutton, Playfair, and Lyell, and explained in the previous lecture. Here we have an ancient gulf of the chalk, which was open to the sea on one side, while on the other it was supplied by rivers charged with the spoils of the country through which they flowed, and carrying down the remains of animals and plants, with land and river shells; and there were occasional introductions of mineral waters. Changes in the relative level of the land and sea took place, and thus admitted of new accumulations upon the previous deposits; lastly, the country was elevated to its present altitude above the sea. Mutations of this kind, as we have already seen, are in progress at the present moment, and afford a satisfactory elucidation of these interesting phenomena. I reserve my remarks on the fossils of the Paris basin to the next section, and pass to the examination of the analogous beds in our own island.

18. THE LONDON BASIN.—The tertiary strata on which the metropolis of England is situated are