

the lava currents that have flowed over them have produced but little change. This series comprises also beds of gypseous and laminated marls, with intercalations of silicious limestone, containing impressions of lake and river shells. In some localities, the fresh-water limestone has an intermixture of volcanic matter, presenting all the characters of a sediment slowly and tranquilly deposited in a lake, into which ashes, and fragments of rocks and scoriæ, were projected by a neighbouring volcano; while there are beds which appear to have been formed by a violent intrusion of volcanic matter.

3d. Immense beds of volcanic production, consisting of basalt, scoriæ, &c. now existing in sheets of lava, either spread over the tabular masses of fresh-water limestone, or appearing as crests on the summits of the lower hills. (Plate VIII. fig. 3.)

4th. Sand and diluvial gravel, containing bones of the mastodon, elephant, hippopotamus, rhinoceros, tapir, horse, boar, felis, hyena, bear, dog, beaver, hare, &c.; with these are associated lignite, and other vegetable remains. Some of the beds of limestone abound in seed-vessels of the chara; and the laminated clays contain fishes, and leaves, stems, &c. of reeds and other plants.

There are several incrusting springs in Auvergne, largely impregnated with carbonic acid, which pour out immense quantities of calcareous tufa; these burst through the primary rocks, which form the base of the whole territory, and cover the volcanic