

of course, no real *petrification*; the substances operated upon retain all their original structure, and are only *incrusted* with the calcareous sediment. When once covered with this stony crust, they may remain unchanged for a long period, being thus hermetically sealed and protected from the influences of the air.

Let the reader suppose himself on the top of the Puy de Dôme, 4842 feet above the sea-level. Seated on the greensward which covers that elevated cone, he has the volcanic district spread out as in a map below him—cones, craters, and lava-currents—clear and distinct for many miles to the north and south. The Puy de Dôme, placed about midway between the northern and southern ends of the chain of the Puys, rises out of the centre of the long granitic ridge or plateau on the western edge of the valley of the Allier. Its position, therefore, is eminently favourable for obtaining a bird's-eye view of the country. Below us, to the eastward, lies the broad plain of the Limagne like a vast garden, dotted here and there with hamlets and villages and towns. Yonder, for instance, are the sloping streets of Clermont, with their dingy red-tiled houses, and the sombre spires of the old church; farther eastward is Montferrand, and others of lesser note lie in the district beyond. The eastern horizon is bounded by the range of the granitic hills of the Forez, which have been already referred to as rising from the level of the Limagne on the one side, and descending into the basin of the Loire on the other. They look gray and parched in the glare of the summer afternoon, though softened a little by the purple light of distance, till their base seems to melt into the subdued verdure of the valley. Westward, the eye wanders over a dreary region of broken and barren ground which stretches far to the north, while southward, some fifteen or