

agent in scooping out this great indentation in the flanks of Mont Dore. Here and there, in the centre of the valley, it has left isolated patches of the beds of rock that occur on either side, such as the picturesque conical crag on which stands the ruinous castle of Murol. These outliers are silent witnesses of the reality of the erosion. The lava-current at the bottom of the valley has certainly not been erupted since the time of the Romans. It must, therefore, be at least 2000 years old, and may, for aught we can tell, be ten or a hundred times older. Yet since its eruption, the action of the river, though here and there bisecting the lava, has nevertheless been, on the whole, but trifling; indeed the amount of excavation effected since the eruption of this lava probably falls far short of a thousandth part of the general erosion of the valley. Yet the excavation of the valley of Chambon is the latest and perhaps the shortest of all the stages which the geology of the district indicates. How vast must have been that earlier period wherein were deposited those fine alternations of lime and clay which form hills, such as Mont Perrier, several hundred feet in height, divisible into distinct zones, each characterised by peculiar assemblages of fossils. It is only by thus advancing, step by step, backward into the remote past, that we begin to appreciate the antiquity of the Tertiary groups of strata, and to realise, in some measure, the extent of that long history of physical and organic change of which these strata contain only the last chapters.

We hurried onward from Issoire up the plain of the Allier, catching a glimpse of the little contorted coal-field of Brassac—an outlier of true Carboniferous strata, resting in a hollow of the crystalline schists, and overlapped by Tertiary marls and limestones which stretch southward from the Limagne. Here and there in the valley were