

with, undoubted sedimentary strata. They were, therefore, not unnaturally grouped with these strata, and the whole association of rocks was looked upon as having had one common aqueous origin. It was also a prevalent idea that a rock which had been molten must retain obvious traces of that condition in a glassy structure. There was no such conspicuous vitreous element in basalt, so that this rock, it was assumed, could never have been volcanic.¹ As Desmarest afterwards contended, those who made such objections could have but little knowledge of volcanic products.

We may now proceed to trace how the patient and sagacious Inspector of French industries made his memorable contribution to geological theory. It was while traversing a part of Auvergne in the year 1763 that he detected for the first time columnar rocks in association with the remains of former volcanoes. On the way from Clermont to the Puy de Dôme, climbing the steep slope that leads up to the plateau of Prudelle, with its isolated outlier of a lava-stream that flowed long before the valley below it had been excavated, he came upon some loose columns of a dark compact stone which had fallen from the edge of the overlying sheet of lava. He found similar columns standing vertically all along the mural front of the lava, and observed that they were planted on a bed of scoriæ and burnt soil, beneath which lay the old granite that forms the foundation rock of the region. He noticed still

¹ See for instance Wallerius' *Mineralogia* (1773), i. p. 336, replied to by Desmarest, *Mém. Acad. Roy. Sciences* (1774), p. 753.