

the mineralogical survey of no fewer than sixteen sheets of the map. These labours involved journeys so frequent and prolonged that it was estimated that he had travelled over some 1600 leagues of French soil. At last, finding the work beyond his strength, he left it to his successor Monnet, by whom the sixteen maps and a large folio of explanatory text were eventually published.¹

It must be acknowledged, however, that Guettard does not seem to have had any clear ideas of the sequence of formations and of geological structure; at least there is no sign of any acquaintance with these in his maps or memoir. His work, therefore, excellent as it was for the time, contained little in common with the admirable detailed geological maps of the present day, which not only depict the geographical distribution of the various rocks, but express also their relations to each other in point of structure and relative age, and their connection with the existing topography of the ground.

In the course of his journeys, Guettard amassed a far larger amount of detailed information than could be put upon his maps. From time to time he embodied it in voluminous essays upon different regions. The longest and most important of these is one in three parts on the mineralogy of the neighbourhood of Paris, in which, besides giving an account of the distribution of the minerals and rocks, he pays special attention to the organic remains of that interesting tract of country, and figures a large number of shells from

¹ *Atlas et Description Minéralogiques de la France, entrepris par ordre du Roi par MM. Guettard et Monnet, 1780.*