

The remarks of Professor Lyell upon the effects of this eruption are so explanatory and true, that we may be permitted to quote them. "These Icelandic lavas, like the ancient streams which are met with in Auvergne and other provinces of central France, are stated by Stephenson to have accumulated to a prodigious depth in narrow rocky gorges; but, when they came to wide alluvial plains, they spread themselves out into broad burning lakes, sometimes from twelve to fifteen miles wide and one hundred feet deep. When the 'fiery lake' which filled up the lower portion of the valley of Skaptâ had been augmented by new supplies, the lava flowed up the course of the river to the foot of the hills, whence the Skaptâ takes its rise. This affords a parallel case to one which can be shown to have happened at a remote era in the volcanic region of the Vivarais, in France, where lava issued from the cone of Thueyts, and while one branch ran down, another more powerful stream flowed up the channel of the river Ardèche.

"The sides of the valley of the Skaptâ present super ranges of basaltic columns of older lavas, resembling those which are laid open in the valleys descending from Mont d'Or, in Auvergne, where more modern lava-currents, on a scale very inferior in magnitude to those of Iceland, have also usurped the beds of the existing rivers. The eruption of Skaptâr Jokul did not entirely cease till the end of two years; and when Mr. Paulson visited the tract eleven years afterward, in 1794, he found columns of smoke still rising from parts of the lava, and several rents filled with hot water."

This explanation of the effects of a volcanic eruption may suggest the origin of those extensive masses of igneous rocks which are found to overlie those of aqueous origin, while at the same time it accounts for many of the veins which are occasionally found to intersect horizontal deposits. Veins have been formed by injection, and by the admission of igneous rocks from above; in the former case the rocks must have been almost necessarily disturbed, and they will consequently give evidence of that disturbance; but veins may have been formed by intermission without any disturbance of the parallelism of the beds they intersect. When lava is ejected into a fissure from below, the probability is, that the fissure was formed by either the same cause that pro