

To this prodigious fiery flood, there are certainly few phenomena of superior grandeur among the "wonders" of geology.

*Dispersion of Ashes.*

The currents of lava, though they may appear to flow with a certain regularity, are really urged by forces which continually rise to explosive energy, and dissipate parts of the liquid columns within the crater into scoriæ and ashes. This effect appears in no small degree due to a circumstance almost universally observed in volcanic excitement,—the extrication of vast volumes of aqueous vapour. To the mechanical energies which steam exerts at the base of the fiery funnel, and in the substance of the mass of lava, we may, perhaps, refer most of the phenomena attesting great expansive power. The ashes, scoriæ, and stones which are shot upwards from the mouth of the volcano, and fall in showers around, are of the same mineral composition as the solidified parts of the lava: they mostly rest on the slopes, and augment by *external layers of growth* the diameter of the volcanic mound. The white lapilli, and black ashes, remind us, in this pulverulent state, of the felspathic and augitic rocks whence they are derived; and it is probable that in this way much larger accumulations happen on and around Vesuvius, Etna, and some other volcanos, than those which are produced from flowing lava. Pompeii, Stabiæ, and Herculaneum were buried in ashes and sediments derived from ashes, to depths of 60, 80, and 100 feet; and it has been calculated that the masses ejected from Vesuvius vastly exceed the whole bulk of the mountain. (*Daubeny on Volcanos*, p. 155.)

The ashes; instead of falling round the volcanic cone, are sometimes carried for great distances by the winds. Owing to the commotion of the atmosphere during these paroxysms of the earth, rains often descend, and sweep away the falling ashes in rivers of mud ("lava