

the internal fire is neither extinguished by the weight of the superincumbent depth of sea, nor prevented from rushing to a height of a couple of hundred paces above the water.¹ He speaks of Etna having sometimes abounded in much fire, and thrown out a great deal of burning sand, day being turned into night, to the terror of the population. On such occasions, thunder and lightning are said to have abounded; but these came from the concourse of dry materials, and not from ordinary clouds, of which probably there were none in such a raging heat of air—a shrewd anticipation of the modern distinction between ordinary atmospheric electric discharges and those evoked during the ejection of vapours, gases, dust, and stones from a volcanic orifice.²

Following the general opinion of the learned men who had preceded him, Seneca had no doubt that volcanic eruptions, like earthquakes, were due to the struggles of subterranean wind to break out to the surface. It is evident, he says, that underground there is a great store of sulphur, and of other substances not less capable of combustion. When the subterranean wind in seeking an outlet has whirled itself through these places, it must in so doing set these inflammable things on fire by mere friction. The flames spreading, in spite of the somewhat sluggish air, make way with vast noise and force, and find at last their escape to the surface, as at Etna and elsewhere. There are fires covered up within the earth, some of which occasionally burst forth; but a vast number are always burning in

¹ Book II. xxvi. 5.

² II. xxx. I.