

be further tested by *experimental inquiries* into the statical temperature at small depths below the surface of the earth.

VOLCANIC ACTION.

Volcanic action, considered in its full meaning, includes, perhaps, the largest class of phenomena, attributable to one predominant agent, which falls within the province of geology. These phenomena are the more interesting and instructive, because they extend through an immensity of past duration, with many variations distinctly related to geological and historical time. The facts known by history and tradition respecting particular vents of subterranean fire, go back to the origin of history and civilisation, and other phenomena of the same volcanoes are undoubtedly to be referred to a part of the scale of geological succession, corresponding to the forms of plants and animals which lived and died before the present races occupied the surface. Each volcanic mountain has its own peculiar history, its accident of origin, its law of progressive increase, its period of inevitable decay; it is a monument more venerable than the pyramids; recalling, by its mysterious agitation of the fertile plains around, the remembrance of movements affecting other lands and seas than those on whose boundaries volcanic fires are now excited.

What augments the interest naturally attached to problems regarding the long duration and varying energy of volcanic fires, is the completeness of the series of phenomena which, taken collectively, they present. New vents are opened in every few years to show us the origin of volcanic accumulations on the land or in the sea; an hundred ignivomous mountains bring up to the surface abundant examples of substances most instructive on points which otherwise could only be sources of vain conjecture; and the last stage of these frightful disorders of nature is seen in many districts where, only at particular points, mephitic vapours rise to darken the smiling picture of general fertility.