

and plants which are his contemporaries, are found imbedded.

The dynamical effects of elevation appear to be referable to three great divisions:—1. The gradual raising up of ridges through large spaces of the earth's crust, and the consequent production of longitudinal fissures and lines of volcanic vent. 2. The long continued protrusion and eruption of igneous rocks along such lines of vent; and 3. Local and partial eruptions and protrusions, producing valleys of elevation, dislocations of the strata, and other phenomena that terminate in ordinary volcanic action.*

Such are the deductions derived from the phenomena which have been submitted to our examination.

To the mind previously uninstructed in geological science, I am ready to acknowledge that to attribute mutability to the rocks and the mountains, must appear as startling and incredible, as did the astronomical doctrines of Galileo to the people of his time. But the intelligent observer, whose attention has been directed to the facts laid before him even in this brief survey, cannot, I conceive, refuse his assent to the inferences thus cautiously obtained. As we proceed in our investigation, we shall find that from the earliest period of the earth's physical history, its surface has been subject to incessant fluctuation; and as the land has been the theatre

* Proceedings of the Geological Society, vol. ii. p. 67.