

All geologists who reflect on subterranean movements now going on, and the eruptions of active volcanos, are convinced that great changes are now continually in progress in the interior of the earth's crust far out of sight. They must be conscious, therefore, that the inaccessibility of the regions in which these alterations are taking place, compels them to remain in ignorance of a great part of the working of existing causes, so that they can only form vague conjectures in regard to the nature of the products which volcanic heat may elaborate under great pressure.

But when they find in mountain-chains of high antiquity, that what was once the interior of the earth's crust has since been forced outwards and exposed to view, they will naturally expect in the examination of those mountainous regions, to have an opportunity of gratifying their curiosity by obtaining a sight not only of the superficial strata of remote eras, but also of the contemporaneous nether-formed rocks. Having recognized, therefore, in such mountain-chains some ancient rocks of aqueous and volcanic origin, corresponding in character to superficial formations of modern date, they will regard any other class of ancient rocks, such as granite and gneiss, as the *residual phenomena* of which they are in search. These latter rocks will not answer the expectations previously formed of their probable nature and texture, unless they wear a foreign and mysterious aspect, and have in some places been fused or altered by subterranean heat; in a word, unless they differ wholly from the fossiliferous strata deposited at the surface, or from the lava and scoræ thrown out by volcanos in the open air. It is the total distinctness, therefore, of crystalline formations, such as granite, hornblende-schist, and the rest, from every substance of which the origin is familiar to us, that constitutes their claim to be regarded as the effects of causes now in action in the subterranean regions. They belong not to an order of things which has passed away; they are not the monuments of a primeval period, bearing inscribed upon them in obsolete characters the words and phrases of a dead language; but they teach us that part of the living language of nature, which we cannot learn by our daily intercourse with what passes on the habitable surface.