http://www.geology.19thcenturyscience.org/books/1833-Bakewell-Geology/README.htm

them. If a thick stream of lava, as frequently happens, were to flow over a range of conformable rocks, filling up the cavities and inequalities of the surface,—when it became hard by cooling, it would form a bed of superincumbent unconformable rock. Such instances are common in volcanic countries. Very extensive ranges of rocks and mountains occur, in this position, in various parts of the world, not only covering the primary, but the secondary rocks. These will be hereafter described, under the name of porphyry, sienite, and basalt. They, frequently, assume the columnar structure, and, sometimes, form vast ranges of natural pillars; as at Staffa, one of the Hebrides, on the north coast of Ireland, in Iceland, Sicily, and many volcanic countries.

Having described the position of both stratified and unstratified unconformable rocks, it may be proper to state, that the latter rocks occur, covering primary, transition, secondary, and tertiary strata: many of those which cover the secondary and tertiary seem, evidently, to have been the products of subterranean fire; and even those which cover the primary and transition rocks bear a close affinity to volcanic rocks. If we admit, that our loftiest ranges of mountains were elevated by the expansive force of central fires, this power, acting upon an extensive portion of the globe, might be, ages, in upheaving the incumbent surface, which would continue to rise, until vast fissures were made, through which the subterranean melted matter would be thrown over the mountains and plains then existing, and form the superincumbent rocks of basalt, porphyry, and sienite, that seem to be so nearly allied to volcanic products. While one part of the surface was rising, another part would sink, and form a new bed, into which the waters of the ocean would gradually retire.

According to Humboldt, the extraordinary eruptions by which new islands have been formed since the period of authentic history, have been preceded by a swelling of the softened crust of the globe. At Kamenoi, the new island made its appearance above the sea, twenty-six days before the smoke was visible. "Every thing indicates that the physical changes of which tradition has preserved the remembrance, exhibit but a feeble image of those gigantic catastrophes which have given mountains their present form, changed the position of the rocky strata, and buried sea-shells on the summit of the higher Alps. It was undoubtedly in those remote times which preceded the existence of the human race, that the raised crust of the globe produced those domes of trappean porphyry, those hills of isolated basalt in vast elevated plains, those solid nuclei covered with the modern lavas of the Peak of Teneriffe, of Etna, and Cotopaxi." —*Humboldt.*

To these great catastrophes, and to vast inundations, and, in some cases, to submarine currents, must we ascribe many inequalities of the earth's surface, the fracture of strata, and the transport of the brok-