

2nd. That we know of no set of igneous rocks that can be proved to be of generally older origin than the earliest stratified deposits, but that *they may often be proved to be* of posterior origin.

3rd. That the stratified masses *were formed from the waste of pre-existing rocks, mingled with organic exuviae.*

4th. That such strata afford a measure of the amount of pre-existing land destroyed to afford materials for their formation.

5th. That there may be a progressive formation of rocks in the bottom of the sea, contemporaneous with great and repeated alterations of lower strata, that approach the regions of internal heat (metamorphism).

6th. That all strata being derivative, and a machinery existing capable alike of erecting and destroying rocks, in the whole course of *visible* nature ‘we find no vestige of a beginning—no trace of an end.’¹

¹ In these modern days very few persons read Hutton, and those who trouble themselves about old geology are in general more familiar with Playfair’s delightful ‘Illustrations of the Huttonian Theory’ than with Hutton’s great original work, in which the philosophy of igneous, stratigraphical, and metamorphic geology was described in a manner that excited the admiring wonder of a few who in those days were able to appreciate his generalisations. One of these was the celebrated Dr. Black, Professor of Chemistry in the University of Glasgow, who thus wrote to the Princess Daschkow. ‘In this system of Dr. Hutton there is a grandeur and sublimity by which it far surpasses any that has been offered. The boundless pre-existence of time and the operations of nature which he brings into our view, the depth and extent to which his imagination has explored the action of fire in the internal parts of the earth, strike us with astonishment. And when we consider the view he gives us of a great river, such as that of the Amazons, descending in a thousand streams from the country of the Andes, and forming those immense and level plains through which it flows in a great part of its course, the mind is expanded in contemplating