

view of the phenomena makes upon me, is that of an unspeakable addition to the reasons for Mr. Scrope's exclamation,—“ *Time! Time!*—Geology compels us to make unlimited drafts upon antiquity!”

It is established by such evidence as places the fact beyond contradiction, that by far the larger part, more probably the whole, of the dry land, not excepting the highest mountains, has been raised out of the bed of the sea. There is also evidence that the process of elevation is extremely slow. The general proof accrues from the ancient beaches, now far above the highest sea-level, which abound on almost all bold coasts. But a favourable concurrence of circumstances has brought the elevation of an extensive portion of the Scandinavian peninsula, within the range of measurement; and three feet in a century have been well established. Now there are successions of such ancient sea-beaches, in several of the glens of Scotland, at heights of eight, ten, twelve hundred feet, and more, above the present sea-level. Mr. Darwin has shown by a series of very probable arguments, that these have been all produced by the regular action of the ocean-waters upon rocky shores, and the no less regular rising of the land, in its bodily mass, over large areas, and with that extreme slowness of which we have so many proofs. Applying then the example of Sweden to the case before us, we bring out a period of thirty thousand years, from the lowest and of course latest elevation to the formation of the present shore; and from the time of the highest elevation, the period is more than eighty thousand years. But a period remains to be added to this, for the interval before that highest beach was raised and while the upper part of the mountains was slowly rising out of the waters: for this prior period, no rule or approximation of estimate is known.*

I must cease; or I had intended to push my argument farther, and to ask some reflection to be bestowed upon the crystalline rocks.—Can any man imagine that granite was created in its characteristic state, a composition of visibly and palpably distinct materials, scarcely mixed, only put loosely together?—It would be almost as reasonable to affirm that the stomachs of the first animals were created

Sketch of his communication to the Geol. Section of the British Assoc. at Bristol, in the Report for 1836; Trans. Sect. p. 78. Prof. Whewell's brief but most interesting summary of the problems which Mr. Hopkins has proposed, and the results to which he has already arrived, in his Presidential Address to the Geological Society, Feb. 15, 1839; p. 40.

* See Mr. Maclaren's paper on the Parallel Roads of Glen Roy; in Prof. Jameson's Philos. Journ. Edinb. Oct. 1839, p. 395.