The persistency of character in the older series was exaggerated, its extreme variability in the newer was assumed without proof. In the chapter which treats of river-deltas and the dispersion of sediment by currents, and in the description of reefs of coral now growing over areas many hundred miles in length, I shall have opportunities of convincing the reader of the danger of hasty generalizations on this head.

In regard to the imagined universality of particular rocks of ancient date, it was almost unavoidable that this notion, when once embraced, should be perpetuated; for the same kinds of rock have occasionally been reproduced at successive epochs: and when once the agreement or disagreement in mineral character alone was relied on as the test of age, it followed that similar rocks, if found even at the antipodes, were referred to the same era, until the contrary could be shown.

Now it is usually impossible to combat such an assumption on geological grounds, so long as we are imperfectly acquainted with the order of superposition and the organic remains of these same formations. Thus, for example, a group of red marl and red sandstone, containing salt and gypsum, being interposed in England between the Lias and the Coal, all other red marls and sandstones, associated some of them with salt, and others with gypsum, and occurring not only in different parts of Europe, but in North America, Peru, India, the salt deserts of Asia, those of Africa - in a word, in every quarter of the globe were referred to one and the same period. The burden of proof was not supposed to rest with those who insisted on the identity in age of all these groups - their identity in mineral composition was thought sufficient. It was in vain to urge as an objection the improbability of the hypothesis which implies that all the moving waters on the globe were once simultaneously charged with sediment of a red colour.

But the rashness of pretending to identify, in age, all the red sandstones and marls in question, has at length been sufficiently exposed, by the discovery that, even in Europe, they belong decidedly to many different epochs. It is already ascertained, that the red sandstone and red marl containing the rock-salt of Cardona in Catalonia, may be referred to the period of our Chalk and Green Sand. It is also known that certain red marls and variegated sandstones, in Auvergne, which are undistinguishable in mineral composition from the New Red Sandstone of English geologists, belong, nevertheless, to the Eocene period: and, lastly, the gypseous red marl of Aix, in Provence, formerly supposed to be a marine secondary group, is now acknowledged to be a tertiary freshwater formation. In North America one great deposit of red marl, sandstone, and gypsum, precisely resembling in mineral character the "New Red" of England, occurs in Nova Scotia as a member of the Carboniferous group, and in the United States near the Falls of Niagara, as a subdivision of the Silurian series.*

* See Lyell's Travels in North America, ch. 2. and 25.