

Nor was the nomenclature commonly adopted in geology without its influence in perpetuating the erroneous doctrine of universal formations. Such names, for example, as Chalk, Green Sand, Oolite, Red Marl, Coal, and others, were given to some of the principal fossiliferous groups in consequence of mineral peculiarities which happened to characterize them in the countries where they were first studied. When geologists had at length shown, by means of fossils and the order of superposition, that other strata, entirely dissimilar in colour, texture, and composition, were of contemporaneous date, it was thought convenient still to retain the old names. That these were often inappropriate was admitted; but the student was taught to understand them in no other than a chronological sense; so that the Chalk might not be a white cretaceous rock, but a hard dolomitic limestone, as in the Alps, or a brown sandstone or green marl, as in New Jersey, U. S. In like manner the Green Sand, it was said, might in some places be represented by red sandstone, red marl, salt, and gypsum, as in the north of Spain. So the oolitic texture was declared to be rather an exception than otherwise to the general rule in rocks of the Oolitic period; and it often became necessary to affirm that no particle of carbonaceous matter could be detected in districts where the true Coal series abounded. In spite of every precaution the habitual use of this language could scarcely fail to instil into the mind of the pupil an idea that chalk, coal, salt, red marl, or the oolitic structure were far more widely characteristic of the rocks of a given age than was really the case.

There is still another cause of deception, disposing us to ascribe a more limited range to the newer sedimentary formations as compared to the older, namely, the very general concealment of the newer strata beneath the waters of lakes and seas, and the wide exposure above water of the more ancient. The Chalk, for example, now seen stretching for thousands of miles over different parts of Europe, has become visible to us by the effect, not of one, but of many, distinct series of subterranean movements. Time has been required, and a succession of geological periods, to raise it above the waves in so many regions; and if calcareous rocks of the middle and upper tertiary periods have been formed, as homogeneous in mineral composition throughout equally extensive regions, it may require convulsions as numerous as all those which have occurred since the origin of the Chalk to bring them up within the sphere of human observation. Hence the rocks of more modern periods may appear partial, as compared to those of remoter eras, not because of any original inferiority in their extent, but because there has not been sufficient time since their origin for the development of a great series of elevatory movements.

In regard, however, to one of the most important characteristics of sedimentary rocks, their organic remains, many naturalists of high authority suspect that the same species of fossils are more uniformly distributed through formations of high antiquity than in those of more modern date, and that distinct zoological and botanical provinces, as