

Nature of the Scale of Time.

The rocks composing the crust of the globe are for the most part stratified; but exceptions occur, especially in mountainous countries: the series of strata is commonly definite, or composed of a certain number of *simple terms, i. e.*, layers, each of a particular quality, in every small district; considered with reference to very large districts, it is found that, by grouping together the layers in natural assemblages, the series of these *compound terms* is also definite: finally, on comparing the series of even remote tracts, the compound terms themselves combine into groups, which are ranged in the same definite order whenever present together; for in some countries whole groups are absent, and others interpolated in the series. It is clear, therefore, that amidst all the causes of local diversity in the series of strata, some general influences have prevailed to give a determinate analogy of character to the resulting succession of stratified rocks in all parts of the globe. If we can search out the causes of local diversity and general agreement, and thus ascertain the law of the geological scale of time, nothing will remain to be done but the comparison of this law with the analogous operations of modern nature, in order to attain the most precise account of geological time which the human mind can reach.

Terms of the Scale of Geological Time.

The different strata which are terms of the series or spaces on the scale of geological time are of various mineral qualities — arenaceous, argillaceous, calcareous, or composed of mixtures of these in unequal proportions. In the substance of many of them, peculiar minerals, as mica, red oxide of iron, silicate of iron, &c., are diffused; they differ in hardness, granulation, crystalline structure, and many other circumstances. Every