

the lower and older strata, another to those of middle, another to those of later date. The different groups of strata, deposited in successive periods, are thus filled with distinct races of plants and animals, which lived at successive periods, and thus it is proved that in every region the land and the sea were covered and filled at successive times with new creations suited to the new physical conditions of the altered planet.

This is not speculation, it is certainty. Each system or group of stratified rocks contains the remains of the plants and animals which existed at or previous to its production in or near the water in which it was formed: it is the museum of the period, the only repository of the monuments of that age of the world. By collecting these, and viewing them in the order of succession in which they occur in nature, we contemplate the forms of life which have successively occupied the globe, and by comparing them, on philosophical grounds, with the creatures that now exist, we can frame conjectures more or less satisfactory as to the state of the atmosphere, light, heat, and other circumstances, to which their life was adapted.

If we are to reason at all concerning the phenomena of nature, one of two conclusions must be adopted with reference to this subject; either the physical conditions whereto the existence of those plants and animals was related, changed gradually and equally in obedience to some continuous law — the forms of life being varied accordingly — or were liable to violent interruptions or revolutions, consequent upon new circumstances, or the accumulated tension of some feeble but continuous disturbing agency. Which of these views is true, will be the subject of inquiry hereafter: for the argument as to the lapse of geological time, it is immaterial which may be preferred; since in existing nature the rate of such physical changes, supposing them to be continual, is so small, as to have caused almost *no changes of organic life* in several thousand years; — witness the sculptured monuments of Egyptian grandeur; — and