

for stratigraphical arrangement and comparison. The succession of these species has been in some cases similar over such wide geographical areas that it is difficult to connect this organic sequence with any physical revolutions, of which indeed in a conformable series of sediments there may be little or no trace. As already suggested there may have been some biological law that governed these apparently rapid extinctions or replacements of organic forms, but which is not yet perceived or understood.

7. The Geological Record is at the best but an imperfect chronicle of the geological history of the earth. It abounds in gaps, some of which have been caused by the destruction of strata owing to metamorphism, denudation, or otherwise, some by original non-deposition, as above explained. Nevertheless it is from this record that the progress of the earth is chiefly traced. It contains the registers of the births and deaths of tribes of plants and animals, which have from time to time lived on the earth. Probably only a small proportion of the total number of species, which have appeared in past time, have been thus chronicled, yet, by collecting the broken fragments of the record, an outline at least of the history of life upon the earth can be deciphered.

It cannot be too frequently stated, nor too prominently kept in view, that, although gaps occur in the succession of organic remains as recorded in the rocks, there have been no such blank intervals in the progress of plant and animal life upon the globe. The march of life has been unbroken, onward and upward. Geological history, therefore, if its records in the stratified formations were perfect, ought to show a blending and gradation of epoch with epoch, so that no sharp divisions of its events could be made. But the