

the whole genus ceases. Some genera have a confined range, if we may use such a word for periods of probably many thousand years: others have continued through more numerous formations, and some even to the living state of the creation. But, be it observed, I am speaking only of *genera*. Of *species*, none are found in the Chalk, nor in the more early strata, which exist in the present condition of the earth. Above the Chalk, a small number of the now living species begin to appear: and the proportional number increases through the six or seven Tertiary formations; so that the formation which, as far as has been ascertained, is the last prior to the existing state of nature, contains about ninety-five in the hundred of living species; while the oldest of even these Tertiary beds scarcely yields four living species to ninety-six extinct ones.

XXI. The areas, or regions, over which characteristic organic remains are found, though often of great extent, are not universal; thus manifesting that groups of species had their geographical limits: a most important fact, since it establishes a correspondence with that law or condition of the existing animal and vegetable kingdoms, by which species are grouped together, and appropriately confined within geographical districts, man being almost the only exception.

XXII. It is also apparent, that the variations of organization, which form the distinctive characters of species, as those of any given genus succeed each other, have been adapted to the varying condition of the earth's temperature, the atmosphere, and the waters; and undoubtedly in their reciprocal relations as partakers of organic life.

XXIII. Besides the fossils which are strictly characteristic of the great systems of strata, there are others which may be considered as subordinate, and which con-