

CHAPTER XXXVIII.

LAWS WHICH REGULATE THE GEOGRAPHICAL DISTRIBUTION OF SPECIES.

Analogy of climate not attended with identity of species — Botanical geography —
 — Stations — *Habitations* — Distinct provinces of indigenous plants — Vegetation of islands — Marine vegetation — In what manner plants become diffused — Effects of wind, rivers, marine currents — Agency of animals — Many seeds pass through the stomachs of animals and birds undigested — Agency of man in the dispersion of plants, both voluntary and involuntary — Its analogy to that of the inferior animals.

NEXT to determining the question whether species have a real existence, the consideration of the laws which regulate their geographical distribution is a subject of primary importance to the geologist. It is only by studying these laws with attention, by observing the positions which groups of species occupy at present, and inquiring how these may be varied in the course of time by migrations, by changes in physical geography, and other causes, that we can hope to learn whether the duration of species be limited, or in what manner the state of the animate world is affected by the endless vicissitudes of the inanimate.

Different regions inhabited by distinct species. — That different regions of the globe are inhabited by entirely distinct animals and plants, is a fact which has been familiar to all naturalists since Buffon first pointed out the want of *specific* identity between the land quadrupeds of America and those of the Old World. The same phenomenon has, in later times, been forced in a striking manner upon our attention, by the examination of New Holland, where the indigenous species of animals and plants were found to be, almost without exception, distinct from those known in other parts of the world.

But the extent of this parcelling out of the globe amongst different *nations*, as they have been termed, of plants and animals — the universality of a phenomenon so extraordinary and unexpected, may be considered as one of the most interesting facts clearly established by the advance of modern science.

Scarcely fourteen hundred species of plants appear to have been known and described by the Greeks, Romans, and Arabians. At present, more than three thousand species are enumerated, as natives of our own island.* In other parts of the world there have been now collected (1846), upwards of 100,000 species, specimens of which are preserved in European herbariums. It was not to be supposed, therefore, that the ancients should have acquired any correct notions respecting what may be called the geography of plants, although the

* Barton's Lectures on the Geography of Plants, p. 2. 1827.