

thousands of them planted round the foot of Mount Washington, they would never be able, in any number of years, to make their way to its summit. We must suppose, therefore, that originally they extended their range in the same way as the flowering plants now inhabiting Arctic and Antarctic lands disseminate themselves. The innumerable islands in the Polar seas are tenanted by the same species of plants, some of which are conveyed as seeds by animals over the ice when the sea is frozen in winter, or by birds; while a still larger number are transported by floating icebergs, on which soil containing the seeds of plants may be carried in a single year for hundreds of miles. A great body of geological evidence has now been brought together, to some of which I have adverted in a former chapter,\* to show that this machinery for scattering plants, as well as for carrying erratic blocks southward, and polishing and grooving the floor of the ancient ocean, extended in the western hemisphere to lower latitudes than the White Mountains. When these last still constituted islands, in a sea chilled by the melting of floating ice, we may assume that they were covered entirely by a flora like that now confined to the uppermost or treeless region of the mountains. As the continent grew by the slow upheaval of the land, and the islands gained in height, and the climate around their base grew milder, the Arctic plants would retreat to higher and higher zones, and finally occupy an elevated area, which probably had been at first, or in the glacial period, always covered with perpetual snow. Meanwhile the newly-formed plains around the base of the mountain, to which northern species of plants could not spread, would be occupied by others migrating from the south, and perhaps by many trees, shrubs, and plants then first created, and remaining to this day peculiar to North America.†

The period when the White Mountains ceased to be a group of islands, or when, by the emergence of the surrounding low

\* Ante, p. 17.

† For speculations on analogous botanical and geographical changes in Europe, the reader may refer with advantage to an excellent essay by Professor Edward Forbes, on the Origin of the British Fauna and Flora, *Memoirs of Geol. Survey of Great Britain*, vol. i. p. 336. 1846.