

ground in swamps. The white cedar and white pine in some places manifest the same tendency.

The appropriate temperature for the growth of a number of species is carried far to the south of their normal latitudes, along the elevated parts of the continent, especially the Alleghanies and the Rocky Mountains.

The range of any species is evidently not governed entirely by the mean annual temperature. The extremes of heat and cold in the west, as compared with the milder winters and cooler summers in the east, with about the same mean temperature for the year, appear to be the chief cause of the marked difference in the character of the woods in the two regions, since there is not a sufficient disparity in the amount of the annual precipitation to account for it. A great difference in the moisture of the air in two regions, otherwise resembling each other in climatic conditions, has also a powerful effect upon the growth of forests; and the dryness of the air in the western prairie and arid regions is, no doubt, the chief cause of the absence of timber. The proximity of the sea, especially where fogs or cold winds are of frequent occurrence, has a great influence upon the kinds and the size of the timber, and, in the north, upon the very existence of trees near the coast. Differences in the composition of the soil appear to have only a local effect upon the distribution of forest trees.

The study of the geographical distribution of the various forest trees of North America possesses a certain interest to the geologist as bearing upon questions in regard to the condition of the continent in later geological times. The outlines of the areas occupied by the different species, and other circumstances connected with their character and distribution, may throw some light on their dispersion from certain centres or lines, or possibly, in some cases, their contraction from wider limits; or we may find that some of them have still a tendency to advance or retire.

The continent of North America possesses a great variety of forest trees. About 340 different species occur within the United States. All the kinds which we have in Canada, amounting to about ninety, including those of the Pacific slope, are also met with in that country. Some species are not only very widely dif-