species. They are separated by oceans and by belts of land occupied by plants which have not been obliged to migrate. Thus, while the flora of the Eastern United States resembles that of China and Japan, that of California and Oregon is distinct from both, and represents a belt of old species retained in place by the continued warmth of the Pacific shore, and the continuous extension of the American continent to the south affording them means of retreat in the Glacial age. Were the plants of China and Eastern America enabled to return to the Arctic, they would then reunite into one flora. Gray compares the process of their separation to the kind of selection which might be made by a botanical distributor who had the whole collection placed in his hands, with instructions to give one species of each genus to Europe, to Eastern Asia, and to Eastern America; and if there was only one species in a genus, or if one remained over, this was to be thrown into one of the regions, with a certain preference in favour of America and Asia. This remarkable kind of geographical selection opens a wide field not only for thought, but for experiment on the actual relationship of the representative species. There is a similar field for comparison between the trees of Georgia in latitude 30° to 35°, and the same species or their representatives as they existed in Cretaceous times in the latitudes of 50° and 60°. The two floras, as I know from actual comparison, are very similar.

One word may be said here as to use of fossil plants in determining geological time. In this I need only point to the fact of my having defined in Canada three Devonian floras, a Lower, Middle, and Upper, and that Mr. Whiteaves, in his independent study of the fossil fishes, has vindicated my conclusions. There are also in Nova Scotia three distinctive sub-floras of the Lower, Middle, and Upper Carboniferous.[1] I

[1] Transactions Royal Society of Canada, 1883 to 1891.