absolutely certain, since we know that at present one genus may have considerable variety in its leaves, and, on the other hand, that plants of different genera may be very much alike in their foliage. There is, however, undoubtedly a likeness in plan or type of structure in leaves of closely allied plants, and, therefore, if judiciously studied, they can be determined with at least approximate certainty.* More especially we can attain to much certainty when the fruits as well as the leaves are found, and when we can obtain specimens of the wood, showing its structure. Such corroboration is not wanting, though unfortunately the leaves of trees are generally found drifted away from the other organs once connected with them. In my own experience, however, I have often found determinations of the leaves of trees confirmed by the discovery of their fruits or of the structure of their stems. Thus, in the rich cretaceous plant-beds of the Dunvegan series we have beech-nuts associated in the same beds with leaves referred to *Fagus*. In the Laramie beds I determined many years ago nuts of the *Trapa* or water-chestnut, and subsequently Lesquereux found, in beds in the United States, leaves which he referred to the same genus. Later, I found in collections made on the Red Deer River of Canada my fruits and Lesquereux's leaves on the same slab. The presence of trees of the genera *Carya* and *Juglans* in the same formation was inferred from their leaves, and specimens have since been obtained of silicified wood, with the microscopic structure of the modern butternut. Still we are willing to admit that determinations from leaves alone are liable to doubt.

In the matter of names of fossil leaves, I sympathise very strongly with Dr. Nathorst, of Stockholm, in his

* Great allowance has to be made for the variability of leaves of the same species. The modern hazel (*C. rostrata*) is a case in point. Its leaves, from different parts of the same plant, are so dissimilar in form and size that they might readily be regarded as of different species.