

from what it is at present—are remains of very frail and delicate plants which still live. I have shown that in these clays there exist, side by side, the Sensitive Fern, *Onoclea sensibilis*, and one of the delicate rock ferns, *Davallia tenuifolia*.¹ The first is still very abundant all over North America. The second has ceased to exist in North America, but still survives in the valleys of the Himalayas. These two little plants, once probably very widely diffused over the northern hemisphere, have continued to exist through the millenniums separating the Cretaceous from the present time, and in which the greater part of our continent was again and again under the sea, in which great mountain chains have been rolled up and sculptured into their present forms, and in which giant forms, both of animal and plant life, have begun, culminated and passed away. Truly God hath chosen the weak things of the world to confound those that are strong.

Other plants equally illustrate the decadence of important types of vegetable life. In the beautiful family of the Magnolias there exists in America a most remarkable and elegant tree, whose trunk attains sometimes a diameter of 7 feet and a height of 80 or 90 feet. Its broad deep green leaves are singularly truncate at the end, as if artificially cut off, and in spring it puts forth a wealth of large and brilliant orange and yellow flowers, from which it obtains the name of Tulip tree. It is the *Liriodendron tulipifera* of botanists, and the sole species of its genus. This Tulip tree has a history. All through the Tertiary beds we find leaves referable to the genus, and belonging not to one species only, but to several, and as we go back into the Cretaceous, the species seem to become more numerous. Many of them have smaller leaves than the modern species, others larger, and some have forms even more quaint than that of the existing Tulip tree. The oldest that I have seen in Canada is one from the Upper Cretaceous of

¹ Report on 49th Parallel, 1875.