

Between 1860 and 1870 the writer was engaged in working out all that could be learned of the Devonian plants of eastern America, the oldest known flora of any richness, and which consists almost exclusively of gigantic, and to us grotesque, representatives of the club-mosses, ferns, and mares'-tails, with some trees allied to the cycads and pines. In this pursuit nearly all the more important localities were visited, and access was had to the large collections of Prof. Hall and Prof. Newberry, in New York and Ohio, and to those made in the remarkable plant-bearing beds of New Brunswick by Messrs. Matthew and Hartt. In the progress of these researches, which developed an unexpectedly rich assemblage of species, the northern origin of this old flora seemed to be established by its earlier culmination in the northeast, in connection with the growth of the American land to the southward, which took place after the great Upper Silurian subsidence, by elevations beginning in the north while those portions of the continent to the southwest still remained under the sea. The same result was indicated by the persistence in the Carboniferous of the south and west of old Erian forms, like *Megalopteris*.

When, in 1870, the labours of those ten years were brought before the Royal Society of London, in the Bakerian lecture of that year, and in a memoir illustrating no less than one hundred and twenty-five species of plants older than the great Carboniferous system, these deductions were stated in connection with the conclusions of Hall, Logan, and Dana, as to the distribution of sediment along the northeast side of the American continent, and the anticipation was hazarded that the oldest Palæozoic floras would be discovered to the north of Newfoundland. Mention was also made of the apparent earlier and more copious birth of the Devonian flora in America than in Europe, a fact which is itself connected with the greater northward extension of this continent.