

may have even ascended out of the water in some of their forms. These comparatively simple cellular and tubular structures, now degraded to the humble position of flat lichens or soft or corky fungi, or slender cellular mosses, may have been so strengthened and modified as to constitute forest-trees. This would be quite in harmony with what is observed in the development of other plants in primitive geological times; and a little later in this history we shall see that there is evidence in the flora of the Silurian of a survival of such forms.

It may be that no geologist or botanist will ever be able to realise these dreams of the past. But, on the other hand, it is quite possible that some fortunate chance may have somewhere preserved specimens of Laurentian plants showing their structure.

In any case we have here presented to us the strange and startling fact that the remarkable arrangement of protoplasmic matter and chlorophyll, which enables the vegetable cell to perform, with the aid of solar light, the miracle of decomposing carbon dioxide and water, and forming with them woody and corky tissues, had already been introduced upon the earth. It has been well said that no amount of study of inorganic nature would ever have enabled any one to anticipate the possibility of the construction of an apparatus having the chemical powers of the living vegetable cell. Yet this most marvellous structure seems to have been introduced in the full plenitude of its powers in the Laurentian age.

Whether this early Laurentian vegetation was the means of sustaining any animal life other than marine Protozoa, we do not know. It may have existed for its own sake alone, or merely as a purifier of the atmosphere, in preparation for the future introduction of land-animals. The fact that there have existed, even in modern times, oceanic islands rich in vegetation, yet untenanted by the higher forms of animal life, prepares us to believe