

Before venturing on such extreme speculations as some now current on questions of this kind, we would require to know the successive extinct floras as perfectly as those of the modern world, and to be able to ascertain to what extent each species can change, either spontaneously or under the influence of struggle for existence, or expansion under favourable conditions, and under Arctic semi-annual days and nights, or the shorter days of the tropics. Such knowledge, if ever acquired, it may take ages of investigation to accumulate. In any case the subject of this paper indicates one hopeful line of study with the object of arriving at some comprehension of the laws of creation.

While the facts above slightly sketched impress us with the grand progress of the vegetable kingdom in geological time, they equally show the persistence of vegetable forms as compared with that of the dead continental masses and the decay of some forms of life in favour of the introduction of others.

When we find in the glacial beds the leaves of trees still living in North America and Europe, and consider the vicissitudes of elevation and submergence of the land, and of Arctic and temperate climates which have occurred, we are struck with the persistence of the weak things of life, as compared with the changeableness of rocks and mountains. A superficial observer might think the fern or the moss of a granite hill a frail and temporary thing as compared with solid and apparently everlasting rock. But just the reverse is the case. The plant is usually older than the mountain. But the glacial age is a very recent thing. We have facts older than this. As hinted in a previous paper, in the Laramie clays associated with the Lignite beds of North-western Canada—beds of Lower Eocene or early Tertiary age—which were deposited before the Rocky Mountains or the Himalayas had reared their great peaks and ridges, and at a time when the whole geography of the northern hemisphere was different