

bility, that the earliest indications of life on the globe should be of the vegetable kingdom, may be somewhat astonished to learn, that traces of plants are really not known in a distinct form in strata so ancient as those which contain the shells of Snowdon and Tintagel (Snowdonian rocks), and that they are almost unknown even in the silurian system. What is calculated to add to this feeling of surprise is the circumstance that in the next system of strata which lies upon the silurian, two of the formations are the repository of most enormous accumulations of fossil plants; for in these rocks principally lie the coal beds of Europe and America, which are nothing else than a mass of chemically altered vegetables. How vast must have been the luxuriance of the vegetable world at that era in particular parts, appears from the thickness and continuity of the coal beds; for, it is probable, that the most dense forest of tropical America would, if buried under sediments, and subjected to the changes which yield coal, produce but a very thin bed of that substance. Yet, in the coal formation beds of three, four, six, ten, and more feet are not uncommon, and the different layers yield as much as sixty feet of solid coal.

Whatever were the causes which permitted that prodigious growth and aggregation of trees and other plants during the era of the production of coal, it appears they were never repeated, for the few unimportant deposits of coal in the oolitic system of Sutherland, Yorkshire, Bornholm, and Westphalia, which are chiefly formed of cycadeæ and equisetæ, hardly deserve mention in comparison.

The races of plants entombed in the earth at different periods of its formation, are by no means the same. M. Adolphe Brongniart, to whom we are indebted for almost the first philosophical view of the affinities of fossil plants, presents the following comparative table of the extinct and living classes of plants: —