

In a recent address, delivered to the biological section of the British Association, Mr. Carruthers has discussed this question, and has shown that the earliest vegetable specimens described by Dr. Schweinfurth from the Egyptian tombs present no appearance of change. This fact appears also in the leaves and other organs of plants preserved in the nodules in the Pleistocene clays of the Ottawa, and in specimens of similar age found in various places in Britain and the continent of Europe.*

The difficulties attending the ordinary theories of evolution as applied to plants have been well set forth by the same able botanist in his "Presidential Address to the Geological Association in 1877," a paper which deserves careful study. One of his illustrations is that ancient willow, *Salix polaris*, referred to in a previous chapter, which now lives in the arctic regions, and is found fossil in the Pleistocene beds at Cromer and at Bovey Tracey.

He notes the fact that the genus *Salix* is a very variable one, including 19 subgeneric groups and 160 species, with no less than 222 varieties and 70 hybrids. *Salix polaris* belongs to a subgeneric group containing 29 species, which are arranged in four sections, that to which *S. polaris* belongs containing six species. Now it is easy to construct a theoretical phylogeny of the derivation of the willows from a supposed ancestral source, but when we take our little *S. polaris* we find that this one twig of our ancestral tree takes us back without change to the Glacial period. The six species would take us still farther, and the sections, subgenera, and genus at the same rate would require an incalculable amount of past time. He concludes the inquiry in the following terms :

* "Proceedings British Association," 1886, "Pleistocene Plants of Canada." Canadian Naturalist, 1866.