

down before the superincumbent tree had commenced its growth. In other instances, the relative positions of trees and stumps are such that we are compelled to assign to perfectly sound timber, retaining even its characteristic aromatic odor, an antiquity of hundreds and even of thousands of years. (See Cook, *Geology of New Jersey*, 1868, p. 343, etc.; Lyell, *Second Visit to the United States*, vol. i., p. 34.)

Buried tree-trunks are often exhumed from glacial drift at the depth of twenty to sixty feet from the surface. Dr. Locke has published an account of a mass of buried drift-wood at Salem, Ohio, fifteen miles north of Dayton, where it lies from thirty-seven to forty-three feet beneath the surface, imbedded in a layer of ancient mud. The museum of the University of Michigan contains several fragments of well-preserved tree-trunks exhumed from wells in the vicinity of Ann Arbor. Such occurrences are by no means uncommon. The encroachments of the waves upon the shores of the "great lakes" reveal whole forests of the buried trunks of the White Cedar (*Thuja occidentalis*), bearing scarcely a trace of the work of destructive agencies upon them.

Unaltered vegetable structures have been found in geological deposits of even higher antiquity. It is known that well-preserved woody tissue has been frequently exhumed from deposits of Tertiary, and even of greater age. I am in possession of pieces of drift-wood from the Cretaceous sands of Alabama, in which the ligneous tissue is so fully preserved as to be capable of ignition, like recent wood. Even from the Coal Measures of Michigan I have made preparations of the delicate tissues of the fronds of so-called Scale-mosses (*Junggermauniaceae*); and from the coal mines of Lasalle, in Illinois, I have collected specimens of exogenous wood of a brown color and not yet carbonized,