

“ We have seen, that dicotyledonous trees increase in size by the deposition of an additional layer annually between the wood and the bark ; and that a transverse section of such trees presents the appearance of a series of nearly concentric, irregular rings, the number of which indicates the age of the tree. The relative thickness of these annular markings depends on the more or less flourishing state of the plant during the years in which they were formed. Each ring may, in some trees, be observed to be subdivided into others, thus indicating successive periods of the same year during which its vegetation was advanced or checked. These rings are disturbed in certain parts by irregularities resulting from branches ; and the year in which each branch first sprang from the parent stock, may therefore be ascertained by proper sections. These prominent effects are obvious to our senses ; but every shower that falls, every change of temperature that occurs, and every wind that blows, leaves on the vegetable world the traces of its passage ; slight, indeed, and imperceptible perhaps to us, but not the less permanently recorded in the depths of those woody fabrics.

“ All these indications of the growth of the living tree are preserved in the fossil trunk, and with them also frequently the history of its partial decay. Let us now examine the use we can make of these details relative to individual trees, when considering forests submerged by seas, imbedded in