on their first appearance, exhibit only one such leaf or cotyledon, such as Indian corn, the cabbage tree, (*chamaerops palmeto,*) &c.; and hence they have been called monocotyledonous plants. Those of the first kind having been found to have stems of the exogenous structure, and those of the latter to be always of an endogenous formation, the two classes have been and may as well be designated by the one name as the other. *Eaton's Botanical Grammar*, 18.

Then assuming that this was the only mode by which exogenous trees were enlarged, and because the sap flowed more freely and obviously in summer than in winter, it was affirmed, that the number of those concentric layers, counting from the surface to the centre, demonstrated the number of years the tree had been growing. But as has been seen, it is admitted, that in the wood of forest trees of the temperate zone, in which those concentric layers have been noticed, it has been observed, that each layer is composed of a great number of thinner and scarcely distinguishable ones, which in some cases assume a more or less conspicuous appearance than usual, in consequence of the fluctuations of the seasons, or accidental checks on the growth of the tree; as hard winters render the outside, or porus part of each circle, more decided; while favorable summers make the circle itself altogether broader.

Hence it is evident, from what is thus stated by the advocates of this notion, of each layer's being an evidence of a year's growth, that it is founded upon the apparent effects of the revolution of the seasons in the temperate zone. But the roots of carrots, beets, &c., which are the growth of a single season; and indeed the roots of all perennial trees, as well those of the endogenous as of the exogenous class, are also formed of concentrical layers, *Roget Anim. and Veget. Physi. pt.* 1, *c.* 1, *s.* 3; and the wood of the trunks of most of the forest trees of the torrid zone are evidently formed in the same way; although some of them may exhibit slighter traces of such concentric rings than others. But the wood of none of the endogenous class of plants, among which is the cabbage tree (*chamaerops palmeto,*) of * our country, exhibit any such indications of the formation of successive concentrical layers, as are to be found in a stem of the oak, pine, &c. *Rees' Cyclo. v. Monocotyledon, Palmae, and Wood; Roget. Anim. and Veget. Physi. pt.* 1, *c.* 1, *s.* 2.

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The conspicuous formation of successive layers of wood is, however, not only confined to trees of a particular class, but even among them the formation of such layers differs materially, according to their respective species, ages, and situation, when

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layers, which prolong the existence of the individual."—*An Essay on Vegetable Physiology, by George D. Armstrong, Prof. of Nat. Philosophy and Chemistry, in Washington College, Virginia, chap.* 5 *and* 6; *The Farmers' Register, by Edmund Ruffin, vol.* 7, *No.* 3.