

kind or species, the production of a series of by-gone years. And of these oak plants, each and every one lives only *one* year, and attains its *full* growth within the year; making provision in the form of buds for the evolution of similar plants the following year. Further, the plants of each year, shooting up in spring from the buds formed by the plants of the previous year, *grow parasitically* on the persistent dead remains of these. Acquiring their maturity in summer, and reaching to the height of a few inches only, they pass into the state of old age (the sere and yellow leaf) and eventually *die* in autumn, save only the buds they have formed, which survive the winter. And thus dying, the greater part of every one of them speedily undergoes decomposition and disappears. The woody stems and roots alone remain. These, although dead, escape that process. Tipped with the living buds they abide entire—as entire, yet as destitute of vitality, as the table I am writing at; and they abide to serve to these buds and to the young oak plants that are to come of them next year (as the earth does to the acorns and their produce), the purposes both of a *temporary soil* and of a permanent *mechanical* support. Such is my apprehension of a tree.”

All this seems strange and paradoxical enough, but the consequences of such a theory of trees appear much more strange and paradoxical still.

“Regarding the tree in this light,” continues our author, “I hold that but for *accidental* causes, any and every tree might live for ever, and go on growing and enlarging to to any conceivable size. You have heard it said that the king of England never dies; and you will readily understand that what is not true of individual men may yet be true of individual families, or of the race in general. Individuals die, but the race lives and multiplies.* The corporation of London has lasted, we may say has lived, some hundreds of years; and unless swept away by some such extraneous cause as an act of the legislature, may last till the end of time, though the individuals composing it may none of them pass the allotted three-score years and ten. Just so in respect of a tree. If what I have stated be a true account of its nature, and of the manner of its production it will of course follow that a tree is an individual in precisely the same sense as a body corporate; and that, contrary indeed to the common opinion, but in perfect consistency with the principle that all living beings are subject to the law of mortality, and have a definite size or bulk of organism, there will be no limit except from *extraneous* causes, to the size it may attain, or the number of years it may live. What is called a *genealogical* tree is constructed very exactly on the principle of this theory, and serves extremely well so far to make it intelligible; while the personality of each member of the tree is admitted, and his own individual *temporary* existence, he is yet regarded as forming a scion or branch of one *common stock*, which may have had its origin in a remote age, and may endure as *long* as the world itself.”

The inferences which Dr. Harvey himself deduces from his theory, viz., that there is no natural limit prescribed by the inherent physiology of the tree, either to its size or longevity, will probably appear to most people to be a sufficient *prima facie* argument against its truth; and as this branch of the subject admits of easy and popular treatment, we may here give a few more paragraphs from the author, both for their *inherent interest*, and as a sample of his matter and manner as a scientific writer.

“Of old trees still extant in this country, and still living and growing, we need not look beyond the yew tribe. There are, indeed, oaks, limes, sycamores, chesnuts, ashes, and others of great antiquity and vast size, some of them coeval with the Conquest, some of them probably much older still; but they all sink into insignificance before the yews. Of these, there are some at Fountain’s Abbey, near Ripon, in Yorkshire, which are believed to be more than 1,200 years old; there are two in the churchyard of Crowhurst, in Surrey, 1,450; and one at Fortingall, in Perthshire, from 2,500 to 2,600 years old. One in Brabourn churchyard, in Kent, is said to have attained the age of 3,000 years; and another at Hedsor, in Bucks, which is still in full vigour, and measures about twenty-seven feet in diameter, is reckoned to be above 3,200 years old. . . . In the Brazils, in one of the primaval forests, there are some trees supposed to be *Courbarils*, which in respect of size are truly colossal, and in respect of age have been variously computed at from 2,000 to 4,000 years. ‘Never before,’ says Martius, ‘had I beheld such enormous trunks. They looked more like living rocks than trees; for it was only on the pinnacle of their bare and naked bark that foliage could be discovered, and that at such a distance from the eye that the form of the leaves could not be made out. Fifteen Indians, with out stretched arms, could only just embrace one of them. At the bottom they were eighty-four feet in circumference and sixty feet where the boles became cylindrical. . . .’