

these ages of the severe inductive philosophy, you have been dreaming your dream, cut off, as if by the state of sleep, from all the tangibilities of the real waking-day world, and that you have not a vestige of testimony with which to support your ingenious vagaries.

But on another account do we refuse to sustain the excuse. It is *not true* that human observation has not been spread over a period sufficiently extended to furnish the necessary data for testing the development hypothesis. In one special walk,—that which bears on the supposed transmutation of algæ into terrestrial plants,—human observation *has* been spread over what is strictly analogous to *millions* of years. For extent of space in this matter is exactly correspondent with duration of time. No man, in this late period of the world's history, attains to the age of five hundred years; and as some of our larger English oaks have been known to increase in bulk of trunk and extent of bough for five centuries together, no man can possibly have seen the same huge oak pass, according to Cowper, through its various stages of "treeship," —

"First a seedling hid in grass;
Then twig; then sapling; and, as century rolls
Slow after century, a giant bulk,
Of girth enormous, with moss-cushioned root
Upheaved above the soil, and sides embossed
With prominent wens globose."

But though no man lives throughout five hundred years of time, he can trace, by passing in some of the English forests through five hundred yards of space, the history of the oak in all its stages of growth, as correctly as if he *did* live throughout the five hundred years. Oaks, in the space of a few hundred yards, may be seen in every stage of growth, from the newly burst acorn, that presents to the light its