

ordinary-sized pine was the slow growth of a century, a mouse-deer or a grizzly bear shot up to its full size in a few weeks or months. And if in the foliaceous shells of the coast, such as its oysters, he finds exactly such layers of growth, or *shoots*, as those from which the oyster-fisher at home computes the age of the animals, each "*shoot*" being the work of a year, can he avoid the conclusion that here also he has got a unit by which to measure the time during which the organisms have lived, and from which he may conclude, in all sobriety, that if the bed of shell-marl which contains the remains of the mastodon be very thick, it must of necessity be very old? If he cannot, in strictness, apply his units to every plant or every shell, or yet to every deposit of vegetable or animal origin, they at least tell him that the same general laws of growth obtain on the one side of the Atlantic as on the other, and warn him against inferring, like his antagonist, that the cases in which he has not yet been able to apply them are in any degree anomalous, or under laws that are different.

We have but to apply to the geological periods of at least the Secondary and Tertiary divisions, the reasoning of our illustration here, in order to determine that they must have been immensely prolonged. In no degree is the argument more affected by the portion of time which separates our age from the ages of the Oolite, than by the portion of space which separates our country from the eastern shores of America. In the woods of the great palæozoic division the lines of growth are uncertain and capricious. Many of the trees furnish no trace of them whatever, just as there are recent intertropical trees in which they do not occur; and in some of the others they appear capriciously and irregularly, as in those intertropical trees in which the growth is checked from time to time by intense heats and occasional droughts. But in the woods of the Lias and Oolite winter has set his seal;