

nature, which it would require the suggestive necessities of many ages painfully to lick into civilisation? Or does it appear rather like the Adam of the poet and the theologian, independent, in its instantaneously-derived perfection, of all after development,—

‘ Adam, the goodliest man of men since born
His sons ? ’

Is this tissue vascular or cellular, or, like that of some of the cryptogamia, intermediate? Or what, in fine, is the nature and bearing of its mute but emphatic testimony on that doctrine of progressive development¹ of late so strangely resuscitated?

In the first place, then, this ancient fossil is a true wood,—a dicotyledonous or polycotyledonous *Gymnosperm*, that, like the pines and larches of our existing forests, bore naked seeds, which, in their state of germination, developed either double lobes to shelter the embryo within, or shot out a fringe of verticillated spikes, which performed the same protective functions, and that, as it increased in bulk year after year, received its accessions of growth in outside layers. In the transverse section the cells bear the reticulated appearance which distinguish the coniferæ; the lignite had been exposed in its bed to a considerable degree of pressure; and so the openings somewhat resemble the meshes of a net that has been drawn a little awry; but no general obliteration of their original character has taken place, save in minute patches, where they have been injured by compression or the bituminizing process. All the tubes indicated by the openings are, as in recent coniferæ, of nearly the same size; and though, as in many of the more ancient lignites, there are no indications of annual rings, the direction of the medullary rays is distinctly traceable. The longitudinal sections are rather less distinct than the transverse one: in

¹ This alludes, of course, to the *development* theory of the *Vestiges of the Natural History of Creation*.