

palm. If any trace be present of tissue crossing the longitudinal tubes at right angles, radiating from the centre to the circumference, this will prove the existence of medullary rays, and the original must have been exogenous, as the oak, elm, &c. And if in a transverse section the tubes appear of equal size, the original was probably coniferous or cycadeous (related to the plants called *Cycas* and *Zamia*); but if larger tubes appear among the smaller ones, disposed in a definite manner (see Plate V. fig. 4.), it belonged to some other tribe of exogenous plants.

If the walls of the tubes be studded with glands (*Lign.* 1, fig. 1, c. Plate V. figs. 2^b. 3^b.), the fossil belongs to the coniferæ.

If any vestige of a central pith be discovered, the exogenous nature of the original is undoubted, for no other class, as we previously stated, possesses a central, cellular column.

The absence or presence of a true cortical investment, or bark, is important, for a distinct bark is the characteristic of the exogenous class:* a cortical integument, or rind, not separable from the enclosed structure, indicates the monocotyledonous; and the entire absence of any rind, the cryptogamia.

The markings on the stems, occasioned by the scars or cicatrices left by the separation of the

* An apparent exception to this rule is found in the fossil genus *Clathraria*, described hereafter.