

DIOSPYROS

Vessels typically small (less than 100 μ mean tangential diameter) or medium-sized in some species e.g. *D. brachiata*, *D. ehretioides*, and *D. maingayi*; solitary and in multiples of 2 or 3 cells, with multiples of 4 or more cells moderately common in some species, and occasionally forming a vague radial or oblique pattern e.g. in *D. embryopteris*, *D. malaccensis* and *D. tristis*. Commonly 2-4 per sq. mm., but more numerous, (up to 15 per mm.) in some species e.g. *D. burmanica*; with slight tendency to ring-porousness in *D. virginiana*. Perforations simple. Intervascular pitting alternate, and small to minute; pits to ray and wood parenchyma similar to intervascular pitting. Sometimes with abundant solid deposits. Tyloses sometimes present, e.g. *D. moonii*. Mean member length 0.2-0.5 mm.

Parenchyma predominantly apotracheal, in numerous uniseriate lines varying from irregular and short to moderately straight and continuous, the latter e.g. in *D. maingayi*, *D. polyalthoides*, *D. sanza-minika* and *D. tristis* with scattered cells (diffuse) sometimes with distinct vasicentric sheaths round the vessels, e.g. in *D. ehretioides*, *D. glandulosa* and *D. undulata*. Cells often filled with gummy contents, and chambered crystals in some species. Strands typically of 4 cells in the apotracheal parenchyma, (strands of 2 cells common in *D. glandulosa*), strands of vasicentric parenchyma, when present, usually of 8 cells. Storied in *D. kaki*, *D. glandulosa* and *D. virginiana*.

Rays typically 1-2 cells wide, but up to 3 or 4 cells in a few species e.g. *D. glandulosa* and *D. virginiana*. Wholly uniseriate or with only occasional biseriate parts in most species. 2 cells wide in *D. ehretioides* and *D. virginianum*. Less than 1 mm. high. Uniseriates numerous and typically composed of square to upright and procumbent cells, but of procumbent only in *D. virginiana*. 10-17 rays per mm. Typically heterogeneous (Kribs Types II B and III) the multiseriate rays commonly with 4 or more marginal rows of upright cells and sometimes with 2 or more multiseriate parts per ray, particularly in species, with rays that are intermediate between exclusively uniseriate and multiseriate; procumbent cells of the uniseriate rays often high

axially and not clearly distinguished from square cells in tangential sections; homogenous (Kribs Type I) in *D. virginiana*; sometimes with numerous crystals, either singly in all cells or, occasionally, with 3 or 4 chambered crystals in the procumbent cells; usually with dark gummy contents, sometimes with marked intercellular spaces. Storied in *D. glandulosa*, *D. kaki*, *D. lotus*, *D. morrisona*, *D. sasakii* and *D. virginiana*.

Fibres with small bordered pits more numerous on radial than on tangential walls, the borders often very small, but moderately large and distinct in some species. Walls moderately to very thick. Mean length 0.75-1.4 mm.