

VITEX

Verbenaceae

Vessels mostly medium-sized (100-200 μ mean tangential diameter) with radial or oblique pattern in some species, and a tendency to a tangential pattern in some species; very variable in number ranging from 20 to more than 40 per sq. mm. Ring-porous or semi-ring-porous in some species. Perforations exclusively simple except for rare reticulate plates in *V. alata* and a few scalariform plates in some other species. Intervascular pitting moderately large; pits to ray and wood parenchyma usually similar, but occasionally simple, and with some elongated pits in species of *Vitex*. Solid deposits of various types sometimes present. Tyloses, which often have large simple pits are present. Tyloses, which often have large simple pits are present and often abundant in some species. Mean member length 0.2-0.5 mm.

Parenchyma typically exclusively paratracheal, though there may occasionally be a few cells scattered among the fibres; usually as a few cells or narrow sheaths round the vessels. May be fine metatracheal bands in *V. lignum-vitae*; occasionally in narrow terminal bands. Chambered crystals in *V. bantamensis*. Strands of 2-8, usually 4, cells.

Rays 1-12 cells wide, mostly up to 3-4 cells, 5 or more cells wide in some species; usually less than 1 mm. high and sometimes very short, but often more than 1 mm. high in some species. Uniseriate rays often few, usually composed of upright cells only, but sometimes of mixed upright and procumbent cells; 3-13 rays per mm; heterogeneous (Kribs Type II A and B) to homogeneous (Kribs Type II). Homogeneous in some species. Crystals rather rare.

Fibres typically septate, but non-septate in some specimens of species of *Vitex*, e.g. *V. longeracemosa*. Pits simple and mostly on the radial walls. Walls typically of medium thickness to thin, thick in some species. Mean length 0.8-1.4 mm.