

VACCINIUM

Vessels typically small (25-50 μ mean tangential diameter) and extremely small (less than 25 μ) in some spp.; exclusively solitary (apart from apparent tangential pairs due to overlapping ends); mostly 60-100 per sq. mm., more numerous in some spp. (up to 400); with spiral thickening in most spp. Perforation plates most typically both simple and scalariform, the latter with relatively few and wide perforations, perforation plates all scalariform and with more numerous bars (up to 20 or more) in some spp.; with some foraminate plates in most spp. and often with what appear to be bordered pits mixed with the perforations, and occasionally with scalariform plates with the bars at different angles on the opposite sides of the middle lamella. Intervascular pitting rare owing to the solitary vessels, scalariform; pits to ray parenchyma typically large, scalariform and simple, tending to be more commonly round, opposite and bordered in Vaccinium. Solid deposits and tyloses sometimes present. Mean member length 0.4-0.75 mm.

Parenchyma absent or very sparsely scattered among the libriform fibres (apotracheal); occasionally more numerous in some spp. e.g. *V. arboreum* Marsh.

Rays typically of 2 distinct sizes with the larger rays up to 6-10 cells wide, except in some spp; the larger rays commonly more than 1 mm. high and showing evidence of dissection from very high rays; in some spp. e.g. *V. arboreum* such groups of large rays are infrequent and most of the rays are short and from 1-4 cells wide; Uniseriate rays moderately high and numerous and composed of high upright cells except in some spp. in which uniseriates are commonly only 1 or 2 cells high; mostly 12-18 rays per mm. sometimes more numerous. Heterogeneous, usually with 1-4 marginal rows of upright cells. Sheath cells usually present.

Fibres of 2 types a) the ground tissue of fibre-tracheids with numerous, distinctly bordered pits on all walls and often with thick walls; with spiral thickening in *V. PARVIFOLIUM* S.M.T.V. *cerereum* Forst. f. Mean length 0.7-1.25 mm. b) Scattered among the fibre-tracheids, but particularly round the vessels, a few fibres with small simple pits and thin walls, often septate, and sometimes mixed with a few parenchyma cells; not much longer than the vessel members.