

## AESCULUS

Hippocastanaceae  
(syn. Sapindaceae)

Vessels in most spp. very small (less than 50  $\mu$  mean tangential diameter) to moderately small (50-100  $\mu$ ); often angular, with numerous multiples and clusters, multiples of 4 or more common in most spp; more than 40 per sq. mm. and often up to 70 or more, with spiral thickening in all spp. Perforations typically simple, but some scalariform plates have been reported in a few spp, of Aesculus. Intervascular pitting typically alternate, but some opposite pitting commonly present; pits to ray cells often limited to the marginal rows, usually similar to the intervascular pitting, but sometimes horizontally elongated or unilaterally compound, e.g. in *A. Glabra*. Mean member length 0.4-0.5 mm.

Parenchyma in narrow uni-to biseriate terminal bands, composed of strands of 4 cells that tend to be storied. Parenchyma other than terminal, absent or very scarce, as occasional cells touching the vessels chiefly on the tangential sides.

Rays exclusively uniseriate, 10-15 per mm. Usually composed entirely of upright cells (Kribs's Homogeneous Type III), occasionally e.g in *A. punduana*, with single marginal rows of square upright cells. Storied in some spp.

Fibres with pits more numerous on radial than on tangential walls varying from simple (*A. punduana*) to distinctly bordered (*A. glabra*). Walls thin and sometimes with a gelatinous layer. Mean length 0.6-0.9 mm.