

## GOSSYPIUM

Vessels small (less than 100  $\mu$  mean tangential diameter) or medium-sized (100-200  $\mu$ ) the latter mostly less than 150  $\mu$  in diameter. Moderately small (50-100 $\mu$ ) in some spp. Solitary, in irregular clusters and in radial multiples of 2 or 3. Seldom more than 20 per sq. mm. 5-10 per squares in some spp. Fewer than 5 in other spp. Ring-porous or semi-ring-porous in some spp. Perforations simple. Inter-vascular pitting alternate, sometimes striated owing to coalescent apertures e.g. *G. dryparioides* Seem. Pitting alternate, opposite, or occasionally scalafiform in part, small to minute, pits to ray and wood parenchyma typically similar to the intervascular pitting but sometimes simple. Mean member length 0.2-0.7 mm, mostly 0.33-0.45.

Parenchyma rather scanty to abundant. Apotracheal parenchyma in numerous short bands 1-2 cells wide in *Gossypium*, but rare in some spp. and with more regular and more continuous bands in others. (Terminal parenchyma in some genera but not stated if in this). Strands most commonly of 2-4 cells. Storied in nearly all spp. except in very small stems.

Rays very variable in type, ranging from a) high multiseriate rays composed mainly of narrow upright cells, together with numerous uniseriate rays, to b) large homogeneous rays with few uniseriates, or c) short heterogeneous storied rays. In a few spp. the multiseriate rays are high, 2-5 cells wide, with relatively few procumbent cells, which are scattered among the upright cells, and the uniseriate rays are numerous, composed entirely of upright cells and moderately high (Kribs's Het. Type I). In some other spp. the rays are similar, though with wider multiseriate rays, but most spp. that have high rays the procumbent cells are more numerous, the upright cells shorter and sometimes almost square, and uniseriate rays are few, often composed of procumbent cells and commonly only 2-3 cells high (Kribs's Het. Type IIB), e.g. *Gossypium* pp. Rays 2-3 cells wide in some spp. and up to 4-9 cells wide in some other spp. commonly with a tendency to be of 2 distinct sizes in woods with larger rays - 6-11 per mm. Markedly heterogeneous with square of upright cells intermingled with procumbent cells and tending to alternate in groups

(Diag. p.228, fig 57 F and K). With square or upright cells, other than sheath cells limited to 1 or 2 marginal rows in some spp. With sheath cells in some spp.

Fibres typically with small simple pits. With thin walls in some spp. Commonly storied in woods in which the parenchyma is distinctly storied. Mean length 0.36-2.33 mm. usually of medium length (0.9-1.6).