

**SPARTIUM**

Vessels moderately small (50-100  $\mu$  mean tangential diameter). In some spp. particularly those with an oblique or tangential pattern, the larger vessels may themselves be small and be set in a matrix of extremely small, angular storied vessels that are comparable with tracheids in cross-section, e.g. *Spartium*. The tendency for the vessels to be mostly solitary, but with a few multiples and clusters (characteristic of many genera of the Mimosaceae and Caesalpinaceae) is not particularly noticeable in the Papilionaceae. Some spp. of *Spartium* have an oblique pattern; clusters common in nearly all woods with a distinct vessel pattern. Apart from woods with very numerous vessels in oblique or tangential rows, most spp. have either fewer than 5 vessels per sq. mm. or between 20 and 40 per sq. mm. Ring-porous or semi-ring-porous in at least some spp. Spiral thickening, often limited to the smaller vessels. Perforations simple. Intervascular pitting alternate, typically small; pits to parenchyma and ray cells usually similar to the intervascular pits; pits vestured. Mean member length 0.1-0.4 mm.

Parenchyma usually moderately to very abundant and either predominantly paratracheal or in moderately regular bands that tend to be replaced by definitely paratracheal forms where the parenchyma is less abundant, confluent, forming irregular bands or the matrix for oblique or tangential bands of vessels in some spp. Chambered crystals sometimes occur in diffuse parenchyma, where this is present. Cells sometimes contain gum-like deposits. Strands most commonly of 1-2 cells, or only 1 cell; parenchyma cells almost exclusively fusiform. Rays and parenchyma may be storied.

Rays of more than half the genera 2-3 cells wide, but exclusively uniseriate or with only occasional biseriate rays in some spp. of *Spartium*, and 4-10 cells wide in some other spp. Woods with multiseriate rays usually with a few uniseriates. Mostly from 4-12 rays per mm. Homogeneous (Kribs's Types I, II and III); sheath cells present in some spp.; commonly containing gum-like deposits.

Fibres typically with few, small, simple pits, more numerous on the radial than on the tangential walls. Walls generally moderately to very thick, often with a gelatinous inner layer. Mean length 0.6-1.7 mm.

Spartium junceum L

Diffuse-porous. Pores in short radial multiples and clusters; in zig-zag and oblique arrangement; pores very small to small, maximum tangential diameter  $75\ \mu$ ; pores numerous but not crowded. Vessels with simple perforations; pits alternate, medium sized; spiral thickenings. Wood parenchyma in narrow confluent bands. Rays heterogeneous, procumbent and square cells in irregular arrangement as seen on the tangential section; up to 3 cells wide; less than 30 cells high; ray vessel pitting medium sized, short oval in outline. Fibres with simple or indistinctly bordered pits; cell walls very thick. Ripple marks present, approximately 7 per centimetre. (Flanoh Specimen No. 40)