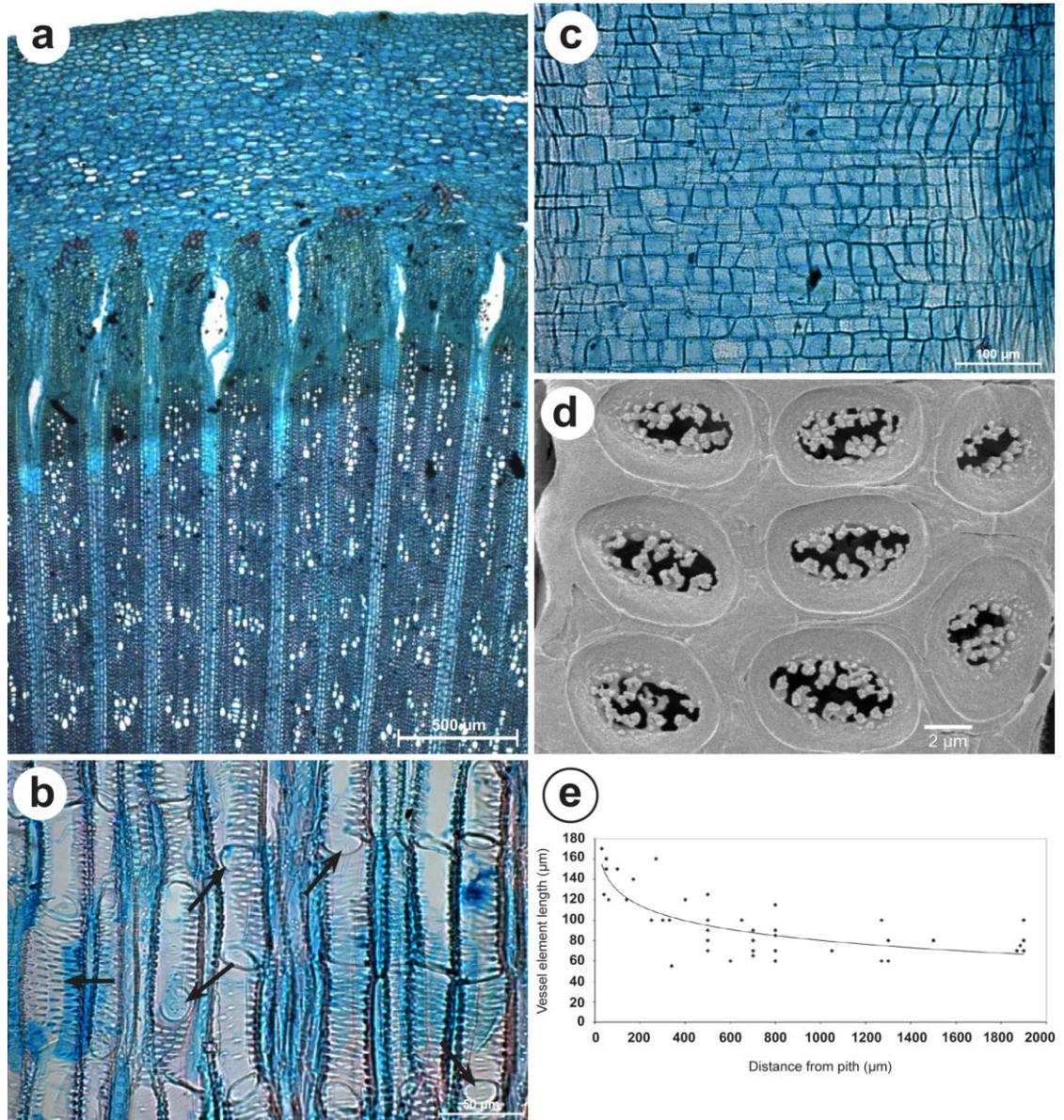


## Supporting Information Notes S1 and Fig. S1

**Notes S1** Description of mature wood in *soc1 ful* (Figs 1h, 2)

The wood anatomical description in this paragraph follows the standardized protocol according to the International Association of Wood Anatomists. Growth ring boundaries absent. Wood diffuse-porous and lignified (Fig. 2a,b). Vessels often between 250–350  $\mu\text{m}^{-2}$ , solitary and in radial multiples of 2–5–(15) (Fig. 2a); vessel outline slightly angular; perforation plates always simple (Fig. 2c). Intervessel pits generally opposite to alternate, pits 3–5–(6)  $\mu\text{m}$  in horizontal diameter, vested (Fig. 2d). Wall sculpturing absent. Tangential diameter of vessels (6)–10–14–(25)  $\mu\text{m}$ , equally wide or even smaller than metaxylem vessels (Fig. 2a); vessel elements (50)–90–125–(380)  $\mu\text{m}$  long, strongly shortened near the pith and rapidly stabilizing *c.* 100  $\mu\text{m}$  (Fig. 2e). Fibres non-septate with few simple pits, very thin-walled (Fig. 2c), (200)–250–310–(470)  $\mu\text{m}$  long, pit apertures 1.5–2  $\mu\text{m}$  in horizontal diameter. Axial parenchyma scarcely distributed nearby vessels (scanty paratracheal), usually in undivided strands (Fig. 2c) or occasionally in 2–(3) celled strands. Rays absent (Fig. 2a). Mineral inclusions (crystals and silica bodies) not observed.

The wood anatomical characters of the three Brassicaceae species studied, *Brassica oleracea* convar. *gemmifera*, *Erysimum cheiri* and *Draba steyermarkii*, are nearly identical to the woody *A. thaliana* plants, although there are some minor differences (Supporting Information Fig. S1): growth ring boundaries distinct in *Draba*, indistinct in *Erysimum*; vessels often arranged in clusters of 3–10–(15); presence of exclusively multiseriate rays with mainly square to upright ray cells in *Brassica* (Fig. S1a,c) and *Erysimum*.



**Fig. S1** Selected anatomical characters in mature wood of Brassicaceae that become shrubby in their natural environment; **(a, c)** *Brassica oleracea* convar. *gemmifera* (Kruier s.n., Leiden, the Netherlands ‘Brussels sprout’), **(b)** *Erysimum cheiri* (Lens s.n., Leuven, Belgium), **(d, e)** *Draba steyermarkii* (van Hengstum s.n., Parque National Cajas, Ecuador). **(a)** Transverse overview showing rays in wood, periderm formation absent. **(b)** Radial section showing simple vessel perforations (oblique arrows) and alternate intervessel pits (horizontal arrow). **(c)** Radial section showing multiseriate ray consisting of mainly square and upright cells. **(d)** Tangential section

illustrating opposite vested intervessel pits. (e) Flat length-on-age curve of vessel elements.