

A KEY TO SOME WOODS, MOSTLY NORTH AMERICAN

- A1. Wood nonporous (without vessels).
- B1. Rays mostly uniseriate, occasionally biseriate, wider when they contain resin canals [conifers].
- C1. Axial resin canals normally present.
- D1. Epithelial cells of resin ducts mostly with thin walls *Pinus*
- D2. Epithelial cells of resin ducts mostly with thick walls *Larix*
- C2. Axial resin canals normally absent, except when induced in tangential rows or groups following wounding (traumatic resin canals)
- E1. Axial wood parenchyma present and conspicuous; end walls of ray cells not conspicuously pitted (nodular). *Sequoia*
- E2. Axial wood parenchyma absent or sparse; end walls of ray cells conspicuously pitted (nodular).
- F1. Ray tracheids present. *Tsuga*
- F2. Ray tracheids absent *Thuja*
- B2. Rays both multiseriate and uniseriate in the same wood, without resin canals [dicots].
- G1. End walls of tracheids (in radial section) with 1-2 rows of round pits. *Drimys*
- G2. End walls of tracheids with scalariform pitting. *Tetracentron*
- A2. Wood porous (vessels present) [dicots].
- H1. Wood ring-porous, the pores of the early wood distinctly larger than those of the late wood.
- I1. Many early wood pores with conspicuous tyloses *Robinia*
- I2. Tyloses rare and inconspicuous.
- J1. Late wood with more or less continuous radial lines or bands of small pores, tracheids, and parenchyma cells.
- K1. Rays all uniseriate *Castanea*
- K2. Rays both multiseriate and uniseriate. *Quercus*
- J2. Late wood pores scattered individually, in small clusters or in tangential lines.
- L1. Late wood pores numerous, arranged more or less in wavy tangential lines.
- M1. Rays 1-6 seriate; ray tissue homogeneous. *Ulmus*
- M2. Rays 1-13 seriate; ray tissue heterogeneous. *Celtis*
- L2. Late wood pores scattered individually or in small multiples.
- N1. Early wood pores densely crowded at the ring boundary, late wood pores all much smaller than those of the early wood. *Fraxinus*
- N2. Early wood pores tangentially separated from one another, late wood pores sometimes as wide as those in the early wood. *Diospyros*
- H2. Wood diffuse-porous, pores throughout growth ring fairly uniform in size or only gradually changing size from early wood to late wood.
- O1. Pores variable in size, the large ones readily visible without magnification, not crowded *Juglans*
- O2. Pores small to minute, often not distinct without a lens, few and scattered to crowded.

- P1. Pores solitary or in small multiples, not crowded.
 - Q1. Rays narrower than the pores, inconspicuous; vessels with scalariform perforations. *Betula*
 - Q2. Largest rays as wide as or wider than the pores, conspicuous; vessels with simple perforations *Acer*
- P2. Pores very numerous, usually crowded.
 - R1. Largest rays as wide as or wider than the pores.
 - S1. Largest rays and pores similar in width; vessels with gum plugs but without tyloses; gum ducts often present. *Prunus*
 - S2. Largest rays much wider than the pores; vessels with tyloses but without gum plugs; gum ducts absent.
 - T1. Rays nearly all wide, numerous, uniformly spaced. *Platanus*
 - T2. Rays of several widths, the widest ones infrequent and irregularly spaced. *Fagus*
 - R2. Rays narrower than the pores.
 - U1. Vessels with scalariform perforations.
 - V1. Axial parenchyma at ring boundary *Liriodendron*
 - V2. Axial parenchyma paratracheal or apotracheal or both, the cells scattered, frequently very scanty. *Liquidambar*
 - U2. Vessels with simple perforations.
 - W1. Rays of two sizes, uniseriate and conspicuously multiseriate. . . . *Tilia*
 - W2. Rays all uniseriate *Salix*

After K. Esau (1960) *Anatomy of seed plants*, pp. 110—113, with some additions.

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