

Simple illustrated guide to identification of commercial Canadian woods

By

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Requirements to use guide effectively:

Piece of wood large enough to cut easily
Sharp knife or razor blade
Ten power handlens

Optional aids:

Stereomicroscope

Other helpful clues:

If fresh, smell is often helpful
Knowing source of the wood (region, more specific location)

Limitations:

While some species are distinct using this guide, often it is only families that can be differentiated and specific species identification requires further microscopic inspection

GUIDE TO IDENTIFYING A BLOCK OF WOOD VISUALLY

Is it hardwood or softwood?

Softwood: radial rows, one type of cells, (1) resin canals sometimes.

Hardwood: has pores (vessels). (2, 3)

A. If softwood,

1. If it has abrupt transition to latewood, (4)

a. And resin canals, (5)

i. If they are visible and abundant, it is one of the hard pines *Pinus* spp.

i. If they need magnification to see and are sparse,

it is Douglas-fir or a larch *Pseudotsuga menziesii* or *Larix* spp.

a. Or if it lacks resin canals (1) it is hemlock *Tsuga* spp.

1. If transition to latewood is gradual and latewood is not pronounced, (6)

a. And there are no resin canals, it is a cedar or fir *Thuja* or *Abies* spp.

a. Or there are resin canals

i. If they are easily visible and abundant, it is a soft pine *Pinus* spp.

i. Or if they need magnification to see and are sparse it is a spruce *Picea* spp.

A. If hardwood

1. If diffuse porous (even-textured), (2)

a. And very soft (easily dented with fingernail)

i. And has banded apotracheal parenchyma (7) in cross section and rays easily visible with a hand lens on the tangential surface (8) it is basswood or linden *Tilia*.

i. And is very white and has invisible rays it is aspen or poplar *Populus* spp.

i. Or is light brown and pores may grade in size (semi diffuse porous) (9)

it is willow *Salix* spp.

a. Or reasonably hard (hard to dent with fingernail)

i. With easily visible tangential-surface rays which form a fleck (10) it is beech *Fagus* spp.

ia. or form a network (11) it is sycamore *Platanus* spp.

i. Or with rays just visible as fleck on tangential surface to the eye alone (12)

it is maple *Acer* spp.

i. Or with rays not obvious to unaided eye it is birch *Betula* spp.

1. If ring porous (3) (variable-textured),

a. And rays are very large (13) (visible at several cm distance) it is oak *Quercus* spp.

a. Or it has light-coloured, wavy tangential lines (14) (latewood pores) it is elm *Ulmus* spp.

a. Or there fine, white bands (15) (of parenchyma) parallel to annual rings

it is hickory *Juglans* spp.

a. Or there are white dots (3) (parenchyma and pores) in the latewood it is ash *Fraxinus* spp.

1. If semi-ring porous (9) (pores get smaller as ring advances),

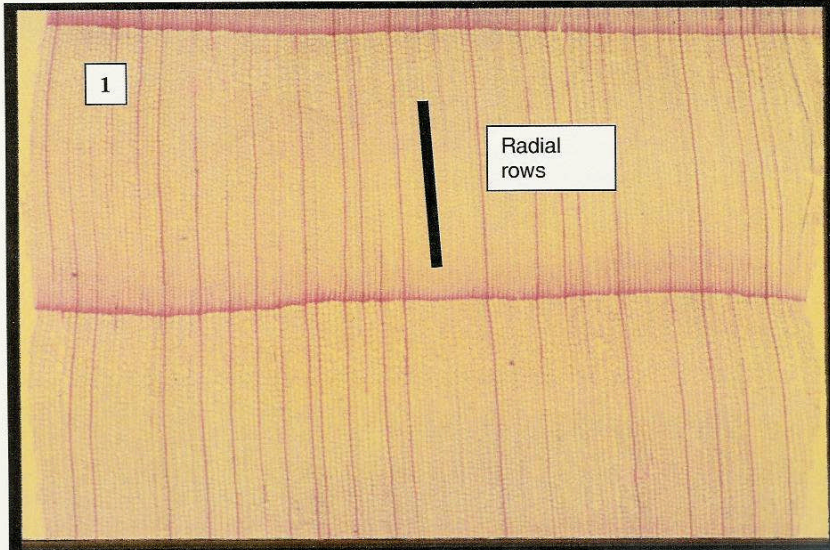
a. And it is course-textured

i. And soft and tan-coloured is is butternut *Juglans cinerea*.

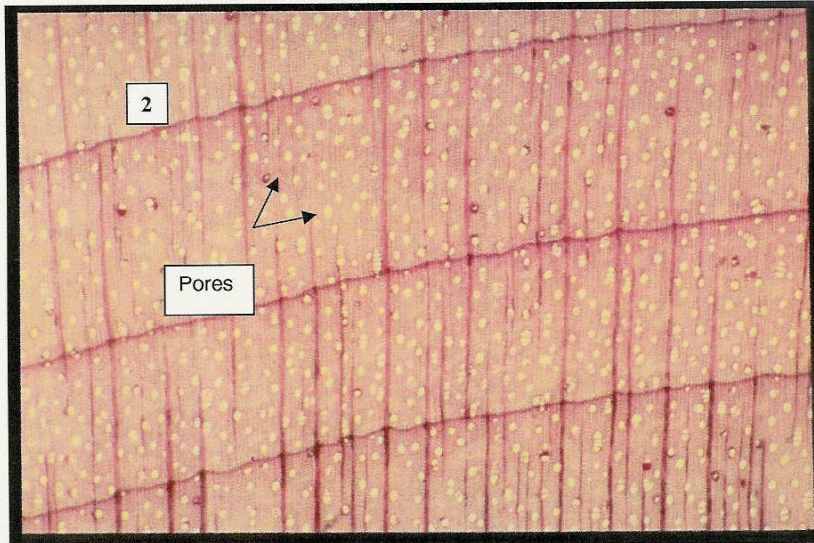
i. Or hard and brown it is black walnut *Juglans nigra*.

a. Or it is fine-textured, hard, reddish brown it is cherry *Prunus* spp.

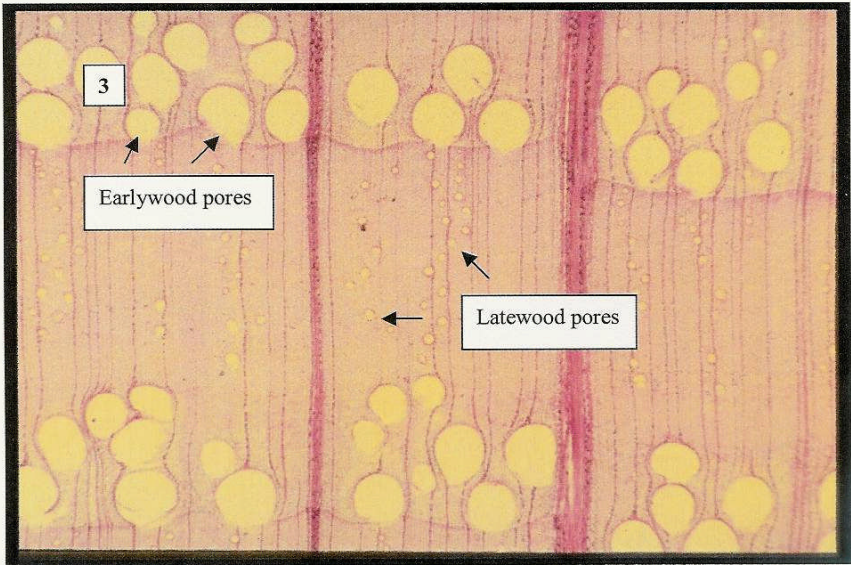
Note: (Number) and refers to illustration and A 1 a i ii is decision level



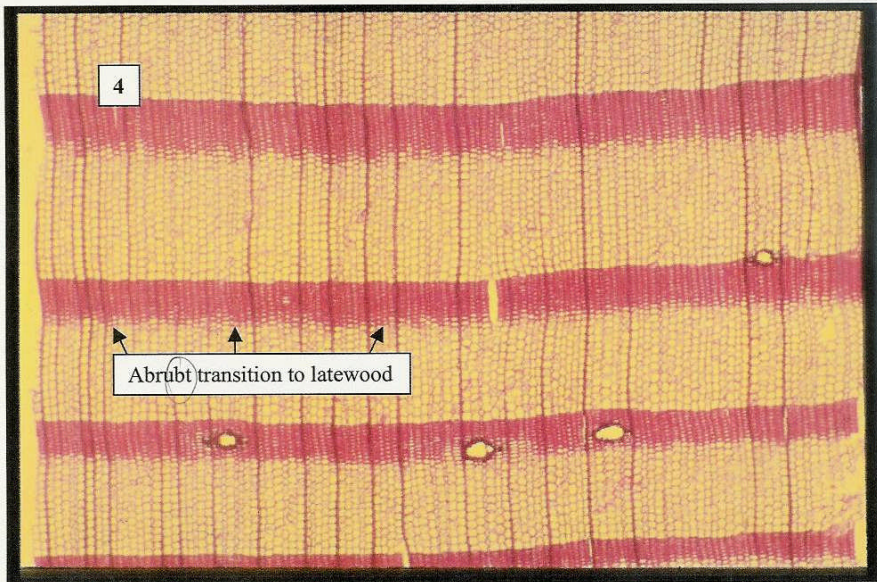
balsam fir, *Abies balsamea* x 5.



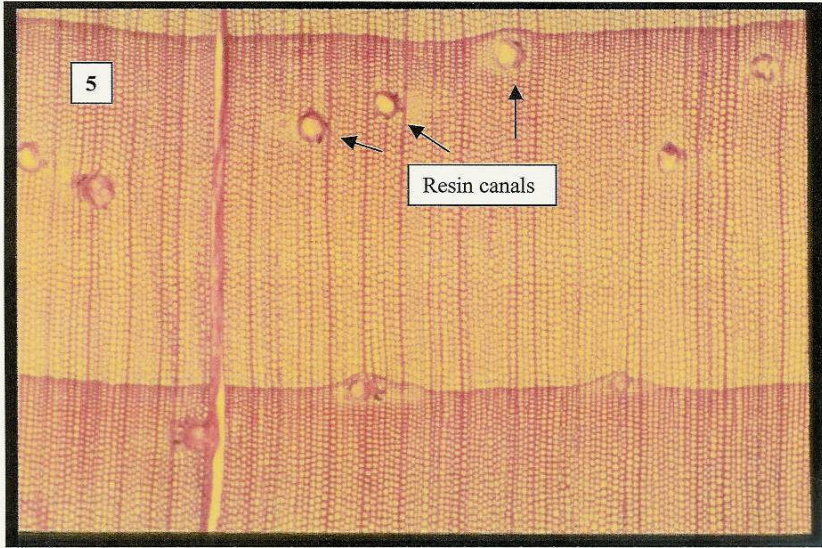
red maple, *Acer rubrum* x 5.



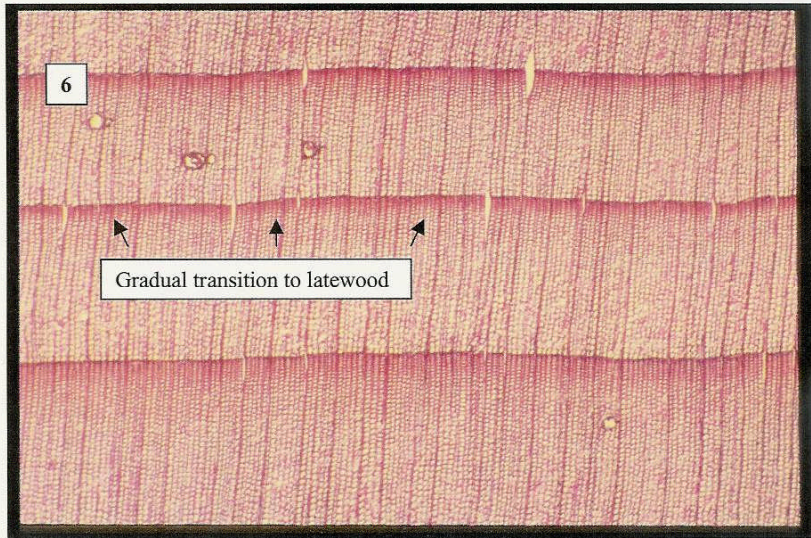
red oak, *Quercus rubra* x.5



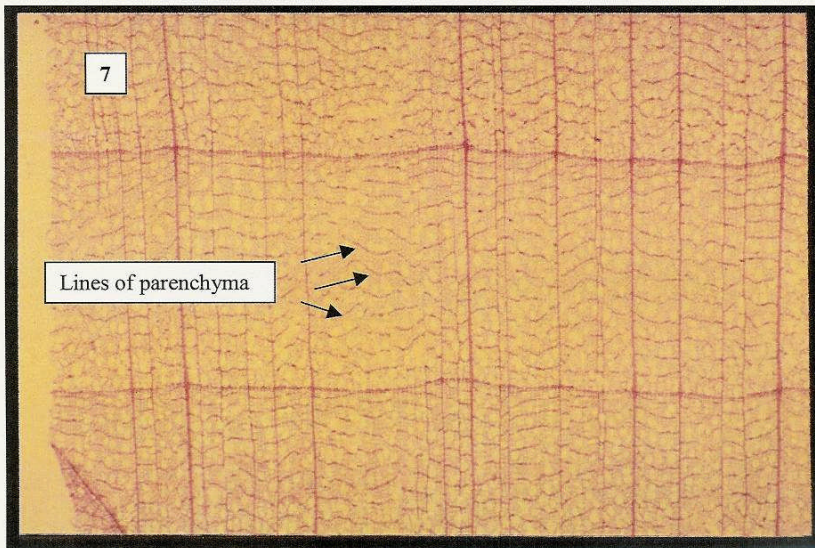
Douglas fir, *Pseudotsuga menziesii* x.8



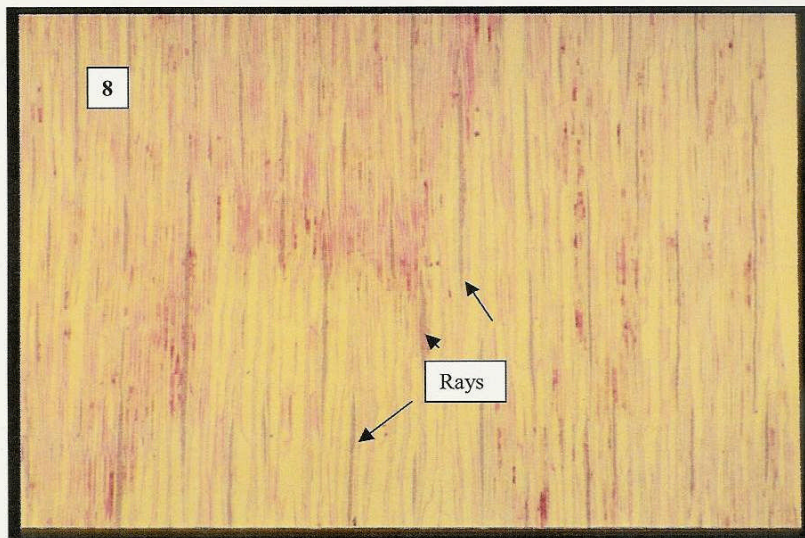
white pine, *Pinus strobus* x.8.



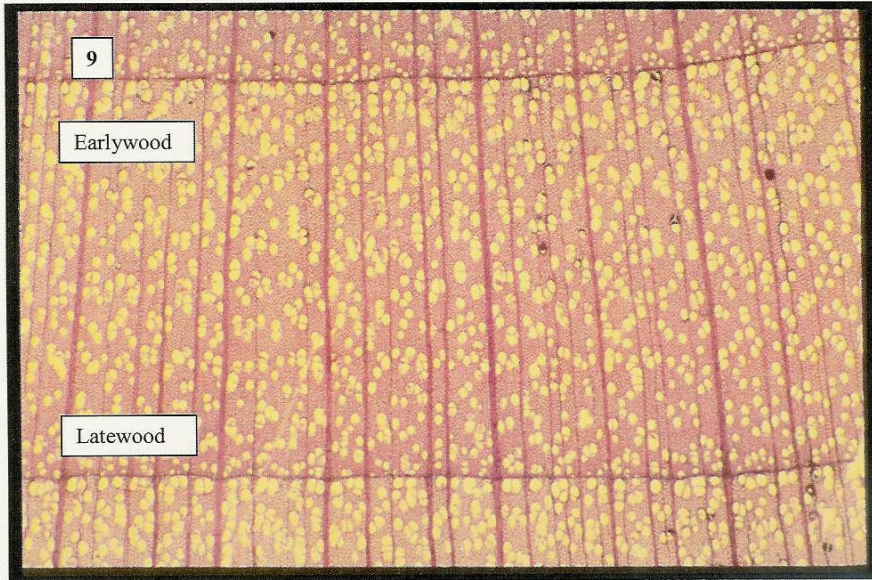
eastern spruce, *Picea* sp. x.8.



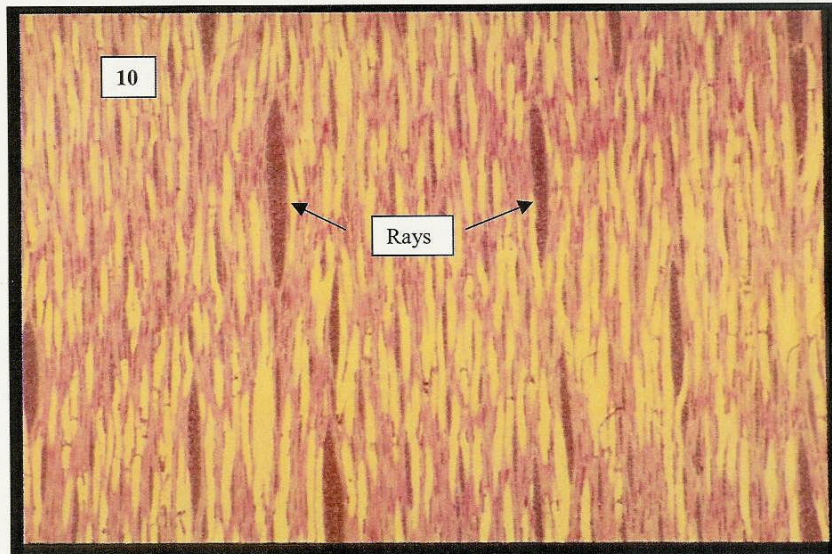
basswood, *Tilia americana* x.s.



basswood, *Tilia americana* l.s.



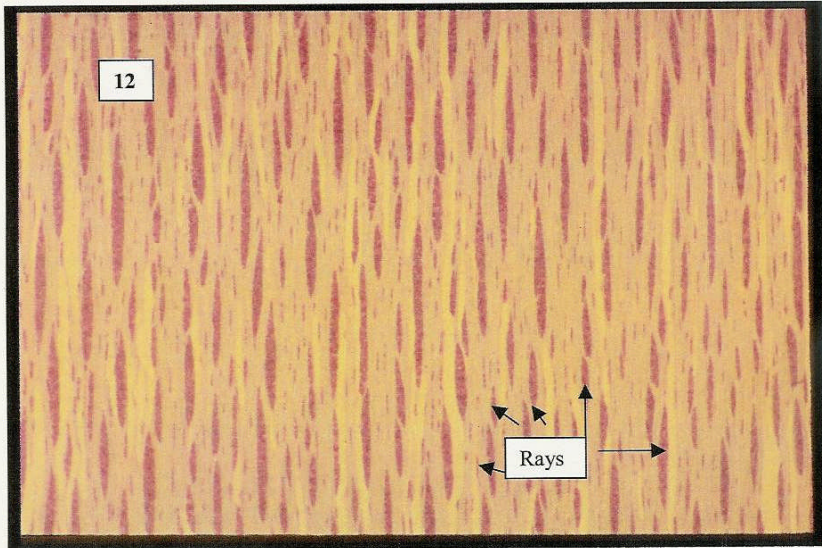
black cherry, *Prunus serotina* x.s.



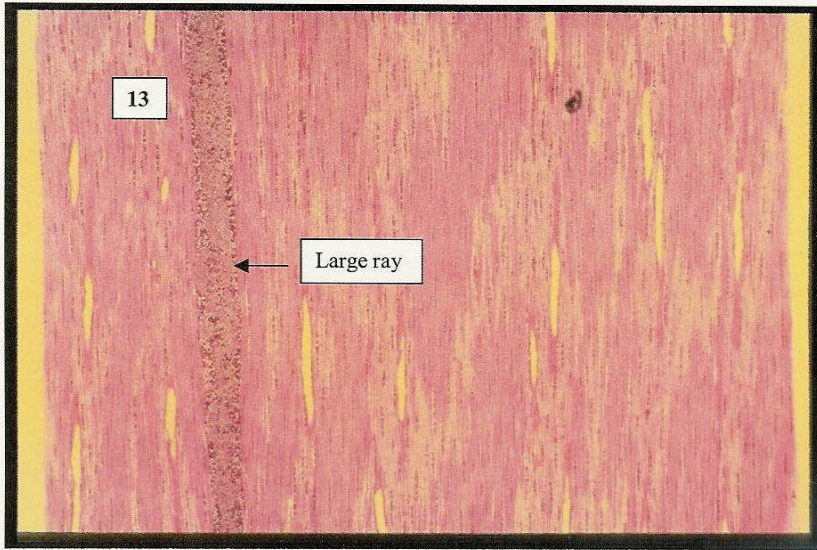
beech, *Fagus grandifolia* l.s.



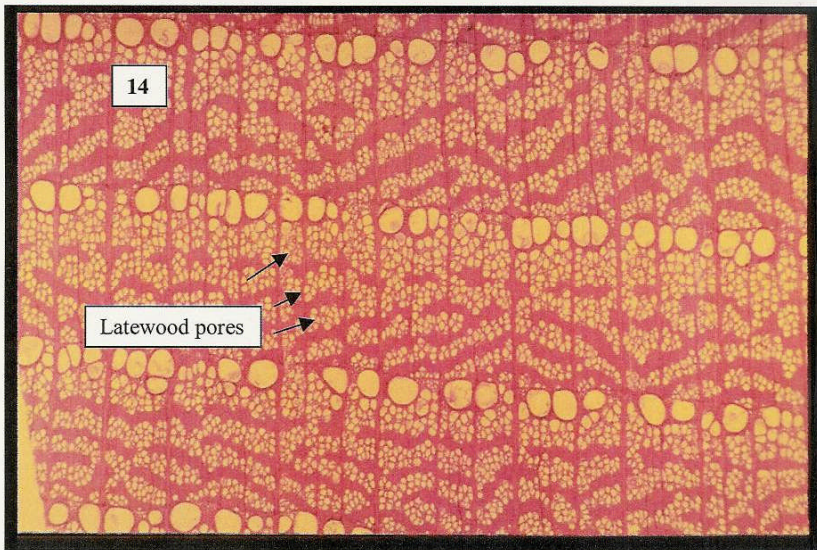
sycamore, *Platanus occidentalis* 1.s.



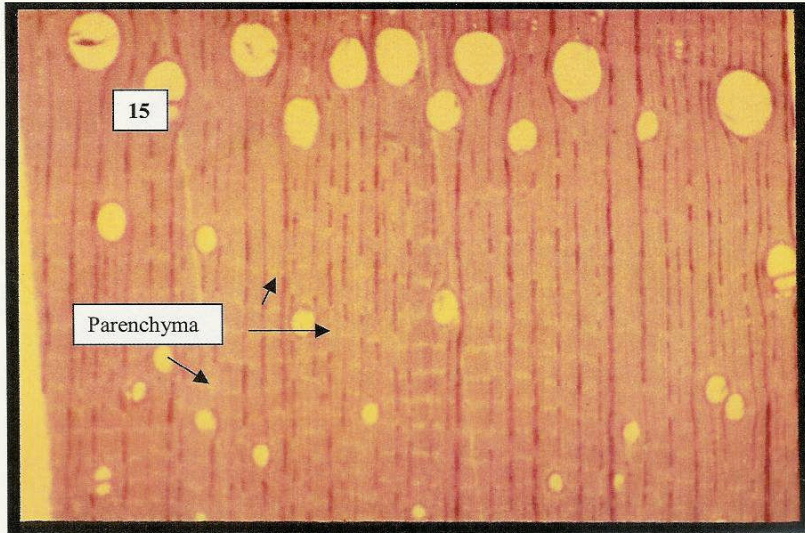
sugar maple, *Acer saccharum* 1.s.



red oak, *Quercus rubra* 1.s.



rock elm, *Ulmus thomasi* x.s.



true hickory, *Carya* sp. x.s.