

# Wood Identification Study Guide

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**For:** Win With Wood Training

**Pictures take by:** Terry Conners & Bobby Ammerman

**Special thanks:** to Terry Conners and the staff at the University of Kentucky's Wood Utilization Center for preparation work on the wood samples used in the training.

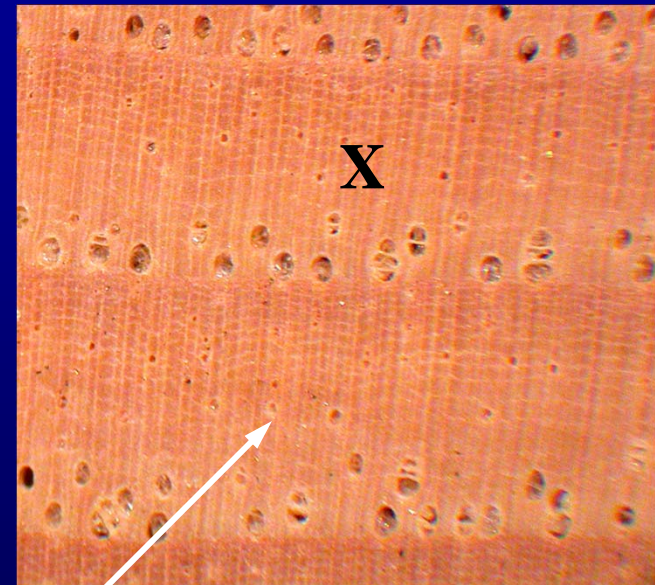
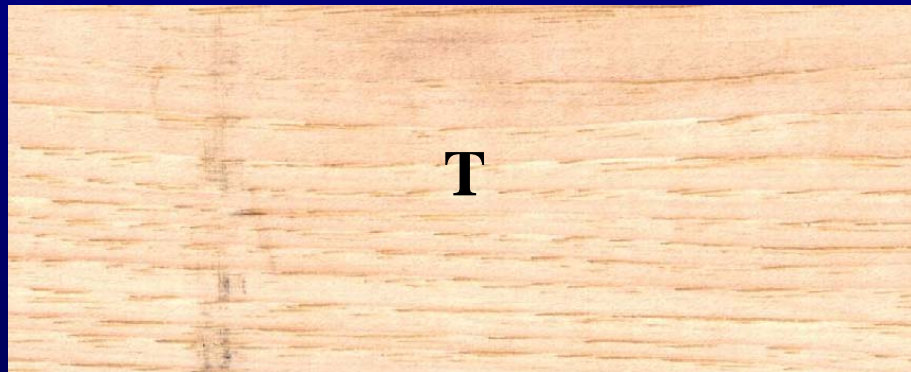
This PowerPoint program was created to be used as a study guide for students to learn wood identification on an individual basis. Please feel free to copy this program and distribute as needed.

Each slide represents one individual wood specie and includes five key details for identifying the specie; a picture of the cross-section (X) view, a picture of the radial (R) view, a picture of the tangential (T) view, key features regarding the specie, and finally the answer.

When the slide is first advanced only the picture of the cross-section view (X) is displayed. At this point the student can begin trying to determine the specie based on the cross-section (X) view. If the cross-section isn't enough information for identification, advance the slide and another identification detail will be displayed. Each time the slide is advanced a new detail will be displayed until finally reaching the answer.

# Hickory

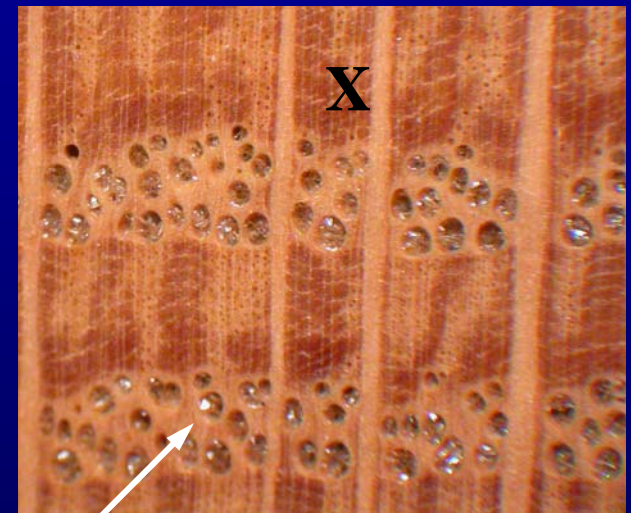
*Carya spp.*



**Key Features:** hardwood, semi-ring porous, parenchyma cells appear as little white squiggly lines perpendicular to the rays on the cross-section surface, fish in a net.

# White Oak

*Quercus alba, macrocarpa, prinus, stellata*

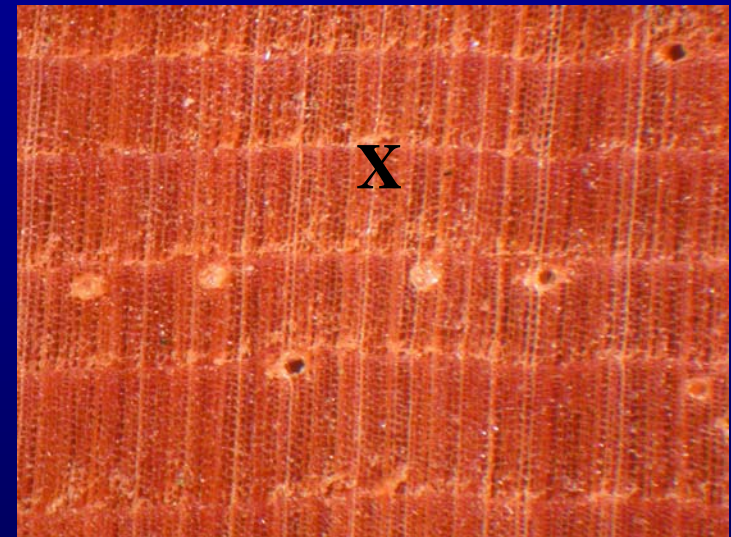


**Key Features:** hardwood, ring porous, majority of rays in the tangential surface greater than 3/4" in length, normally pores filled with tyloses, very large ray fleck in the radial plane can be present.



# Eastern White Pine

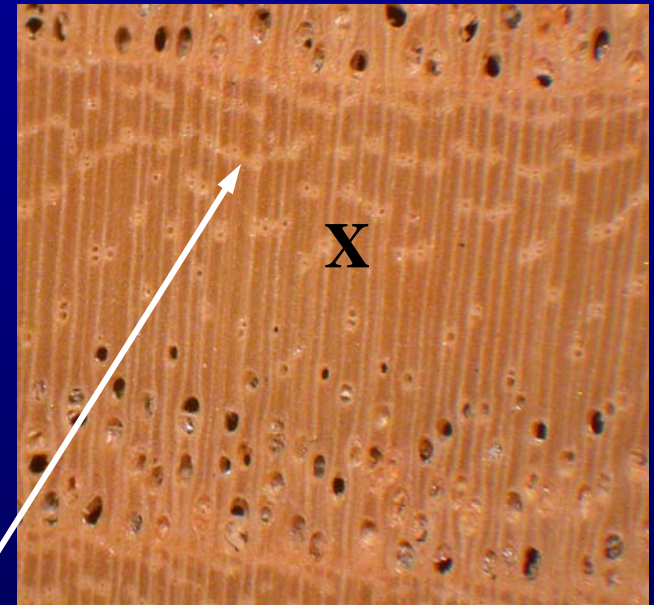
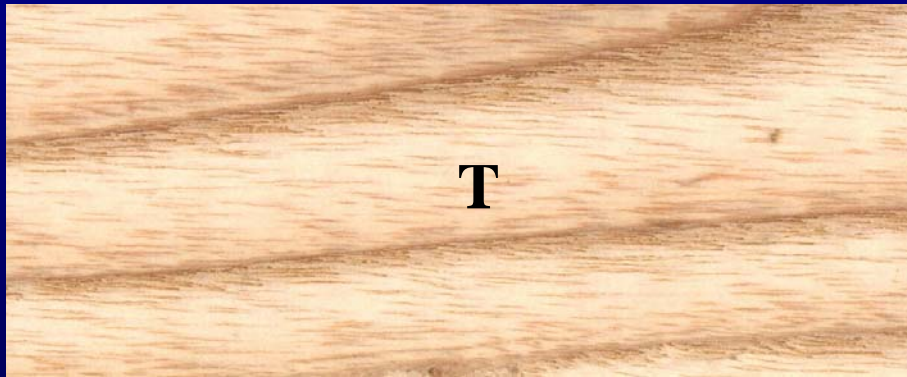
*Pinus strobus*



**Key Features:** softwood, has resin canals, earlywood to latewood transition is gradual, pine smell, much softer than Southern Yellow Pine fairly easy to scratch with thumbnail.

# Ash

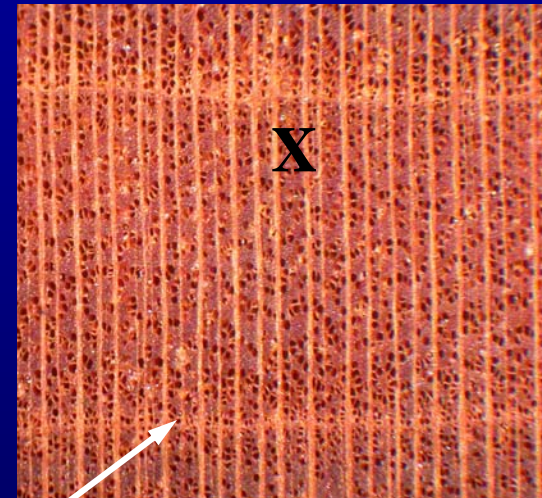
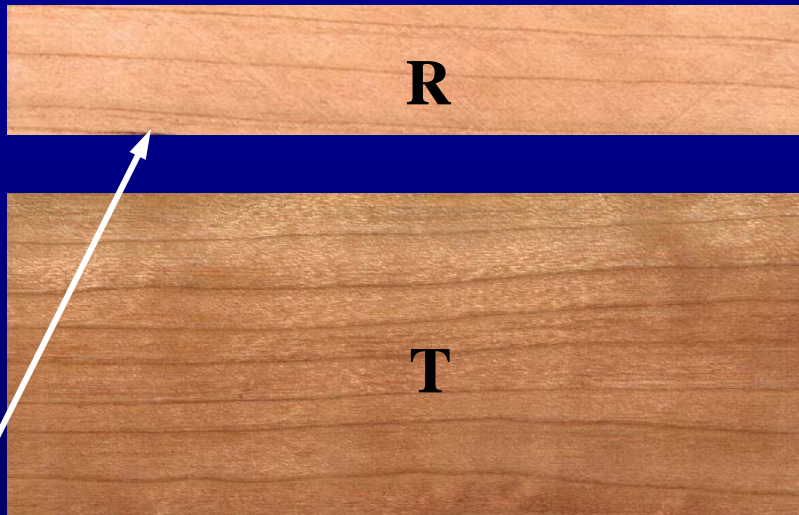
*Fraxinus spp.*



**Key Features:** hardwood, ring porous, looks like oak without visible rays in the tangential or radial surfaces, latewood pores connected in a chain.

# Black Cherry

*Prunus serotina*

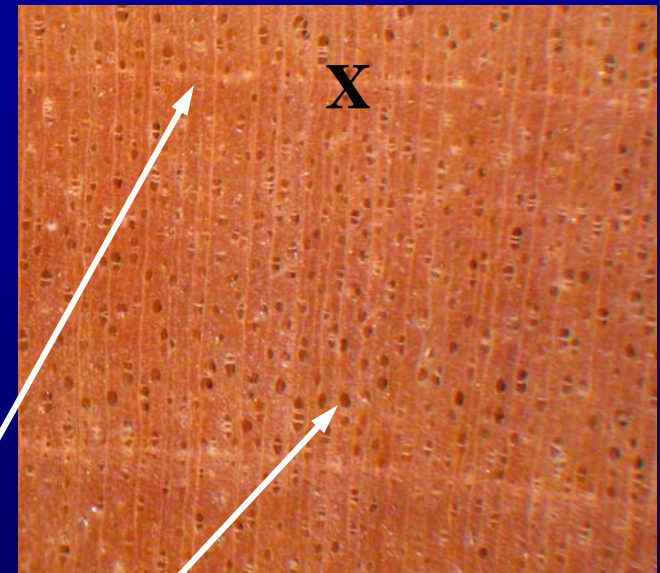
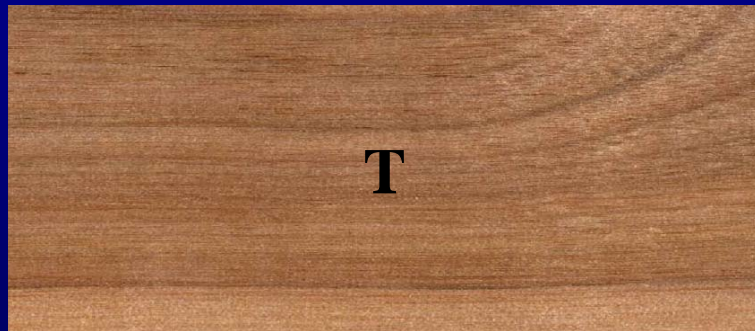


**Key Features:** hardwood, diffuse porous, sapwood very light color, first row of pores in the earlywood may be larger than rest, heartwood distinctive orange to maroon color, gum pockets may be present.



# Birch

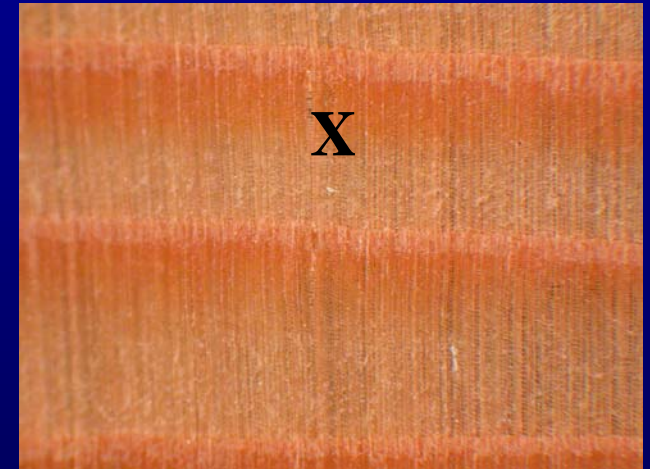
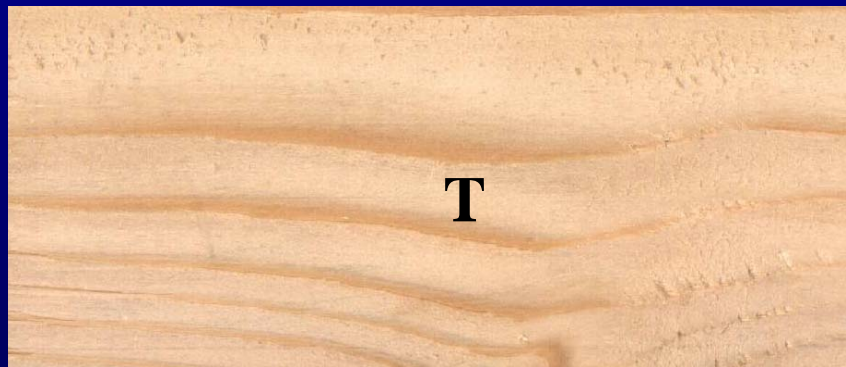
*Betula spp.*



**Key Features:** hardwood, diffuse porous, annual growth rings not very distinct, pores much larger in size than ray widths.

# Eastern Hemlock

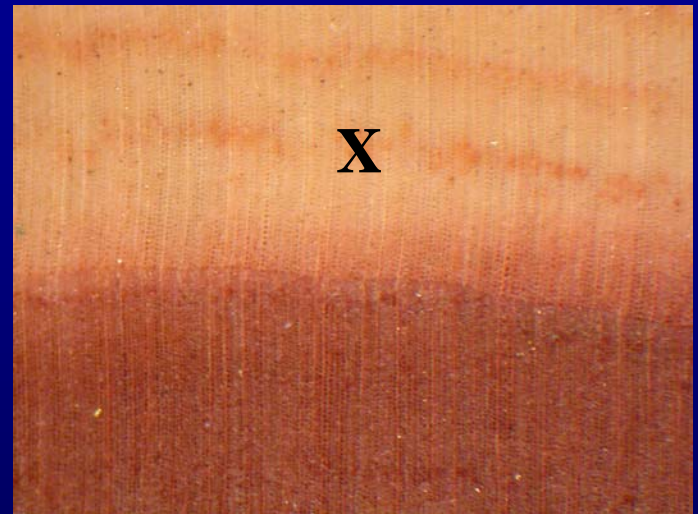
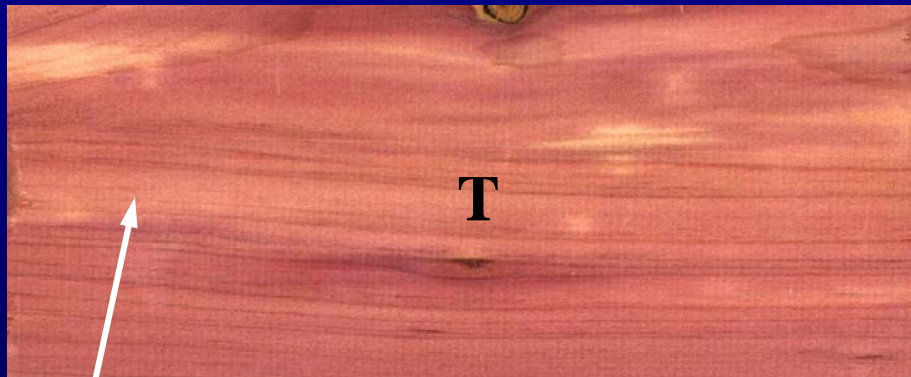
*Tsuga canadensis*



**Key Features:** softwood, no resin canals, earlywood to latewood transition is abrupt, no other real distinctive feature.

# Eastern Redcedar

*Juniperus virginiana*

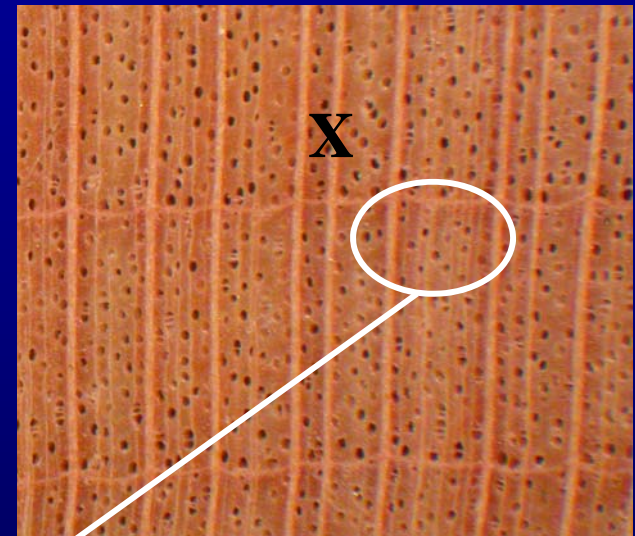
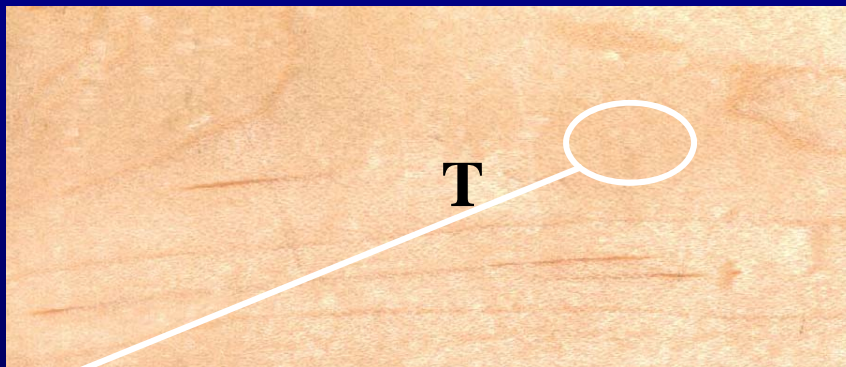


**Key Features:** softwood, no resin canals,  
heartwood deep purple color, distinctive  
cedar chest smell.



# Hard Maple

*Acer saccharum*

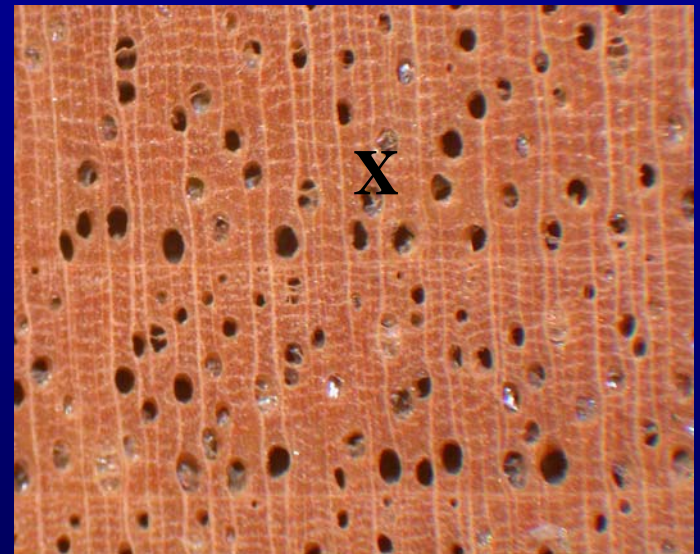


**Key Features:** hardwood, diffuse porous, large rays with several thin rays in between, very hard, difficult to scratch with thumbnail, rays appear on the tangential surface as little red lines and difficult to see



# Black Walnut

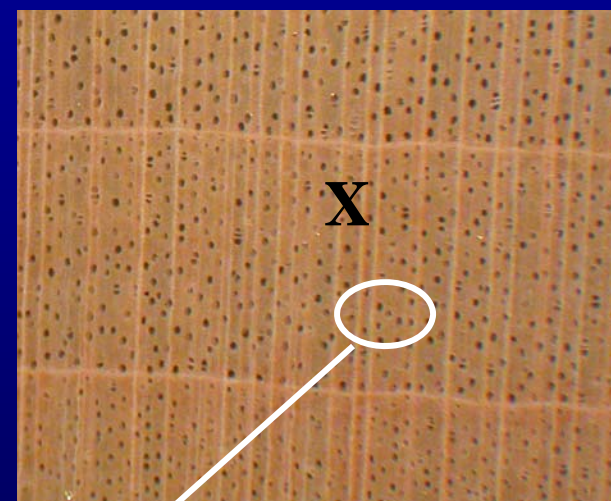
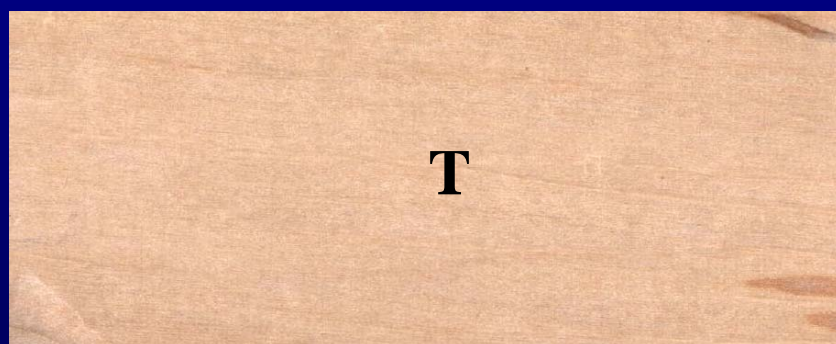
*Juglans nigra*



**Key Features:** hardwood, semi-ring porous,  
very distinctive chocolate brown color.

# Soft Maple

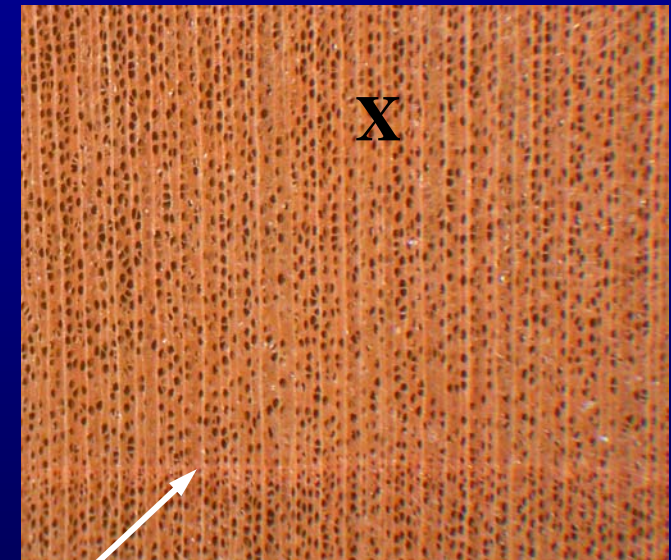
*Acer rubrum*



**Key Features:** hardwood, diffuse porous, the largest pores are the same diameter as the largest rays are wide, softer than Hard Maple, easier to scratch with thumbnail.

# Sweetgum

*Liquidambar styraciflua*

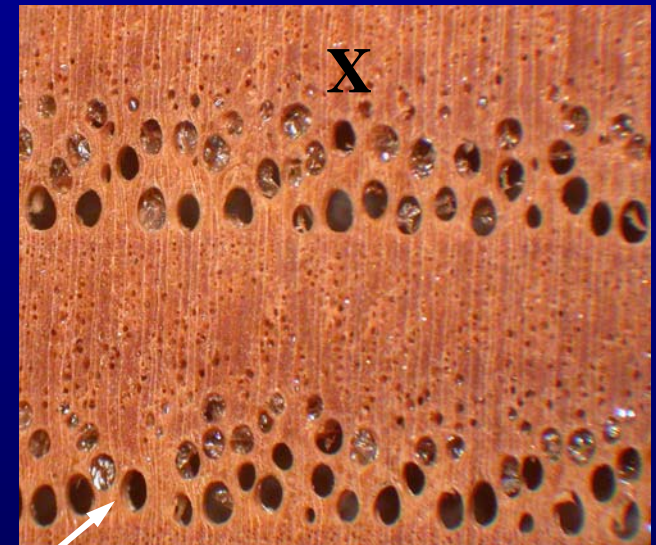


**Key Features:** hardwood, diffuse porous, often has interlocking grain, growth rings are not distinct, several thin tiny rays on the cross-section surface.



# American Chestnut

*Castanea dentata*

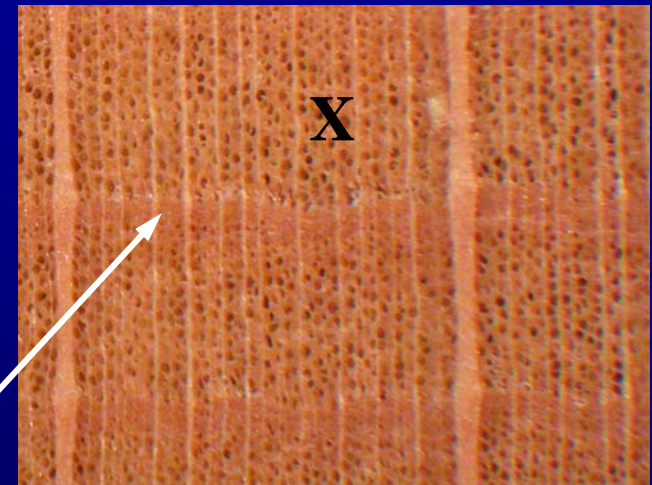
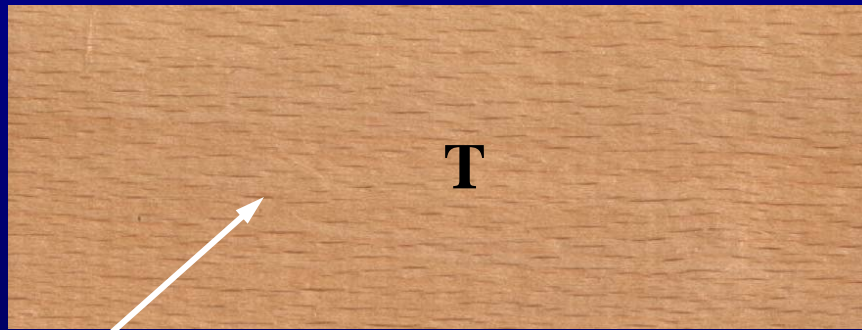


**Key Features:** hardwood, ring porous, usually will have wormholes, earlywood pores oval shaped.



# American Beech

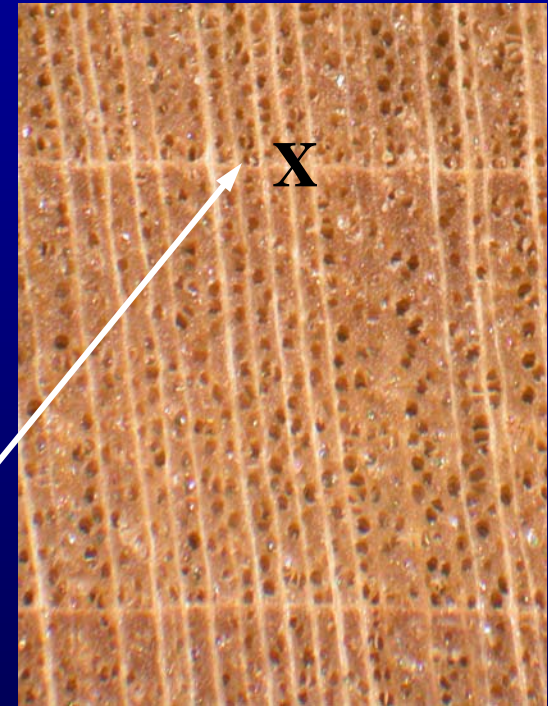
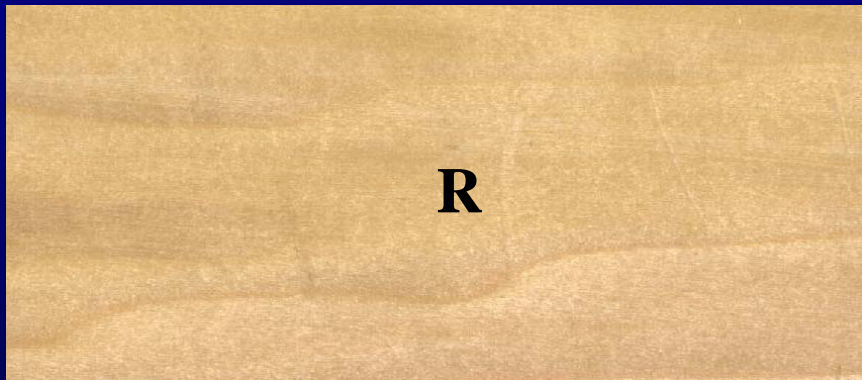
*Fagus grandifolia*



**Key Features:** hardwood, diffuse porous, a zone of dense material in the latewood of the annual growth ring, rays on the tangential surface appear as short wide dark lines uniformly scattered across the surface.

# Yellow Poplar

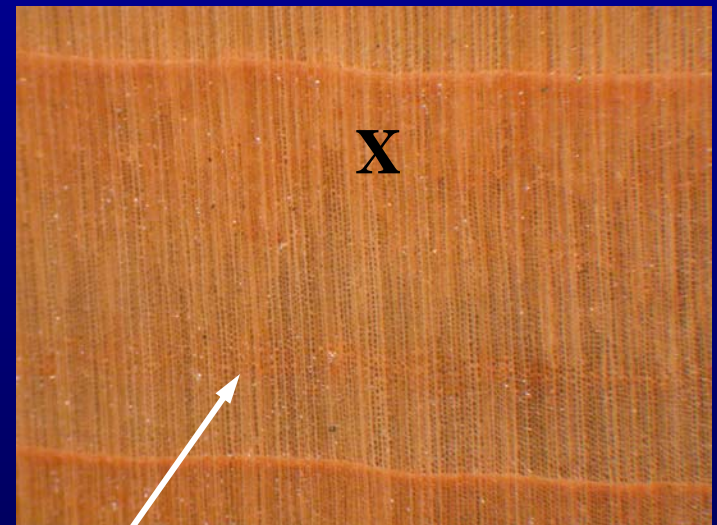
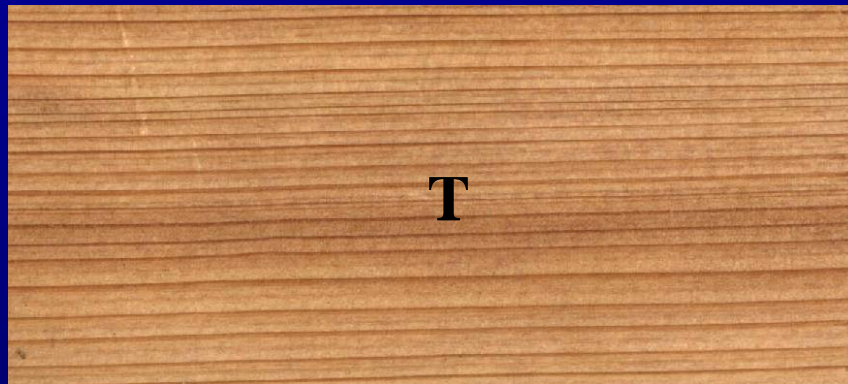
*Liriodendron tulipifera*



**Key Features:** hardwood, diffuse porous, marginal parenchyma at the annual growth ring appears white in the cross-section surface, heartwood is green and can have streaks of purple and black.

# Baldcypress

*Taxodium distichum*

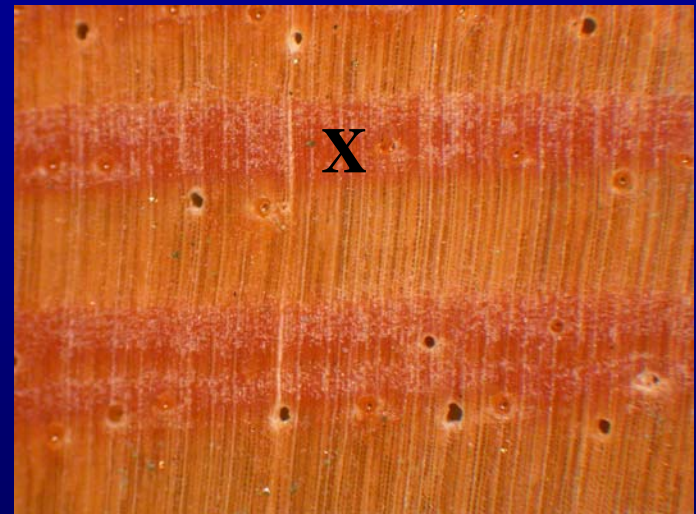


**Key Features:** softwood, no resin canals, false growth rings, waxy feel on tangential surface.



# Southern Yellow Pine

*Pinus spp.*

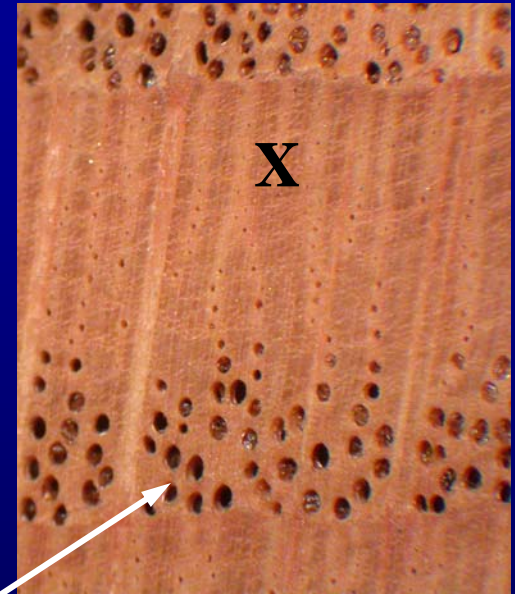
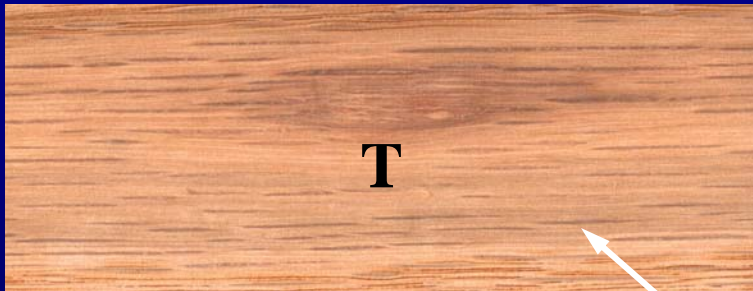


**Key Features:** softwood, has resin canals, earlywood to latewood transition is abrupt, pine smell, much harder than White Pine, fairly difficult to scratch with thumbnail, latewood growth very dense.



# Red Oak

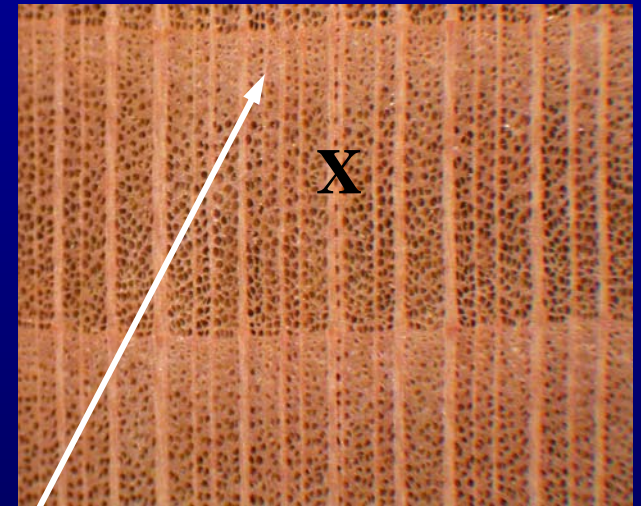
*Quercus rubra, coccinea, palustris, velutina*



**Key Features:** hardwood, ring porous,  
majority of rays in the tangential surface  
less than 3/4" in length, limited amount of  
tyloses in the pores

# Sycamore

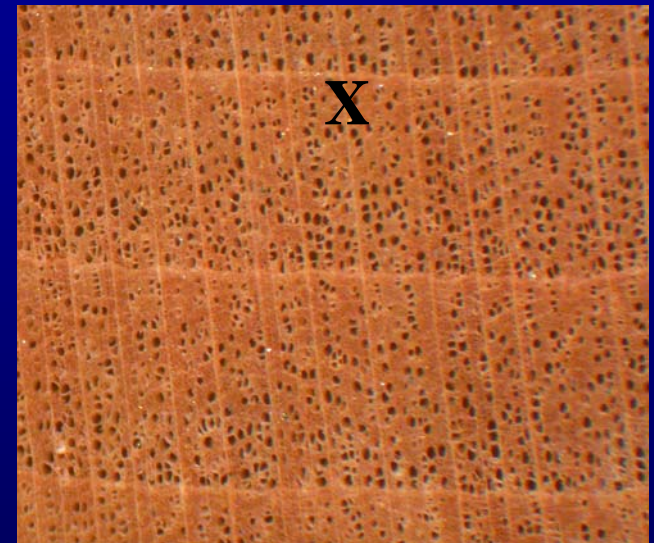
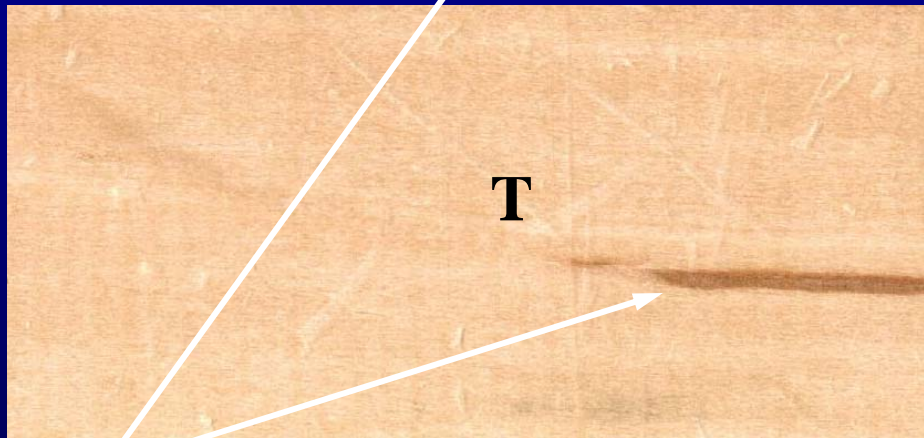
*Platanus occidentalis*



**Key Features:** hardwood, diffuse porous, rays very distinct on the tangential surface, usually has distinct ray fleck on the radial surface, latewood tissue lighter than the earlywood tissue.

# American Basswood

*Tilia americana*



**Key Features:** a very soft hardwood, diffuse porous, a smooth cut in the cross-section feels like velvet, brown streaks often present.