

# Hardwood Lumber and Veneer Series



## Sycamore

FNR-291-W

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**EXPERT**  
REVIEWED

Sycamore (*Platanus occidentalis* L.) or American plane tree, is fast growing and a giant of the eastern hardwood forest, but it is not commonly used by woodworkers even though it can have a unique figure. The tree is easily recognized by its smooth, thin white and green mottled bark in the upper portions of the tree. A thin scaly brown bark is found on the lower part of the trunk. The tree is common in rich soils along river banks and ranges throughout the eastern hardwood region with the exception of the upper Great Lakes region. The tree is intermediate to intolerant to shade and thus establishes itself in open areas.

The trees are often over a 100 feet in height and three to eight feet in diameter. The current record tree is just over 11½ feet in diameter at 4½ feet high.

### Wood Color and Texture

The sapwood is whitish to light yellow, sometimes pink; the heartwood is a dark to reddish brown, but it is not always clearly marked. The wood can be discolored by oxidation and fungal stain if not properly handled in the log and green lumber stage. The pores are indistinct and uniformly distributed. The growth rings are delineated by a narrow band of lighter tissue. The wood has an interlocked grain, thus it creates some processing problems.

The wood rays make this species unique compared to all others. The rays are comparatively wide, numerous, and conspicuous to the naked eye. However, the rays are not as large as in oak but narrower and more numerous than those in beech. On the quartered surface, the rays form a very interesting pattern as a result of the ray tissue and



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Sycamore tree and Jane Wolf Brown, editor

changing directions of the longitudinal cells due to the interlocked grain. This feature is seldom capitalized on by the current industry or woodworkers but deserves consideration (see page 3).

### Workability

The wood is rated as intermediate to good in its ability to be turned and bored. As a result of interlocked grain, the wood is poor in shaping and very poor in planing. Running cutter heads at high speed or abrasive planing could help alleviate chipped grain.

### Strength

At 12 percent moisture content, the wood weighs about 34 pounds per cubic foot, making it a relatively light weight hardwood. The mechanical properties, with the exception of shear, are likewise toward the lower end when compared to other hardwoods. Shear parallel to the grain is relatively high, due to the interlocked grain.

### Steam Bending

The wood is a poor choice for steam bending.

### Drying

Sycamore requires the use of a mild schedule for kiln drying because the interlocked grain will cause the wood to warp and twist easily. This problem can be controlled by placing drying sticks on 12 inch centers and heavily weighting the top of any pile being air or kiln dried.

### Shrinkage

Total volumetric shrinkage for sycamore is 14.1 percent making it intermediate with the other commercial hardwood species. Quarter sawn stock will resist warping, cupping, and shrinkage much better than flat sawn stock.

### Decay Resistance

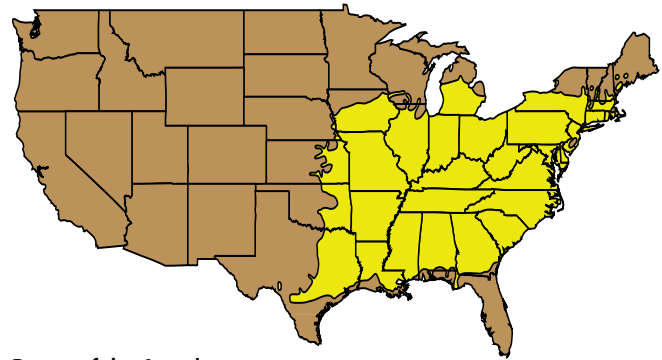
The wood has no resistance to decay.

### Commercial Use, Grading, and Value

The lumber is commonly used for drawer sides as it seems to lubricate itself and wears well. It is also used for concealed parts in furniture as well as exposed parts in some less expensive furniture. It can be used for interior millwork and paneling, particularly if quartersawn stock is available. Other uses include pallets, crates, boxes, and veneer for baskets. It is only priced for the southern market region.

The wood is graded standard in the NHLA rules, and it is a very inexpensive wood.

With the current interest in figured and decorative woods, quarter sawn sycamore should receive more consideration.



Range of the American sycamore



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Sycamore is a relative soft wood without distinctive growth rings. Board 1 is wide, perfectly clear, and is all sapwood, while Board 2 contains a light brown heartwood flanked by white sapwood. Sycamore typically has a wide sapwood that can be stained easily.

Board 3 shows a streaked somewhat diagonal appearance along its length. Sycamore has an interlocked grain where the longitudinal cells spiral slightly upward in one direction for a few years and then for some reason the spiral is reversed. As a result, the bands of cells, usually about an inch wide, run in and out of the board. Light is then reflected differently, and there is also a tendency during machining for the grain to chip or tear in one direction and not the other. The interlocked grain will result in excessive warping during drying unless extra care is taken. This piece is very close to being quarter sawn and a ray fleck is evident.

The insert shows the natural beauty of perfectly quartered sycamore. The rays that cause the “fleck” are not as big as in oak, but they are much more numerous. The rays are much more prominent when they are found in the heartwood or they have turned brown. Quartered sycamore is a very beautiful material but very little is produced.

Board 4 shows characteristic heartwood and sapwood as well as a small brown knot.

Sycamore will occasionally show damage from the Columbian Timber Beetle (see soft maple) as seen in Board 5. The beetle bores into flood prone timber. It carries a fungus with it which causes the streaking or flagging. The fungus is used as a food source for the beetle.

Quartered sycamore heartwood can be seen in the lower left corner in the overlaid photo.

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