



Catalpa, often planted as a yard ornamental, boasts large clusters of white flowers in June and develops long cigar-like seedpods that make it instantly recognizable in winter. The

lumber, below, is similar in appearance to chestnut or brown ash, but is more stable and easier to work. Catalpa's softness, however, makes it prone to dents and wear.



Catalpa

Not just a shade tree, but timber

by Jon Arno

Ask any 10 woodworkers you know, even those who pride themselves on their experience with rare woods, what they think about catalpa. Probably all 10 will be able to describe the tree with its unusual, cigar-shape seedpods, beautiful white flowers and heart-shape leaves. You might even get a story or two about how they once tried to smoke a seedpod or how much fun it was to climb the catalpa tree in the backyard when they were kids.

When you get down to business though, most of them will probably confess they are unaware catalpa is used for lumber. Fence posts maybe, but lumber no.

If any of them have used catalpa wood, there is a good chance they liked it so much they have been reluctant to spread the word. Catalpa, given the supply situation, is a secret they would

just as soon see kept. Why? Because catalpa is a very fine cabinet-wood, and at least at the present, it isn't that expensive. It is, however, hard to find.

Depending on your luck, you might be able to get kiln-dried, S2S catalpa in a common grade for as little as \$1 per bd. ft. at a local lumber supplier. A few of the well-stocked mail-order houses carry it, listed for as much as \$4.75 per bd. ft. But the more typical place for a woodworker to find some catalpa is at the local sawmill, where it comes in a log or two at a time and is quickly bought by the first few woodworkers who see it. The only other way to come by the wood is to cut down the tree and air-dry it yourself. With very little care, it will end up as good as any you could buy.

There are two species of catalpa native to the United States. Either tree might be called catawba locally or be known as cigar-

tree or Indian-bean, because of the shape of the seedpods. Southern catalpa, *Catalpa bignonioides*, is found in Gulf Coast states from the Florida panhandle west to Louisiana. Used locally for fence posts and occasionally for lumber, this small tree is not commonly found outside its native range.

The other catalpa, *Catalpa speciosa*, or northern catalpa, is a much larger tree capable of heights in excess of 100 ft. and diameters well over 5 ft., although mature specimens that are 70 ft. to 80 ft. tall and 3 ft. to 4 ft. in diameter are more typical. For more than a century now, northern catalpa has been a widely planted ornamental, especially in the Midwest. It is a fast grower and very hardy, provided it gets adequate moisture. It is also very cold tolerant. I have seen catalpa growing as far north as Minneapolis, where winter temperatures of 30°-below are more frequent than most of the residents care to think about.

Well, if catalpa is so hardy and so often planted, why isn't its wood more plentiful? First, plantings tend to be a tree here and a tree there, or at best, in a windrow or woodlot of a few dozen trees. Trees grown in the open like this branch out quickly instead of reaching up, and as a result, they produce little quality timber. Also, no sawmill gets a lot of the logs at any one time.

Catalpa is also scarce because the only region of the country where, even charitably speaking, the tree could be said to form pure stands is in its native range. In the case of northern catalpa, the native range is one of the smallest of any North American hardwood. Until man began to transplant it, northern catalpa was found only along a narrow band of bottomland near the confluence of the Ohio and Mississippi rivers from around Louisville, Ky., to Memphis, Tenn., with a few small pockets in the surrounding states. The fact that this narrow range was on the path of westward migration has helped the tree spread, but it is still not plentiful anywhere.

What makes all of this important to woodworkers is that catalpa is a -wonderful cabinetwood, both visually and in the ease with which it can be worked. Its ring-porous structure makes for a very bold figure on the flatsawn surface, somewhat resembling oak and ash (see *FWW* #51). Because catalpa does not have prominent rays, its quartersawn wood is not as loud and unpredictable to stain as the oaks, and it is much, much softer.

Perhaps the one native hardwood that most resembles catalpa is chestnut. Unfortunately, few woodworkers today have the chance to work with chestnut either. Catalpa, with an average specific gravity (SG) of only 0.38 (oven-dry weight/green volume), is even softer than chestnut, which averages 0.40SG. Virtually all of the oaks are in the tool-dulling range above 0.55SG.

Although catalpa is darker in color and not quite as stringy as chestnut, it is on the splintery side and may fray a little when crosscut. This is an insignificant handicap when you consider how soft and easy it is to work and what beautiful results its open-texture, wavy figure provides. And like chestnut, catalpa has excellent weathering properties. All of these characteristics make it an ideal choice for many cabinetmaking and carving projects, especially outdoor sculpture.

As similar as chestnut and catalpa are, the two are not closely related. Chestnut, like the oaks, is a member of the beech family, *Fagaceae*. Catalpa belongs to the trumpet creeper or bignonia family, *Bignoniaceae*, and is one of that family's few large representatives in North America. Most of catalpa's close relatives inhabit the tropics, and many of them are vines rather than trees. However, several tropical members of the family produce valuable timber, such as primavera, Surinam and calabash.

The beautiful white flower of catalpa is one clue that its genetics diverge from those of chestnut. Another clue more meaningful

to the woodworker is catalpa's strong scent, which unlike the tannin smell of chestnut, is impossible to put into words. Whether it is pleasant or not is a question I haven't resolved for myself yet, but once you've cut into a piece of catalpa, the musty-spicy odor won't soon be forgotten.

Catalpa is not perfect. Its extreme softness and open grain make it a poor choice for any piece of furniture that will get heavy wear. In this respect, its working qualities remind me of butternut, and like butternut, it is a pleasure to shape and fit. A woodcarver will quickly note that catalpa is more uneven-grained than butternut, which makes controlling cuts a little more difficult. But, the surface left behind is silky smooth to the touch. Catalpa sands better than butternut, too, but be sure to use a block or the soft, porous wood may be abraded away, leaving the harder wood in each annual ring raised. The finish is magnificent when first rubbed out. Once you have experienced the pleasure of catalpa, there is a tendency to use it for everything, but it is so easily dented it really should be reserved for display pieces that are often seen but seldom banged around.

While not germane to woodworking, catalpa packs few BTUs and makes very poor firewood, which I mention mostly to discourage the practice of burning it. Because catalpa is an ornamental species that sooner or later outgrows its available space, mature trees are often cut down by homeowners who are indifferent to the wood's subtler properties. More than once I have rescued a carving blank or two from a neighbor's woodpile.

If a catalpa tree in your neighborhood has outgrown its welcome, it could prove to be more than just "neighborly" to help take it down in exchange for some of the choicer pieces.

You can hack out turning blanks and carving blocks with a chainsaw, and most of them will dry alright. As with any other wood, it is a good idea to coat the endgrain with glue or paraffin as soon as possible. As you do, you'll see another feature that makes catalpa a prime wood: The tree is almost all dark heartwood, with the lighter sapwood seldom more than two annual rings wide. If you cut the wood into boards, make sure the pile is well stickered, weighted down and protected from soaking rain. Because of catalpa's excellent weathering properties, degrade caused by staining is not much of a problem. Fresh-cut catalpa can be very wet, however, and may take longer than you expect to dry. Weigh a sample periodically. When the weight stabilizes outdoors, the wood will be down to about 15% moisture content.

Shrinkage in drying is low and relatively uniform. Catalpa, in fact, is one of the most stable hardwoods in North America. With an average radial shrinkage of 2.5% and a tangential shrinkage of 4.9%, drying tension and warping is minimal. In contrast, elm has a radial shrinkage of 4.2% and a tangential shrinkage of 7.2%, and beech is even worse. By comparison, air-drying catalpa is a breeze. It is sometimes even possible to dry whole log sections in one piece. The wood is weak enough that drying stresses can distribute themselves evenly throughout the wood instead of forming prominent checks.

After air-drying, bring the wood indoors for a while in the winter to reduce its moisture content further. In a month or so, you will be able to share one of woodworking's best-kept secrets firsthand. And by the way, I wouldn't be telling you all this if I didn't have several hundred board feet in inventory and a line on a few logs still on the stump. When I see what looks like an unwanted shade tree in somebody's yard, I can be a very neighborly sort of guy. □

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