

Urban Sawmilling

BY DAVE BOYT

ONCE UPON A TIME, woodworkers began a project by selecting a tree out in the woods. Their skill in felling the tree, milling the logs, and drying the lumber was as much a part of their craft as the actual building of furniture. With only hand tools and, perhaps, an apprentice to assist them, master carpenters could craft anything from wooden spoons to wagon wheels to furniture, all now regarded as works of art. With the Industrial Revolution, trees were cut and milled into boards before the craftsman laid eyes on them. While this allowed the woodworker to concentrate on his craft, it also rendered him one step removed from the resource and he became increasingly dependent on standard lumber sizes cut by the sawyer.

Add to this situation a diminishing supply of quality timber and a clamoring by the public for more mass-produced goods at lower cost, and you will have a recipe for mass-produced, inexpensive furniture. The resulting product will have lost most, if not all, of the craftsman's touch and even custom-made furniture will be dictated by what the builder is able to buy.

AN URBAN RESOURCE

Now furniture making has gone full-circle and a growing number of woodworkers have begun to take matters into their own hands by utilizing a largely untapped and often discarded resource. Imagine a source of lumber that allows you to work beyond the standard sizes and shapes that your local lumber dealer happens to have in stock. Picture a stockpile of perfectly book-matched boards. Fantasize about building a project where all the solid wood is so perfectly matched for grain and color that it appears to have come from the same log—because it did. And while you're at it, dream about this wood being delivered to you at a fraction of what you're paying for those standard-size boards.

This timber comes from an unlikely source. Each year in cities and towns across the country, millions of board feet of timber are cut by tree services, utilities, highway departments, and developers. Sadly, most of these trees end up as firewood, or are buried in landfills. Ash, walnut, pecan, oak, spruce, pine, and cherry, as well as less available species like sassafras and honey locust, all end up as compost and firewood. But with a few phone calls and a little ingenuity, they could end up in your shop.

Why don't the logs go to sawmills? There are several

reasons. First of all, this is a limited source. Tree services simply don't provide the volume sawmills need. It just isn't worth it for them to haul one or two logs. Another reason is that many sawmills refuse to purchase logs that have been cut near houses. Ceramic insulators, wrenches, horseshoes, and nails embedded in the wood tend to make inserted teeth part ways from the saw like flying shrapnel. Besides the risk of bodily harm, striking foreign objects in logs can shut the mill down while repairs are being made. It just isn't worth the risk.

But whether it is worth it to you is another matter. If you are willing to risk a chain saw chain or band saw blade, and can spend some time working with the logs, you will be rewarded with lumber of quality and size that is simply unavailable from other sources at any price. Along the way, you will need to develop an understanding of wood properties, drying techniques, surfacing, and jointing before you actually begin building your project. In short, you will restore your connection to the resource.

A Computer Geek Turned Furniture Maker

A former computer programmer, John Ming has harbored a love for woodworking since taking a shop class in the sixth grade. In a recent phone interview, he described himself as "a geek turned professional furniture and cabinet maker." He started with woodworking as a creative outlet. "I'd spend all day looking at a computer screen working on code. By the end of the day it looked the same as when I started. But with woodworking, I could see the project develop."

For several years, Ming kept his eye on the small



The recycling center (left) can be a great source of unusual specialty wood.

Above: a found redbud log, which would make interesting turning stock.



It takes ingenuity and much effort to scout and wrangle large log pieces.



A 22-inch oak burl, too big for the chipper, will be buried in the landfill unless claimed.



Using custom-cut wood has allowed the author to create unusual and whimsical pieces of furniture.

sawmills that were entering the marketplace. Finally, he made the decision to become a sawyer as well as a woodworker. He purchased a Logosol M7 mill, powered by a chain saw. “I had seen the Logosol mill at woodworking shows for several years,” he told me. “With its low initial cost, versatility, and ability to handle large logs, it seemed like a natural choice.”

Even though he has a chain saw, Ming is no logger. “There are so many trees already on the ground, and there are tree services who will deliver to me, so why cut trees down?” After purchasing his sawmill, John contacted area tree services. “Eight out of 10 just laughed when I told them what I was willing to pay for the logs,” John recalled. “Now, I work with two tree services, and they deliver all I can use. In fact, sometimes I have to call to tell them not to deliver for a month until I get caught up with the mill.” John mainly buys cherry, walnut, and ambrosia maple, paying for the logs by the foot. “They just drive up and roll the logs off the truck into my yard,” John explained.

This arrangement suits Ming. For one thing, the landowner has already paid the tree service to remove the tree, so the “logger” has already made his money. Second, it spares Ming the expense of maintaining a truck and other logging equipment. Third, it avoids liability issues. Finally, it allows him to focus on working with wood. If someone calls him about removing a tree that would make good lumber, he simply refers them to one of the tree services with which he does business, and lets them cut and deliver the log.

Ming also does a limited amount of sawing for other woodworkers. One niche he has found is milling what he calls “emotionally significant” trees. These are trees that have special meaning to the owner, but have died, been blown down, or cleared for housing developments or roads. The owner wants to buy or build furniture from that particular tree. Sawing will likely remain a small part of his business, however. On average, he only spends one or two days per month running the mill. With a 36-inch bar and a ripping chain, he can cut logs up to 6 feet in diameter. The largest he has tackled so far was a 42-inch-diameter ambrosia maple log.

When a log arrives, Ming assigns it a number, and keeps together all the boards from the same log. “I always try to cut boards in pairs so that I’ll have the chance to book-match,” he told me. By keeping together boards from a given log, the color and grain are consistent throughout the piece. “What makes a startling high-dollar piece of furniture is the quality of the raw material—often more than the skill of the woodworker,” he claims. “When I cut a gnarled, burlled log that most mills would reject, I get wild grain patterns. It is what makes a distinctive piece of furniture. It is what people remember after they have seen it.”

With the boards labeled and bundled together, they go

straight into a dehumidification kiln. “One thing that caught me by surprise was that I did not properly study and learn the techniques for drying lumber,” Ming recalls. “I thought it was a matter of going from the mill to the shop. The gap in the middle was drying.” His advice to anyone considering milling lumber for their own woodworking projects is to read up on different types of kilns and drying techniques. “Had I known how much time and effort drying takes, I would have learned about it and put off buying the mill for a year, instead of milling first, then figuring out how to dry it,” he concluded.

Although most of his work is sold in the Atlanta, Georgia, area, some of his pieces sell nationwide. He relies almost entirely on word of mouth for advertising. Naturally, being a former “computer geek,” he has a website showing some of his work. If you’ve got an Internet connection, check out www.heirloomwoodcrafting.com.

An Airline Captain’s Milling Business

Another part of the “urban sawyer” group is typified by Bob Pugh of Denton, Texas. Bob is a retired airline captain. A few years ago, he built a house, partly with lumber cut on his cousin’s portable bandmill. Intrigued by the operation, Pugh purchased a bandmill of his own. “I just started playing around, one thing led to another, and it became a business,” he recalls. Pugh stresses that he never cuts down a tree. His logs come from a number of sources, including developers, contractors, and the highway department, all within a 200-mile radius.

One unusual source of raw material is wood utility poles that are replaced by the utility companies. Pugh uses them for heavy-equipment trailer flooring. “A 40-foot pole weighs about 1,400 pounds,” says Pugh. “We cut them into two 16-foot 6-inch poles and one 7-foot pole before milling. The quality of the wood is some of the best there is. We cut a hundred poles a week when we can get them.” Because these poles have been treated with creosote, Pugh only cuts when the wind is right—that is, when it doesn’t blow the sawdust in the sawyer’s face. “We have to account to the EPA for all treated material we cut, right down to the sawdust,” Pugh explained. The sawdust, by the way, is swept up and disposed of in accordance with EPA regulations.

Milling flooring for heavy-equipment trailers has had an additional benefit for Pugh. “The people who buy the trailer flooring operate heavy equipment,” he explained. These are the people who are clearing land for highways and housing developments, which, in turn, becomes my source for lumber.” Because of his dealings with these companies, Pugh has a continuous supply of logs and utility poles.

Another facet of Pugh’s business is custom milling. “The customer brings in logs and takes home boards,” he explained. He runs a Wood-Mizer 42-hp turbo-diesel. His business started out as a mobile operation, but now

operates as a stationary mill on a cement slab. “I’d probably go with an electric mill, if I were to start over,” he told me. In addition to the flooring, he cuts a variety of woods for himself and area woodworkers. Species include Osage orange, mesquite, Texas ebony, cypress, cedar, white oak, red oak, walnut, and pecan. He recently began working with cypress and “sinker pine” from Alabama. Some of these logs have been under water for over a hundred years, and yield exceptional lumber.

Pugh charges by the hour for his custom cutting, which begins with a once-over with a Rens metal detector. “It can detect a nail 15 inches deep,” he claims. Besides the usual nails, he has come across ceramic insulators and even live ammunition in the logs. The customer pays for any blades that are damaged beyond repair from hitting foreign material.

Like John Ming, Pugh stresses the importance of drying the wood properly. His operation uses a Wood-Mizer vacuum kiln. He places green lumber in a temperature- and humidity-controlled room for 30 days before putting it in the vacuum kiln. “The vacuum kiln takes 1-inch-thick cypress from 40% moisture content to kiln dry in five days,” he explained. After that, the lumber remains in the humidity-controlled room for another five days. He says that his lumber has much less defect than that from steam kilns. “I love it [the vacuum kiln],” he told me. “It’s the finest thing going.” He also does custom drying for area woodworkers.

The final step in his service is planing and moulding. Pugh uses a Logosol moulder/planer. “This machine has probably tripled our business,” he told me. With its quick setup times, he is able to plane and shape boards for customers when they bring in their lumber, and send them home with a finished product. For example, he planes and moulds longleaf pine flooring, V-groove paneling, and other similar products for area contractors.

When the weather is unsuitable for milling, Pugh builds furniture and cabinets. Using specialty woods, such as mesquite, he fills in cracks in the wood with a turquoise/epoxy compound to give it an even more striking appearance. Pugh maintains a showroom displaying projects he has built, as well as those built by some of his customers. “It is great, because it gives the women something to look at while their husbands are looking at lumber in the ‘board room,’” Pugh laughed. It also gives his woodworking customers an additional outlet for their products. Different paneling schemes on the showroom walls give customers ideas that they might use in their own homes. Says Pugh, “Everything supports everything else.”

Pugh tries to keep his business simple. In addition to Pugh himself, it employs his wife, son, and one full-time employee. His advertising strategy is equally simple, relying almost entirely on word of mouth. His business is diverse, as is his source of raw material. But as busy as his



A huge 33-inch pecan log starts up a ramp. Salvaging the piece helped the landowner, who wanted to get rid of it, and the author, who wanted it.

business keeps him, he still manages some time to fly once in a while.

A Revolution in Woodworking

On the forefront of the urban sawmill movement is Rob Bjorklund, of Santa Barbara, California. As a dealer and salesman for Logosol, he is wildly enthusiastic about woodworkers milling their own lumber from recycled trees. Rob enjoys the challenge of finding trees to mill, as well as the actual milling. “It’s a sport—like going on an elephant hunt,” he told me. “There is incredible wood going to waste,” he continued. To illustrate his point, Bjorklund described a huge fir tree that was to be cut down to make room for a housing development. The developer hired him to mill the log so that it could be turned into outdoor furniture that would be set up for public use where the tree had once been.

Bjorklund sees urban milling as a revolution in woodworking. “Ten years from now, woodworking will not be the same. Woodworkers will be able to mill their own wood. It will give them the power to design their furniture around the resource.” Bjorklund is anything but a quiet revolutionary. He travels with The Woodworking Show, maintaining a grueling schedule of sawing demonstrations and educational seminars. His enthusiasm is contagious, and sales are brisk.

Charlie Griffin, of Logosol’s main office in Madison, Mississippi, shares Bjorklund’s enthusiasm—and also his frustration at seeing good logs hauled to the landfill. “People hate to see wood go to waste when they know they could use it if they had a way to mill it,” he told me. In fact, he says a large number of the Logosol chain saw mills are sold to hobbyists. “One customer who lived in a condo in Los Angeles bought a sawmill,” says Griffin. “He had no place to use it, but after looking at our product for several years, he was compelled to buy this mill.”

According to Griffin, many of the new urban sawyers are baby boomers, retired, but not adjusting well to the time on their hands, and anxious to get back into something where they can see some accomplishment at the end of the day, and to do something useful with their time. “Many times during this past year at shows, the wife of a Logosol sawmill owner would stop by and say to me with a whisper and a wink, ‘It keeps him out of trouble.’”

While on the subject of “keeping out of trouble,” Griffin strongly recommends against cutting down trees in an urban area. It just isn’t worth the risk—especially when there are so many logs available from tree services, contractors, and firewood processors. “Many firewood processors are glad to sell logs for firewood prices,” he

told me. “It saves them from having to cut them to length and split them.” Even if a log has been cut to firewood length, it may still be of use to the woodworker for clocks, birdhouses, toys, and other small projects. Unlike most sawmills, the chain saw mill is well suited to cutting firewood-length “logs.”

Another issue for urban sawyers is zoning. More than one sawyer has had a conversation with local police as a result of chain saw noise in a residential area. Griffin’s recommendation is to move logs to an industrial area for milling. The sawyer can even pull into a factory parking lot and mill the logs right on the trailer (with permission from the business). As an alternative, Logosol offers an electric powerhead that can be used indoors with very low noise levels.

“Our experience is that people get a mill for their own shop, but wind up cutting some [lumber] to sell,” Griffin told me. “The Logosol isn’t a production mill, but people see the material and start selling some lumber. For the guy who wants to test the water, it’s a great thing.”

My Urban Logging Experience

Generally, I work in the woods. But when a windstorm came through on July 4, 2004, I was appalled by the number of walnut trees that had blown down. The size and quality of these trees were superior to anything I’d seen in the woods, and I was sure that many of the owners would be glad to let me have the logs in exchange for cleaning up. So I threw a chain saw in the back of my truck and knocked on a few doors. I quickly concluded that there are two types of people in this domain: those who have heard about someone who knows someone who sold a walnut tree for \$3,000—so theirs must be worth at least that (even if it is barely big enough to make a fence post); and those who have already cut up their perfectly straight 28-inch-in-diameter, 18-foot-long walnut log for firewood before I had a chance to talk to them.

Unfortunately, I did manage to line up a few small logs, which was the beginning of a long sequence of problems. First of all, the trunk of nearly every one was split lengthwise from the stress of being blown over. Next, I faced the problem of moving the logs from behind houses and loading them onto a trailer. I figured I’d pull them around with my 4-wheel-drive pickup, then use the truck to pull the logs up a ramp and onto the trailer with a rope—a technique I had used in the woods when my loader was down.

But homeowners are a fussy lot. I spent more time apologizing and filling in places where the logs gouged the lawn than actually cutting or moving the logs. One lady is still trying to make me pay for a professional lawn

“Once back home, I put the first log on the mill and cut into it, exposing the beautiful chocolate-brown wood—and a half-dozen nails!”

service to fix her yard. Then there was that birdbath. I think it had suicidal tendencies, because it came out of nowhere and threw itself behind the truck as I was backing up to

hook onto a log—twice! Another homeowner insisted that “cleaning up” included cutting anything over 1 inch in diameter into firewood lengths.

Bringing the logs home was no small challenge. I had to carefully plan my route to minimize the possibility of any encounter with law enforcement officials. This put me on winding gravel roads with hills that would have put fear in the heart of Evil Knievel. The panic-stricken expressions on the faces of people in cars I passed didn’t help much either. Once back home, I put the first log on the mill and cut into it, exposing the beautiful chocolate-brown wood—and a half-dozen nails.

The bottom line is this: Without the proper equipment to remove the logs from property, or to haul them over public roads, I spent far more time than the lumber was worth. I offended landowners who thought I was trying to “steal” their valuable walnut log, risked getting a traffic ticket for being overweight, and wound up with mostly split logs that yielded enough nails to build a house—but very little lumber. The experience reminded me of the quote “Good judgment comes from experience—and experience comes from poor judgment.”

I strongly urge readers to take their cue from the experienced urban sawyers. If you don’t have the proper equipment, have a tree service bring the logs to you. Spend your time and effort milling lumber and making furniture, and let someone else (who is licensed, bonded, and insured) deal with the homeowners. I called a few local services, and was pleased with the responses. Understandably, most wanted to know what I would pay for the logs. One had set aside a few logs and was interested in hiring me to mill them. All expressed regret that good lumber was going to the landfill or being cut for firewood, and were interested in an arrangement that would make use of this resource. I think we’ll be able to work something out.

A Great Resource

Go to <http://www.na.fs.fed.us/spfo/> and download “Utilizing Municipal Trees: Ideas from across the Country” by Stephen Bratkovich, who is also the author of “New Life for Old Utility Poles,” in the Home & Hearth column that appeared in the January/February 2003 issue of *Sawmill & Woodlot*. Another good source to reference is Sam Sherrill’s book titled *Harvesting Urban Lumber*. Check out www.harvestingurbanlumber.com. ■

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