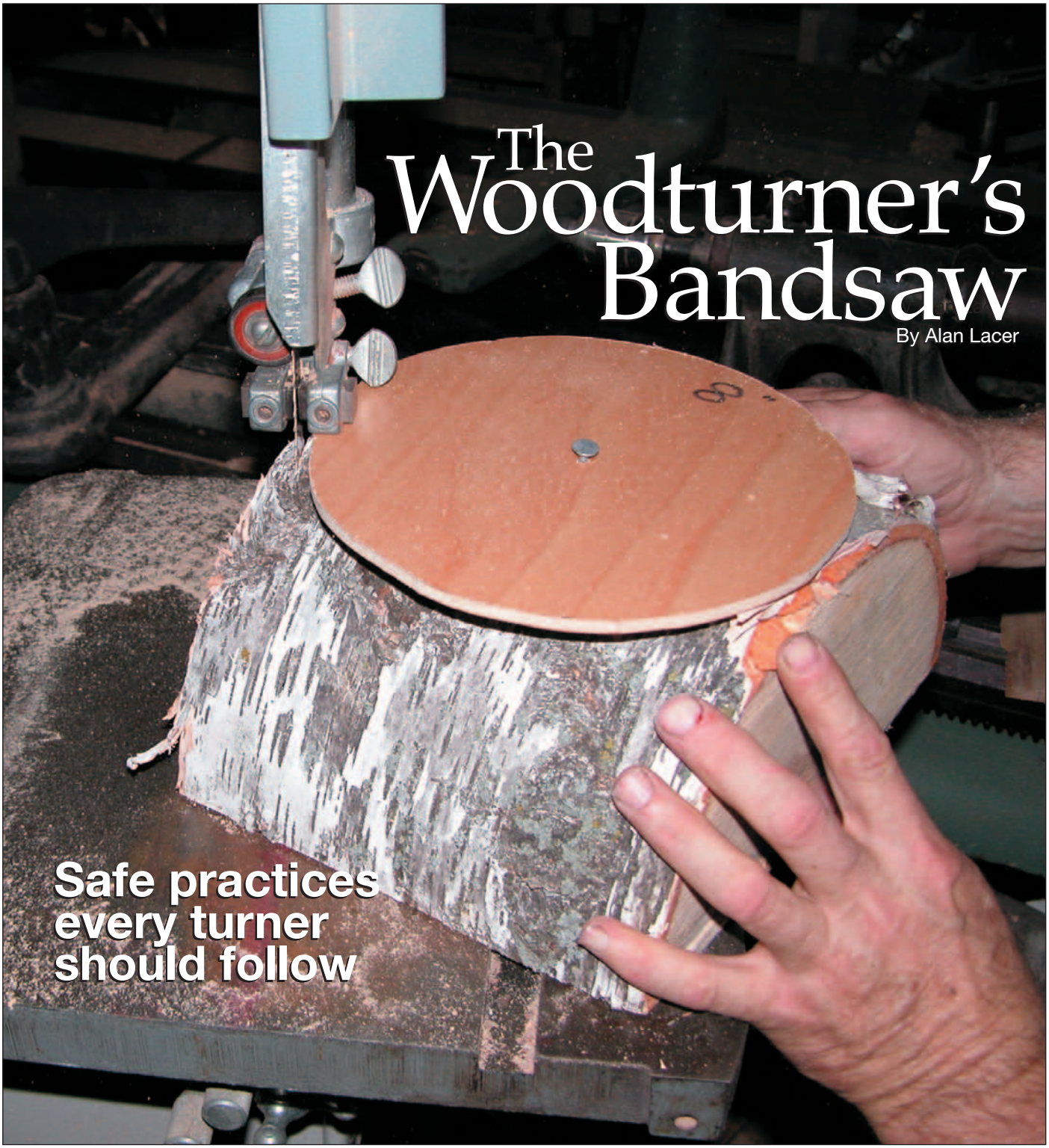


# The Woodturner's Bandsaw

By Alan Lacer

**Safe practices every turner should follow**

Give me a lathe, a grinder, and a bandsaw and I'm a happy woodturner. But despite the importance of lathes and grinders, we sometimes overlook the bandsaw's role in turning. Here are some bandsaw tips for a wide range of turning applications—from preparing stock for small tops to larger green wood bowls.

### Sensible bandsaws for woodturners

I've had poor luck with bandsaws with smaller than 14" wheels, and no luck at all with the three-wheel models and resaw bandsaws with wide blades. My recommendation is a 14" or larger saw—preferably with a minimum of 8" under the blade guide.

One excellent choice for a woodturner turning modest-sized pieces is to purchase a 14" saw with the optional riser block kit (allowing approximately 12" under the guides). There also are a number of 16", 18", and 20" saws capable of doing great work for the turner, but costs escalate.

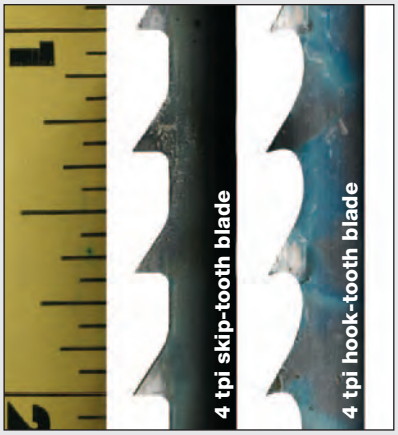
I steer most turners away from the large classic bandsaws of 30" and 36" because the forces are so great and the saw is too unforgiving when something goes wrong. For 14" saws, I prefer at least a one horsepower motor for the gusto required to cut through wet wood. And I like a tilting table for tasks including sawing off corners of large turning squares and cutting tapered bowl blanks.

## Bandsaw blades for turners

- For green-wood cutting, I prefer a skip or hook-tooth blade with as few teeth to the inch as I can find—usually 3 or 4 teeth per inch (tpi). Both tooth styles have advantages and disadvantages. The hook tooth does not clog as quickly, but the aggressive cut pulls stock into the blade. The skip tooth is gentler to operate, but clogs more frequently. Try both types to determine which suits you best; you'll like either one better than a regular blade.
- I don't recommend narrow blades of 1/4" or less, nor blades greater than 1/2". For preparing bowl blanks, turners don't need a narrow blade to cut exactly on the circumference. However, we want a blade that is not prone to jamming when cutting a radius. In balance, a 3/8" or 1/2" blade satisfies turning work.
- Blade thickness also is a concern for resistance to twisting and metal fatigue. Generally I avoid any blades less than 0.025" thick. For my 20" bandsaw, I prefer something closer to 0.030".

I purchase blades from a local saw shop that welds them to length from good quality basic stock. If you go through a lot of blades and have a frugal bent, consider learning how to silver-solder blades from rolls of coil stock.

But what about the low-tension, bi-metal, or carbide-tipped blades? Because I often cut wood with bark attached—which dulls blades—I can't justify the more expensive blades in these categories for rough-cutting stock.




### Options and accessories

- Good light to shine directly onto the cutting area.
- Brush for the lower wheel to minimize build-up on the tires.
- A brake, which is a wonderful safety feature usually found on 20" or larger saws.

### Bandsaw safety

I probably know more turners injured at their bandsaw than at their lathe. The message: Learn the saw's habits, develop sound practices, and acquire a healthy respect for this machine.

Who is probably most at risk for a bandsaw accident? Two

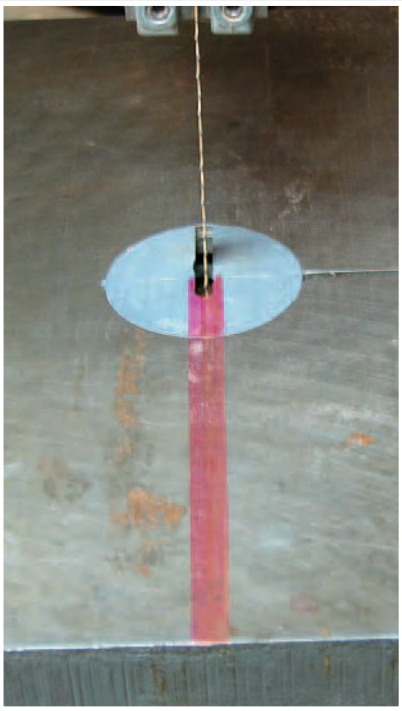
*Continued*

## Safety tips in the Red Zone

While teaching bandsaw techniques, I recommend drawing or painting a 1"-wide strip on the bandsaw table that extends from the blade to the edge of the front table. Hands and arms must stay out of this zone. Unless using a pushstick, never push with the hands or fingers in this zone.

To reduce exposure to injury, I work from the side when cutting bowl blanks, turning the piece into the blade rather than pushing.

One more suggestion: Develop a routine to pull the stock through the bandsaw rather than pushing. Doing so reduces the chance of injury.



prominent groups generate the most accidents: the novice who does not understand the bandsaw's behaviors and the seasoned veteran who thinks he or she has mastered all and therefore can't get hurt.

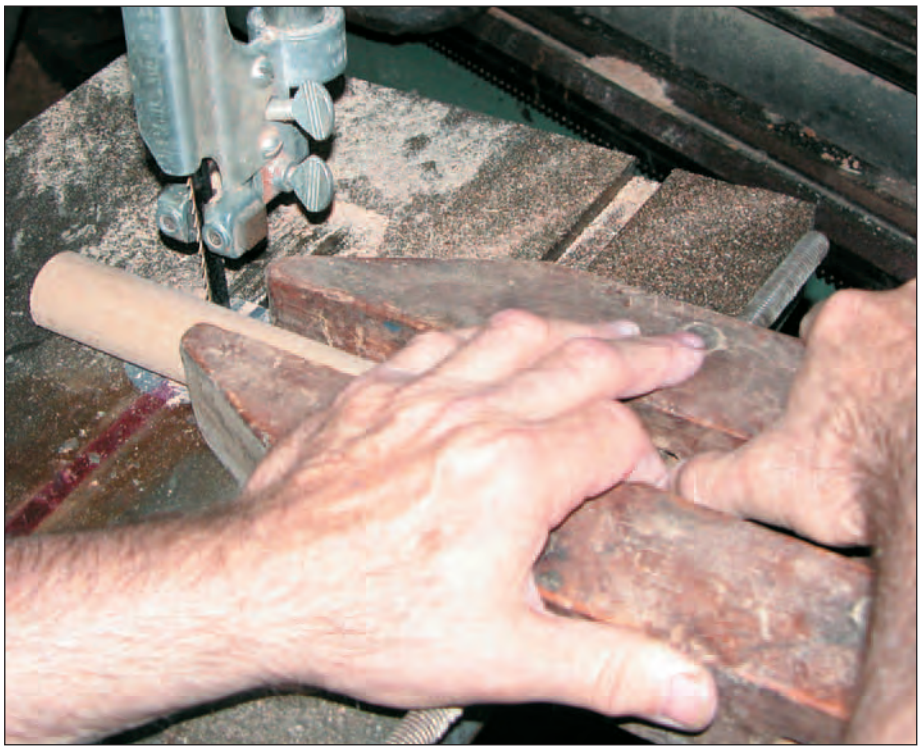
I operate from two essential rules. First, hands and arms must stay out of the Red Zone—the area in line with the blade. See the box at *left* for more details.

Second, work with supported stock—not stock that wobbles, rolls or flips while cutting. Just as in turning wood where an unsupported edge causes a dig-in, serious bandsaw accidents happen with lightning speed when the work is not supported below the cut.

I know a lot of turners like to crosscut short, round objects on the bandsaw. But there are serious risks here unless you take precautions. If larger than 3" in diameter, I prefer to crosscut stock with a chainsaw.

It is possible on some sizes to rig up V-blocks to cradle the round stock. If the round stock is small (under 2") and shorter than the table is wide, I suggest securing the piece in a parallel (handscrew) clamp that stays flat on the table as shown *below*.

For making multiple blanks 2" or smaller, crosscut stock with your bandsaw miter gauge. Clamp smaller pieces of wood against the miter-gauge fence and cut away—a good technique to



**To crosscut short round stock, securing material in an adjustable parallel (handscrew) clamp is a solid solution.**

remember for making multiples.

The problem with crosscutting round stock is that on entry, the piece tries to roll like a wheel—pulling the work quickly into the blade and sometimes twisting the blade. Either of these situations can result in a broken blade or worse—an accident caused by shooting the wood from the saw or pulling your body parts into the blade.

One additional note: It makes my hair stand on end when I see or hear about a turner going to the bandsaw to cut the waste off the bottom of a turned bowl. This sounds like an emergency room visit in the making. A better plan: Remove the nib off the lathe with a Japanese pull saw.

**With 6"-diameter or larger stock, you can bandsaw logs upright to halve the material. Note safe hand position.**

## Bandsaw bowl stock

Because bowl turning is still the most popular interest, let's review the process of bandsawing a small log to produce a face-grain bowl.

I recommend crosscutting the log to length (slightly longer than the diameter) with a chainsaw or even a hand bow saw. Next, halve the log using wedges and a sledge hammer, a chainsaw, or bandsaw.

At the bandsaw, there are several options for halving a log. One is to cut into the side of the log (end grain on table) as shown *above*. I suggest this technique on logs 6" or larger in diameter and no longer than the height under the upper blade guide.

Another strategy is to cut head on to the end-grain as shown at *right*—truly a ripping cut. This cut on supported wood avoids the

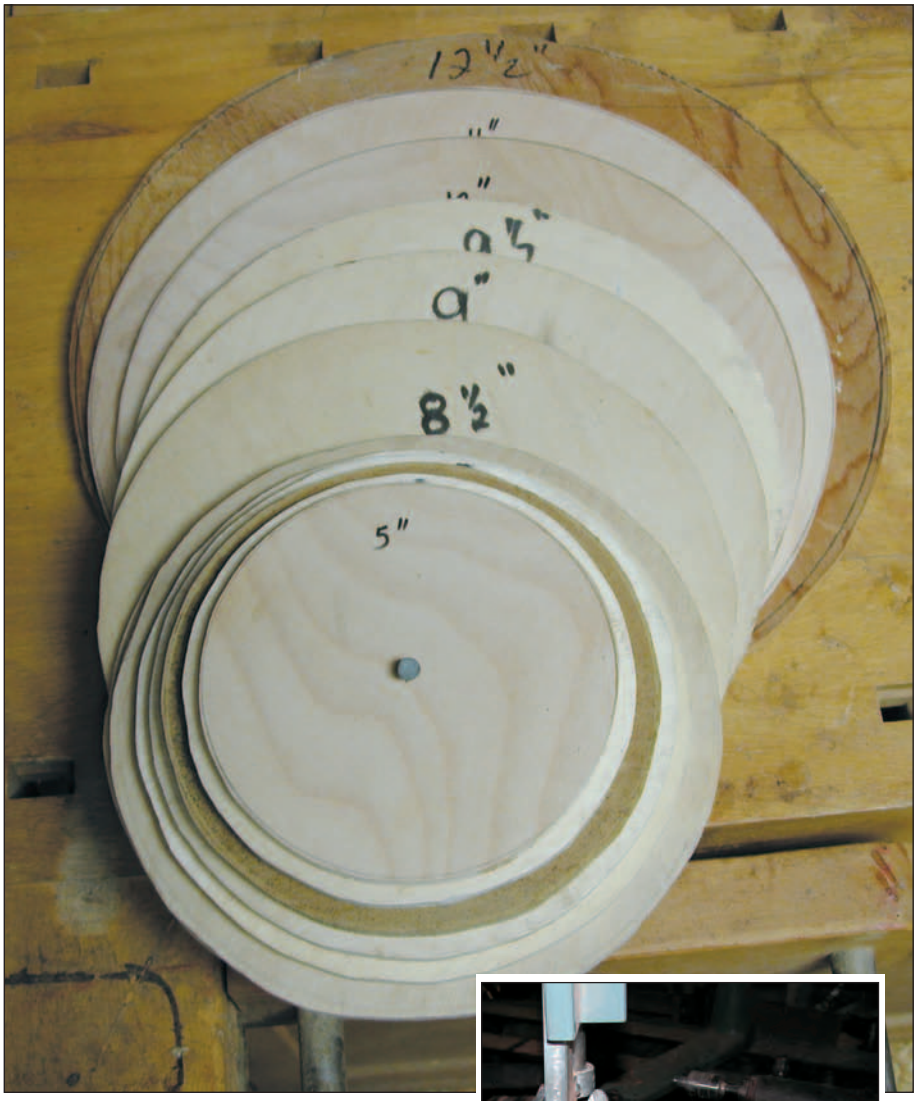
**A recommended ripping procedure: The downward pressure of the bandsaw blade reduces the tendency of the log to roll side to side.**

*Continued*

danger of the piece rolling like a wheel as noted in crosscutting. If using this method, I recommend looking for a face of the log that has support on the bandsaw table along the entirety of the cut. Also, the face of the log that first contacts the blade should be as flat as possible to maximize support under the blade.

Next, cut the half log into a disc. The safest way I have found is a cutting template attached to the curved section of the half log.

I recommend making a set of patterns for the smallest bowl you think you will ever turn to the largest capacity of your lathe. Patterns from 1/4" plywood or hardboard are ideal. Make a set in half-inch increments, drill a hole through the center to accept a nail, and identify the size of each template as shown at *top right*.




**Spend a few minutes to make a set of cutting patterns, shown above, for your lathe's swing capacity. The 8" pattern is shown at right on a birch log.**

### Bandsaw with a template

Select the appropriate template, nail it to the half log (flat face down on the bandsaw table) and cut around the outside of the template as shown *below right*. Don't try to cut the circumference in one pass—it's too easy to jam the blade or even twist it. I nibble away with 6 or 8 cuts that appear to be straight.

If you're new to bowl turning or you're turning at a lightweight lathe, take your time to make the blank round; doing so reduces effort at the lathe. For mounting stock to the the faceplate, use the same template to mark the center on the flattened face.

I can think of no other saw that is so versatile as the bandsaw. It easily rips, crosscuts, cuts circles and arcs, works logs or other thick stock, and cuts angles—all quietly and effortlessly compared to other power saws.

But just like other power tools, the bandsaw demands full attention and control. Focus on the task at hand—not your lathe work—while bandsawing.

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