

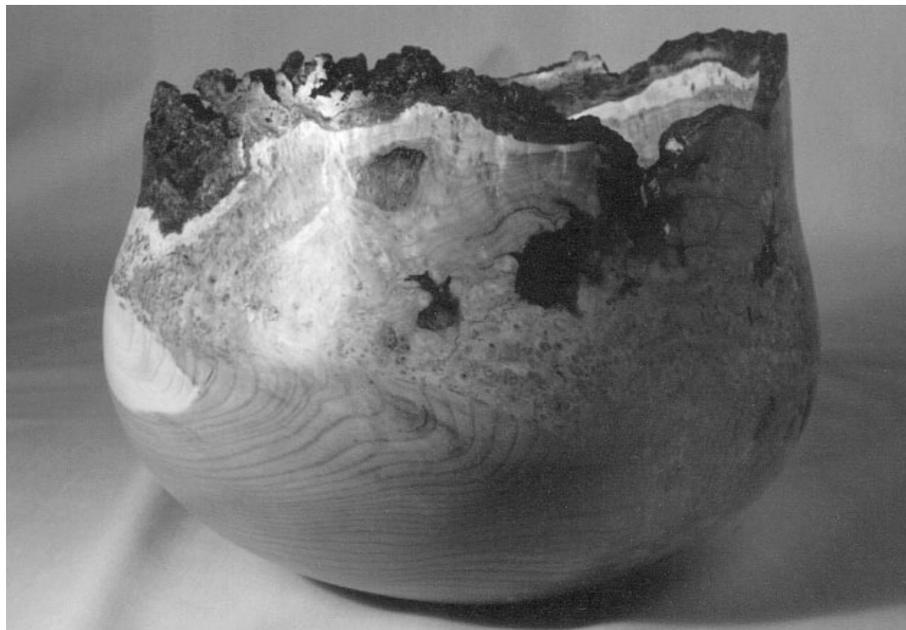
GREEN OR DRY?

Three alternative approaches

LYLE JAMIESON

TWO OF THE MOST OFTEN ASKED questions by woodturners or turning enthusiasts are where do you get your wood and how do you keep it from checking, cracking, and splitting? The answers for woodturners are not easy. Unlike other woodworkers, turners usually start with freshly cut wood. In contrast to cabinetry and carpentry, larger, thicker pieces of wood are necessary for turning. Most kiln-dried wood in lumber yards is not the size or species desired. Trees with flaws, crotches, and burls and hard-to-find varieties are usually relegated to the firewood pile, but these are the most valuable for woodturning because of the unusual color or grain patterns. To purchase exotic woods from distant lands is very expensive and except for an occasional special project unnecessary.

Trees are coming down all around, everyday, if you keep your eyes and ears (listen for the chainsaws) open. New roads and homes



"Castle," 8" dia., cherry burl from the upper peninsula of Michigan. It was turned green, incorporating the natural edge of the burl.

are always underway; electric, cable, and telephone companies are expanding service. City and local government workers are trimming and

thinning damaged or diseased trees. Most of this wood is on its way to the fire pit or landfill. That's just what you want: wood that others are discarding and glad to give away for the asking. It's the greatest to turn!

So you have found this great curly maple tree the city has cut down and they would love for you to haul some of it away for them. Now how do you handle it? Wood handling is a vital factor in turning successfully.

There are three ways to handle wood for turning. First, you could take it home and turn it green. Second, you could partially turn it and set it aside to dry slowly for returning to a final piece at a later time. Third, you could allow the block to dry completely before turning. Now let's explore these options.

Green turning works well because the wood turns much easier when wet. Shavings flow off your tool like butter. As with most turning, it is important to use very sharp tools. A



"Seascape," 12" dia., beech crotch. The tree was cut down during a business expansion. The wood was turned green, left thick, dried, and turned again.



Left, maple burl, 10" high, from wood salvaged during the clearing for a new subdivision. It was turned green, all in one session. Above, Russian olive, 6" dia., from firewood. The pith is included and the resultant checks are filled with brass shavings and cyanoacrylate glue.

dull tool on wet wood will tear or fuzz the end grain. When turning green wood you must be able to live with and even enjoy the fact that your finished turning will change shape as it dries. So the round bowl will become slightly oval, because as moisture leaves the wood, it shrinks more across the grain than along the grain. Very attractive effects can be achieved, especially when creating a natural-edged piece, such as the piece I made from cherry burl, pictured at the top of the facing page. The grain also shrinks inconsistently, leaving a pebbled effect to the piece. Shrinkage also accentuates a defect or knot, because it dries differently than the surrounding wood.

There are dangers or drawbacks to turning green. Shape is restricted somewhat, for example, "Seascape" made from a beech crotch had to be turned from dry wood (see photo, facing page). To capture the feathering grain of the crotch a shallow fin-

ished form was called for. Turned green, it would surely have warped and ended up significantly oval in shape. The warping of a shallow form is not usually desirable in a plate, platter, or shallow bowl. It distracts from the smooth flow of the flat surface. Using green wood for deep hollow turnings has less effect on the overall shapes, yet gives each piece a personality of its own. The photo above left shows an example of a tall, deep, hollow turning that was turned green and allowed to dry afterwards.

Another danger in working with green wood is cracking and checking. The key to avoiding this (no guarantee) is to turn it fairly thin and by all means uniformly so, especially the bottom of a bowl. A uniform thickness will allow the wood to give a little and warp without cracking. Thick areas will dry more slowly than thin, creating stresses that can break the piece apart.

Also, when planning the orientation of your work from the block of wood, always remove the pith. The pith is very unstable and will surely crack, even if turned thin. It will also bulge out of shape as it dries. Some turners have used the pith and accentuated the cracks, filling them with a contrasting wood-dust and cyanoacrylate glue. The Russian olive piece, above, was turned green with the pith right in the center of the wall. It was inspired by James Poppell's Treaty Oak work demonstrated at the last year's AAW Symposium in Colorado. I inlaid the brass shavings in the carved shape of a cedar bough to conceal the pith cracks. This looks very attractive, but the pith will always cause problems when turning green wood. Unless you want the challenge, it is best to cut it out before you turn.

Now, you can't turn all the newly acquired wood all at once. So let's explore a second option for creating



Beech, 11" dia., from wood salvaged from the clearing for a subdivision. The wood was rough-turned green, dried, and returned to final shape and thickness when dry.

great turnings without cracks and checks.

Mount your turning blank green. This mounting takes no special handling; you could use any chuck or you could glue the green blank to a scrap block with cyanoacrylate, then screw that scrap block to your faceplate. (Green wood will hold just fine.) Turn the wood roughly to your desired shape, but this time leave a thick wall and bottom, $\frac{3}{4}$ to 1 inch thick. Still, try to maintain a uniform wall thickness. Take the blank from the lathe and remove the glue block or chuck.

Now it has to dry *slowly*. If the piece dries too quickly, the wood at the surfaces will want to shrink while the wood in the center of the walls will remain the same size. The tension will be relieved by cracking or checking of the surface. You must retard the drying so that moisture from the center of the walls can migrate to the surface, allowing the wood to dry and shrink uniformly. Using paste wax helps clog the wood pores and slows down drying, but that's usually not enough. Some turners use paper bags, others use plastic bags, turning the bag inside out every day or so to control the release of moisture. A favorite trick of many is to use the recently turned

wet shavings from the turning. Sweep them up immediately, while they are still wet and put them in a cardboard box stuffed all around and inside the thick-turned piece. Close the box up and store for a few months. This allows the shavings and turned object to dry very slowly.

The trick is to find the right drying rate. If kept too wet, the wood will mold, but if dried too fast, it will crack. Check it now and then. When the shavings are completely dry, take the turned piece out into the air and let it dry a little longer, exposed, maybe another month or two. Now when it has air-dried completely, it is ready to re-mount and turn to the finished wall thickness. Note: do not leave the old glue block on and try to re-mount as you did when the wood was green. The shrinking green wood will weaken the glue joint and it will break off easily. Mount a new glue block to your dried piece. In most cases you will be turning an oval shaped dry piece back to round. The beech piece pictured above was warped too far out of round to turn and keep it the original diameter. An interesting effect was created by leaving the outside warped and turning the center with a shadow-edge lip and smooth, flat bottom. The underside was left warped with an ele-

vated foot. This piece required hand sanding and finishing off of the lathe, but the results were worth the extra effort.

The third option is to try to dry the entire log or turning blank. This takes a long time (about one year per inch of thickness) and very often the large piece will check and crack as it dries. Cut the tree in lengths a little longer than you plan to use. It is best to split or saw the log lengthwise with the grain. This accomplishes two things: it puts the pith on the outside edge of your workpiece so there is little waste to discard, and it relieves some of the stress created as the wood shrinks in drying. This will help prevent the deep cracks that ruin a piece for turning. Next, seal up the end grain with a wax-based liquid sealer (available from Craft Supplies USA, 800/551-8876). This will slow the drying so that you can store the wood long enough to get back and use option one or two above, if you decide not to wait for it to dry.

If you've experienced cracking problems, perhaps these tips will encourage you to give it another try.

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