

# Turning a Double-Natural-Edge Bowl.

by Don Lindsley

If you scavenge for wood as I do, from time to time you'll come across a piece that provides special challenges - and thus special opportunities. That was the case last year when my friendly local arborist dropped off a piece of American beech. The trunk had forked into two almost equal branches, resulting in a "Y" shaped log. I sealed the cut ends and wondered what I would do with it. A few nights later I had a dream about turning a double-natural-edge bowl—one that retained the bark (or at least the shape of the log under the bark) on both top and bottom. I realized that the piece of beech should be ideal for this, as the fork would provide three points of contact at the base and so the resulting bowl could stand up without rolling over. I was pleased with the result, and ever since have been on the lookout for other logs suitable for making double-natural-edge bowls. These have become my "signature" pieces. They provide more challenge than do ordinary natural-edge bowls - and then some!

One reason I enjoy making double-natural-edge bowls is the unspoken dialog they require between the wood and the turner. Experts tell us that we should have the final shape in mind and preferably on paper before we ever take tool to wood. Possibly that's true for an ordinary turning square, but it emphatically doesn't work when you start with an irregular log, especially a "Y"-shaped one, and want to retain some of the natural edge! My greatest joy in turning is to see the

possibilities exposed as I cut into a log and the wood "tells" me what it wants to be, the final product being determined by the piece of wood itself, limited only by my vision and level of skill.

## Choice of Wood.

The prime criterion for making a double-natural-edge bowl is a log shape that will permit the base to have (at least) three points of contact so that the finished bowl can stand up. Most common is a "Y"-shaped log as shown in Fig. 1, as a careful choice of the turning center will almost always provide the necessary three points of contact at the base. Any type of wood will do, but of course it's nice to have an interesting figure to go with the unusual shape.



**Figure 1. Y-Shaped Log is ideal for this type of project.**

To date I have used American and copper beech, eastern red cedar, black walnut, cherry, and Norway maple for making these bowls. If you want to retain the bark, it's best to use winter-cut wood (approximately November into March here on Long Island) so that the moisture content of the cambium is as low as possible. Almost equally good is wood from a tree that has just died, provided that the cambium

has not begun to decay. I have used both green and dried wood; green is generally much easier to turn, and the distortion that accompanies drying can add interest to the resulting shape. Also, it's generally easier to retain the bark on green wood during the turning process. Still another reason for turning the wood green rather than curing it first is that it is very difficult to dry a "Y"-shaped log without formation of checks.

## Turning a Double-Natural-Edge Bowl.

This past winter, the local electric company was running new lines near my home, and had to trim branches that interfered with those lines. I rescued some interesting green cherry logs that they discarded; several of these were ideal for double-natural-edge bowls. I started turning the cherry log in Fig. 1 as the basis for this article. However, when I was about half finished, I wrecked it. (As you can imagine, there are many opportunities for messing up a double-natural-edge bowl!)

So I started again, this time with an oval-shaped cherry log that lacked a "Y" but was sufficiently irregular that it would still provide the necessary three points of contact at the base. Figure 2 shows this log, and the 4" hose clamp indicates the region that will become the base of the bowl. I moved the hose clamp around until it made contact with three points on the bark. Then I lightly tapped in a finishing nail - you can see its head in Fig. 2 - to mark the center, slipped a masonite

*[Continued on Next Page.]*

## Double-Natural-Edge Bowl Continued



Figure 2. Actual piece use for this project.



Figure 3. Log section with masonite disk to mark the piece to be cut on the bandsaw.



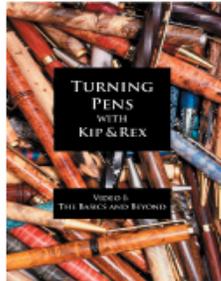
Figure 4. Using a Delta circle-cutting attachment to cut out the bowl blank.

disk over the nail, and carefully removed the nail, replacing it with a screw holding the center pivot of my Delta circle-cutting attachment (Fig. 3). I set the diameter of the attachment just larger than that of the disk (9" in this case) and sawed away the waste (Fig. 4). I chose a circle slightly larger than the width of the

## TURNING PENS WITH KIP AND REX

TWO NEW VIDEOS ABOUT PEN MAKING

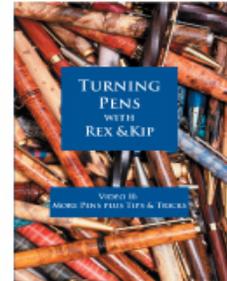
In 1999 Kip Christensen and Rex Burningham authored the book "Turning Pens and Pencils". It quickly became recognized as the definitive book on pen making. Now Rex and Kip have followed with two videos about turning pens. These two videos offer the most comprehensive information available in video format on the subject of making pens on a wood lathe. In the process of showing detailed steps for making six different pens, Kip and Rex cover both the fundamentals and advanced techniques, offer several design options, and discuss using a variety of materials. Video II offers an extensive section providing a host of handy "Tips and Tricks".



### Topics covered in

#### Video I: The Basics and Beyond

- An Introduction by Mike Mahoney
- Fundamental procedures of making turned pens
- Making the basic slimline pen
- The versatility of the slimline pen kit
- Possible design variations using the slimline kit
- Detailed steps in making two design variations using the slimline kit, including one with wire burn details, finger grip grooves, and no centerband; and no with a fixed antler centerband
- Tools and tool use
- Adhesives
- Materials for making pens, including various woods, plastics, and antler
- Running time: 1 hour 8 minutes



### Topics covered in

#### Video II: More Pens plus Tips and Tricks

- An introduction by Mike Mahoney
- The European style pen
- A variation on the European pen which includes a fixed blackwood centerband
- The American style rollerball or fountain pen
- Techniques for turning plastic
- Turning antler
- Tips and Tricks, including:
  - drying pen blanks
  - cleaning the brass tube
  - the "potato trick"
  - about drill bits
  - drilling jigs and tips
  - using polyurethane glue
  - reaming before barrel trimming
  - all about barrel trimmers
  - repairing defects in wood
  - using a buffing wheel
  - assembly jigs and tips
  - disassembling a pen
- Running time: 1 hour 28 minutes

These DVD's are \$20.00 each or \$35.00 for the pair + \$4.05 P&P.

Order from: **More Woodturning**, PO Box 2168,  
Snohomish, Washington 98291

log, because the final shape of the bowl would be oval in any case - and I've learned the hard way that I almost always wish I'd left more wood than I did!. Note the wedges (just visible to the right of the bandsaw blade in Fig. 4) between the masonite disk and the log; they keep the log steady as I saw away the waste. I have a whole set of these disks in one-inch increments; together with the stabilizing wedges, they greatly aid in sawing irregular blanks as well in laying out a proposed bowl.

Next I used a Forstner bit to drill a shallow hole for the spur drive (Fig. 5) - a most useful tip I picked up from More Woodturning. On the other side I drilled a smaller hole to accommodate a cup center, mounted the blank on my lathe and turned the exterior (Fig. 6). Turn it as smooth as possible at this stage, because distortion during drying will prohibit later tool use! Even though the cherry was cut in winter, and would probably retain the bark on its own, I made doubly sure by driz-



**Figure 5. Drilling a small hole for the spur drive center.**



**Figure 6. Mounted between centers and the outside turned.**

zling in thin cyanoacrylate (CA) glue all along the cut bark surfaces, both top and bottom.



**Figure 7. Rough hollowing the center leaving a spigot for the chuck to grip when turning the bottom of the bowl.**

Now rough-hollow the center, carefully leaving a spigot (Fig. 7) for attaching a scroll chuck.

There's not much clearance, so a shielded ring cutter is very useful for most of the hollowing. The walls are 8-9 mm (about 1/3") thick; as for the exterior, the inner surface should be turned as smooth as possible at this stage. Once again I apply CA to the cut bark surface. Not only does this help retain the bark in place, it also helps protect the bark during later sanding. Note the sharp contrast between the dark heartwood and lighter sapwood immediately after turning. The next step is to reverse the bowl in the lathe so as to turn the base. I replaced the cup center with the Oneway revolving center adapter, screwed on the scroll chuck, and clamped it onto the spigot (Fig. 8) while the base was still on the spur drive; this keeps everything coaxial for when the chuck is then mounted on the headstock.



**Figure 8. Chuck gripping the spigot while still on the spur drive.**

Turn the walls of the base the same thickness as those of the bowl itself. The interior of the base should be turned to mimic the curvature of the bowl's exterior so the shape appears continuous; the trick here is to have an offset so the base is actually thicker (that is stop turning before the shape really is con-

tinuous with the exterior). This permits drilling a shallow hole (Fig. 9) that I'll then shape with a dovetail scraper, in anticipation of later mounting the base on an expansion chuck to turn away the interior spigot.



**Figure 9. Drilling a recess in the base to provide a place to grip the bowl while the spigot is removed from the inside.**

However, the next step is waiting for the rough-turned bowl to dry! You can use a moisture meter, or simply weigh the bowl each day until it stops losing weight - a little over a week in this case. The rough-turned bowl distorted during drying, and two checks formed - a common hazard since a double-natural-edge bowl necessarily retains the pith portion of the log. I filled the checks with powdered chrysalis and medium CA glue, as the blue-green color of the mineral nicely complements the cherry (Fig. 10).



**Figure 10. Filled crack shows as blue green mark.**

*[Continued on Next Page.]*

## Double-Natural-Edge Bowl Continued

Note also in Fig 10 that the contrast between sapwood and heartwood has reversed; the sapwood now appears darker. This is a result of drying; evidently as the interior moisture moved to the surface and evaporated, it deposited the darker material there. Sanding removes the darker surface deposit (Fig. 11, where only the bottom half has been sanded), and the original heartwood/sapwood contrast is restored (Fig. 12).



**Figure 11. Only bottom half has been sanded.**



**Figure 12. At this point, a bit more rough sanding is needed.**

A few darker streaks near the rim in Fig. 12 show that a bit more coarse sanding (120 grit) is needed, and then sand through to 600 grit. Inside the base I carved my initials and the year, and used a transfer iron to apply the wood type, name of the inlaid mineral, and my company name (Fig 13). [These last were la-



**Figure 13. Markings placed in side the foot recess.**

ser printed on ordinary copy paper - mirror-image, of course, so that they read correctly when transferred.] Now apply finish to the exterior and the base; in this case salad bowl finish (Fig. 14).



**Figure 14. Salad bowl finish has been applied to the finish sanded bowl.**

After the finish dried, I had an unpleasant shock: The base had shrunk so much during drying that the regular #2 chuck jaws would no longer fit it. If I expanded the jaws to fill the dovetail recess, their outer portions would have broken off the bark at the base (Fig. 15)! To work around this problem, I turned a collar from scrap wood, leaving a dovetail that would just fit into the base of the bowl, and boring a hole that would just fit over the spigot jaws I had mounted on the chuck.

With a hacksaw, I then cut most of the way through the collar, sawing parallel to the grain so the col-



**Figure 15. Chuck could not be used as planned.**

lar would split when I expanded the spigot jaws with the collar inserted in the dovetail recess in the base of my bowl (Fig. 16).



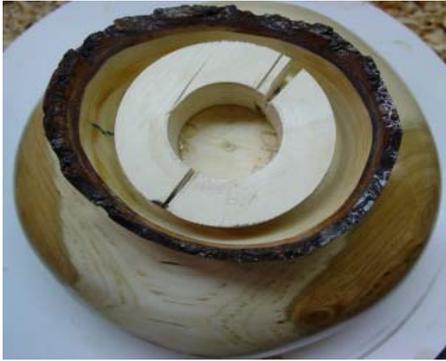
**Figure 16. Collar to solve the problem.**

Because I wasn't sure how well this set-up would hold, I dabbed a few drops of thick CA glue into the dovetail recess just before inserting the collar and expanding it. Once the CA had cured, I mounted the assembly on the lathe and carefully cut away the interior spigot (Fig. 17).



**Figure 17. Cutting away the spigot in the center.**

I could shape the very center of the interior with scrapers, but because of distortion during drying, any irregularities remaining on the interior walls had to be sanded rather than cut away. After sanding I applied several coats of salad bowl finish.



**Figure 18. Scrap-wood collar still in the base.**

Now came the moment of truth. I removed the chuck and inspected the scrap-wood collar in the base. As planned, it had split when I expanded the chuck jaws inside it. A little judicious chisel work removed the collar, and light sanding removed the remnants of CA glue. [To protect the natural edge of the top of the bowl during the chisel work, I couldn't rest the bowl itself on the workbench because the delicate natural-edge would be damaged. I clamped a 6" lambswool buffing pad (designed to be used in an electric drill) in a vise and inverted the bowl over the pad in such a way that the center of the bowl was supported by the pad while the edges hung free.]

Fig. 19 shows the final product - a handsome double-natural-edge bowl. I anticipate that the heartwood will darken with age (as cherry does), but that the sapwood will mainly retain its light color, so the contrast between them will intensify over time.



**Figure 19. The finished bowl.**



**Figure 20. Double-Natural-Edge Bowl in Eastern Red Cedar.**



**Figure 21. Double-Natural-Edge Bowl in Norway Maple.**

Figs. 20 and 21 show examples of other double-natural-edge bowls - in Eastern red cedar and Norway maple, respectively.

**About the Author:** A self-taught woodturner, Don Lindsley is a geologist in his other life, studying rocks from such diverse places as Wyoming, the Moon, and Mars. In the 1990's he had an unpleasant administrative position, and woodturning provided ideal therapy for him. He became hooked, and in retirement spends ever more of his

time turning. A large variety of hardwoods grow on Long Island, and a local arborist (who happens to love wooden bowls!) provides more than enough wood for Don's needs. You can see more of his work at [www.thewellturnedbowl.com](http://www.thewellturnedbowl.com).



Woodworking at Home Magazine brings to you the best possible method of expanding your woodworking skills. Published 7 times per year on DVD (Digital Video Disc). Each issue is packed with over 2 hours of video presentation and includes printable project drawings.

Featured regulars include:

**Cabinet / furniture making with Chris DeHut**

**Turning with Dick Sing**

**Relief carving with David Reilly**

Expand your woodworking skills as each of these highly skilled woodworkers walks you through the various projects and techniques.

Only \$33.95 per year.

**Call 847-854-2381 or visit us on the web at:**  
[www.woodworkingathome.com](http://www.woodworkingathome.com)



**Big Tree Tools, Inc.**  
Belt & Buff

Designed specifically for Woodturners.  
Set-up, grind & deburr in 10 seconds total!  
Only \$375.  
Free Shipping in US.

**New for 2005:**  
Easy set up adapter for your side grind jig \$80.00

Mail check to:  
Big Tree Tools, Inc.  
258 Breezy Hill Road  
Wilmot, NH 03287-4111  
call - 1-888-turning or  
[www.bigtreetools.com](http://www.bigtreetools.com)

