

Cindy Drozda

“The Fine Art of Woodturning”

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Why color a burl?

Burls are already so naturally beautiful, why would I want to color them? I was originally motivated to dye burls because the light colored natural burls didn't sell well. Maple and Boxelder burls are relatively inexpensive to buy (or were at that time), are easy to work with, and have awesome figure, but they just didn't sell like the naturally colored burls such as Amboyna and Australian Red Mallee. And I love bright colors!

The Wood

This coloring technique gives a 3 dimensional quality to the burl figure, using transparent dyes to enhance the figure in the burl without obscuring it like paint or pigment would.

The technique works best on burls. It can work on curly or quilted wood also, but only if the shape is flat, like a table top, or very shallow, like a turned platter. To enhance the wood grain this way, there needs to be some mix of side grain and end grain in the wood, like with curly, quilted, or especially burl figure. A curly figured deep side grain bowl, or a hollow vessel, will have a lot of end grain area and will not allow for this technique to work, even if the wood has curly figure. The end grain areas will absorb dye, but scraping it off will not show the curly figure like it does on side grain.

Side grain wood with no curly figure will not leave any dye in the wood after scraping it off in Step 2. If the surface is plain side grain, all of the color will be scraped off.

The best results are obtained on a relatively soft light colored burl that can absorb the dye. Soft Maple burls, like Big Leaf Maple or Boxelder, are perfect. I've had some luck with Black Ash burl, but it was not nearly as dramatic. Phil Irons uses Horse Chestnut (Buckeye) burl, I believe, with good effect.

If the wood is hard, the dye won't penetrate, and the technique described here won't work.

The Dye

The dye that I use is TransTint, made by Homestead Finishing. It is described as “metal-acid”, or “metalized”, dye. This technology produces the most light-fast and color-fast dye made today. Since natural wood colors are not very colorfast at all, and will change over time, a dyed piece is more likely to retain its color through the years. Even the most colorfast dye can fade over time, especially if exposed to sunlight. Some colors will fade more than others, and some dye products will fade more than others. Black dye, of almost all brands, is very colorfast, even if the other colors in that brand's range are not.

TransTint is concentrated, and can be thinned with either alcohol or water. I thin it with denatured alcohol, sold in the hardware store paint department or as fuel. Isopropyl pharmaceutical rubbing alcohol, and Ever Clear drinking alcohol also work. TransTint recommends thinning at a ratio of 32 parts thinner to 1 part dye. That can be varied, giving stronger or lighter colors. I like to thin at a ratio of 16:1, for a darker and brighter color. To get a deep rich color on a finial, I will use the TransTint full strength.

Other types of dye work with this technique, also. What you need is a transparent dye, carried in either alcohol or water, that will penetrate into the wood and not obscure the grain.

The Process

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Step 1: The first color

The way this process works is, the dye will penetrate into the wood deeper into areas of end grain than side grain. In a burl, the end grain and side grain are all mixed up together. When the dye is scraped or sanded off the surface of the wood, color will be removed from the side grain areas and will remain in the areas of end grain.

I apply the first coat of dye after smoothing the surface of the wood with a double beveled negative rake scraper. Applying the dye to a surface that has been cut with a gouge, or sanded with coarser than 400 grit, will show the minute ripples from the gouge or the scratches from the sandpaper in the next step. I find that a double beveled scraper gives the smoothest surface. I use a scraper with a 50 degree included angle. This first coat of dye will be a darker color.

Step 2: Scrape most of it off

Using the double beveled scraper, I then scrape a layer of wood off the surface. This leaves color in the areas of deepest penetration, the end grain areas. The areas of less penetration, the side grain, are now the natural wood color. If the surface was not smooth, all of the cutting irregularities or sandpaper scratches will have dye in them.

Different effects can be had by scraping more, or less, of the dye off in this step. Keep in mind that the next step, sanding, will remove more of the dye.

Step 3: Sand

I like to sand the wood to at least 1000 grit. This will eliminate sanding scratches. On a dyed wood surface, sanding scratches can be more noticeable than on plain wood.

Step 4: More color

I usually do this off the lathe. Applying a lighter color over the dark color that was scraped off will give a colored surface with the grain accentuated by the first color.

Colors blend on the wood. Applying yellow over blue, or blue over yellow, will give you shades of green. Red and blue combine to make purple, and red and yellow make orange. If all 3 primary colors, red, yellow, and blue, are mixed, you will get brown. Yellow over purple, red over green, blue over orange, and you get mud brown.

The dye colors can be mixed before applying to the wood, also.

To blend the colors, I spray the surface with denatured alcohol. If the color is too dark, I will wet the surface with alcohol, and blot with a paper towel to lift out some of the color. If it's still too dark, the surface can be sanded.

Step 5: Finish with a top coat

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My preference is usually for a penetrating oil type of finish. I like the look and feel of oil finish. Some of the oil finishes I like are Sutherland Welles Polymerized Tung Oil, Waterlox, and Minwax Wipe-on Poly used as an oil. The process here is to flood the surface with oil, let it soak in, wipe it off before it gets tacky, and let it dry. I will do 4-6 coats of oil, one per day, depending on the wood. Some oil finishes are darker than others. A light colored oil will keep the colors brighter.

On my larger pieces, I like to use a glossy film finish so the pieces look like glass. I love the mystery of having my wood pieces look like they might be something other than wood. The viewer often thinks the piece is glass, stone, or ceramic.

Oil finishes tend to give depth to the figure of the wood that we don't get from lacquer or poly. Oil finishes also can impart an amber tone to the wood, dulling the bright colors somewhat. A good compromise for the cleanest color is to apply just one coat of oil to the bare wood, wait 3 days, and then apply a film finish. Use Minwax Wipe-on as that one coat of "oil", and you don't need to wait longer than its drying time.

I will do a built up film finish by using General Finishes Woodturners Finish to build and to fill the grain. It's a water based poly that builds well, dries fast, and sands easily. When I have the surface smoothed to my satisfaction, I will put the piece on the lathe and apply a last coat of Minwax Wipe-on Poly with the lathe turning slowly. The spindle speed wants to be just enough to keep the finish from running. Too fast and the finish will migrate to the largest diameters from centrifugal force.

This last coat needs to be perfect, and doesn't need to be rubbed out. It gives a clear wet-look finish. If that coat isn't perfect, I'll sand it smooth and do another. Thinned gloss polyurethane can work well here, too. This technique was shown to me by Steve Sinner. He gets a wonderfully glossy film finish on his vessels!

Some brands of poly are darker in color than others. Water based poly tends to be lighter in color than oil based. Minwax Wipe-on Poly is a very light colored oil based one. The slower drying time of oil based poly allows it to flow out better, eliminating brush marks.

There are lots of other finishes and techniques that will work equally well. I am just describing what I do. Since I don't like to spray, I have developed a gloss build finish that doesn't need to be sprayed.

Things to keep in mind

What I have described so far is the basic process. Sometimes I will apply colors, after Step 2, and after sanding to at least 400 grit. That might look like: Sand to 400, dab on a color in some places or on the whole piece, sand with 600, apply more color, etc. A surface sanded to coarser than 400 is likely to show scratches in the dye.

This technique can also be done using natural wood colors. For instance, Maple burl could be dyed brown-over-black to look like Walnut burl.

To enhance the figure without changing the natural color of the burl, use an amber dye for the first color that gets scraped off, then sand and apply a clear finish.

The natural color of the wood will mix with the dye color. If the wood has a brown natural color, the dyed wood will have an earth tone. If the wood is too dark, the colors won't have much of an effect.

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For brighter colors on an amber colored wood, I will use wood bleach. I use the 2 part A&B bleach, not chlorine laundry bleach. I have also had success with the bleach used for lightening hair. Bleaching only lightens the surface of the wood, so doing it before step 1 will result in all the bleach being scraped off. Applying bleach after Step 3, the bleach only lightens the wood color, it doesn't lighten the black dye. The dye applied after the bleaching will be more true to color.

Experiment and be Creative!

This is a wonderfully creative process with many possibilities! Experiment with different colors over other colors, try it on different shapes, and different burls, and let us see what you make!