

## APPLYING ALCOHOL BASED DYE TO WOOD TURNINGS

After searching the web for articles on applying layered dye coloring to wood surfaces, I was able to find scant usable information. The information I did find was primarily for finishing guitar surfaces. I then sent emails to various wood turners that do wonderful pieces that are also dyed, no responses were received. So, based on that baseline, I set out to teach myself how to use alcohol based dyes to enhance my own wood turnings. My goal was to understand how to apply black dye as a back ground or foundation, followed by multiple layers of a color of my liking (in this case blue and bright green). The following is a discussion of my failures, what was learned from those failures and what I believe to be a workable process for dyeing wood turnings.

In the high desert areas in Southern California Ash and its many varieties are very common. Eucalyptus is also quite common. For those who are willing to do a little more work, Buckeye is also available. All three of these woods although different in grain and growth characteristics are very light in appearance and do not offer much in the way of visual interest.

Note that no discussion of dye chemistry or mixtures has been included, my choice of dye is Transtint and dilution is as defined with each bottle. Several of the published articles that dwelt with applying alcohol based dye to Ash suggest that a generous coating should be applied prior to starting the sanding sequence, so that is where the learning curve started.

After allowing an Ash end grain hollow form to rest for a few months after rough turning, the piece was re-chucked and turned to final shape. Prior to any sanding, using a foam brush (as suggested in the articles) dye was applied on the exterior surface, all seemed to go well so the sanding process was started. I start sanding at 120 grit; very little dye was remaining when the wood surface (inside and out) was ready for 150 grit sanding. After stepping back and thinking about what the next phase of the process should be, the piece was removed from the lathe (still in the chuck). The interior needed to be dyed also so to accomplish this, a small amount was poured into the hollow form. All interior surfaces were coated and any remaining dye was poured out. I then re-coated the outside surface with more black dye using a foam brush. Oh my, what a big mistake!!! Before the piece could be but back on the lathe, a sickening sound of cracking wood could be heard. I sure did like that hollow form too. Within twenty minutes four major fissures greeted me.

After going into the house in disgust, feeling like I had just wasted a perfectly good hollow form, I decided to wait a few hours before even looking at the turning again. When I did go back out to the lathe, three of the fissures had closed up and the fourth was only about 1/8 inch wide at its widest point, and this crack didn't break out at the top or bottom of the turning. Rather than try to fill the cracks or hide them in any way, (or just throw the piece away) the decision was made to continue the learning process on this piece knowing that any sanding would leave defects on each side of the cracks. The sanding process proceeded by trying to feather the black dye into lighter and darker areas (darker on the ends, lighter in the middle), it was believed that this effect was desirable. Quite quickly it became obvious that was not how the process should work. The lighter areas actually were the result of sanding too much dye away, and the darker areas ended up being too dark after blue dye was applied. For this first piece, the perceived process was to apply dye as dark as possible, then sand to the desired effect as the piece went through the various grits. My first attempt at dyeing wood turning was a complete failure but a great learning tool.



For the second attempt, a nice Eucalyptus end grain hollow form was selected because Eucalyptus is not as porous as Ash. After the cracking of the first piece, no foam brushes were going to get close to this piece. Too much alcohol is a bad thing for this effort! After a trip to the local crafts supply store, some small spray bottles were selected for applying dye. On this piece, after turning to a finished shape, sanding at 120 grit, inside and out, was completed. The piece was then lightly sprayed with black dye allowing it to dry between applications while turning the piece still in

the chuck by hand. Four or five light spray coatings were built up on the outside surface. Once the outside was completely dyed and dry, the inside was lightly sprayed then allowed to dry before more dye was sprayed. This was repeated until the inside of the piece was completely black, again four or five light coats. The spraying process was not as neat as was hoped because the spray nozzles on these bottles allowed inconsistent misting, drips and glop's for lack of a better description. Although this didn't turn out to be that much of a problem (the glop's blinded in well during sanding). After each sanding grit was completed (through 220 grit), more black dye was lightly misted on the piece, this time not trying to be cute, just consistent. The effect that I was after was to highlight the grain without hiding any of the wood.

After sanding through 220 grit, bright green dye was misted on in the same manner as the black. Again, after each successive sanding grit, more dye was misted onto the piece. Not knowing how the final piece would turn out, more dye was removed than necessary between each step. It is my belief that because the pours in Eucalyptus are not large (like Ash) the dye does not penetrate as well, therefore leaving a much lighter finish. The finished piece is not displeasing to me, and I am finding out that this type of finish is very much subjective and in the eye of the beholder. Sounds like something that might be said about wood turning!



For a third attempt, a Buckeye end grain hollow form was selected. Buckeye is a very soft wood, but again not as porous as Ash. The spray bottles used on the Eucalyptus turning were tossed out because of the inconsistent spray patterns. I found a better quality 8 oz. spray bottle at WalMart that, as it turned out, worked very well and was used on all future dyed pieces.

The same dye application and sanding sequence, as used on the Eucalyptus, was followed on this turning. The outcome was quite different though. As a soft wood that was end grain turned, the base and top portions of the turning absorbed, and retained more dye than the long grain areas. As a result, the long grain areas are lighter. On this turning, that was not an effect caused by my trying to be artistic.



The last turning to cover is an Ash end grain hollow form. The same dye and sanding process that was utilized on the previous two turnings was also used on this Ash piece. As can be seen in the two photos, the grain is very discernable and has been highlighted in a very pleasant manner. To me, Ash does not normally display much character on its own, but alcohol based dyes enhance the grain and bump up the visual interest.



Since completing these turnings, I have dyed several more pieces, (spalted Buckeye and Ash) each has turned out looking quite different than any other. My conclusion is because each turned piece exposes varying degrees of end and side grain, and that the porosity of each piece, even within the same species of wood is different, the final outcome will be unique on each turned piece.

I don't believe I will be dyeing all my future turnings, but for those that don't display any interesting characteristics, I will consider coloring with alcohol based dyes. The processes that I used work for me, if others want to copy this process, please feel free to do so. I am quite sure this process can be improved upon, and my hope is that others will share their successes (and failures) so we all can expand our knowledge.