Kurt's clinic

Kurt Hertzog answers readers' questions

PHOTOGRAPHS BY KURT HERTZOG

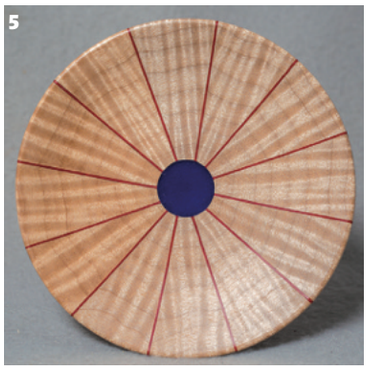
Any suggestions on how to make the grain 'pop'? I seem to have a hit or miss and I'm looking for ideas on how to be more successful.

To my mind there are several factors on grain 'pop'. First, the species, actual piece of wood, and the turning final shape and surfaces will have an impact. Some species are very spectacular with their grain structure, chatoyance, and any special features. The actual piece selected and used can make a difference as can the overall finished shape. Flat surface expanses and gentle flowing curves lend themselves to looking good. The next factor is the prep for finish. The sanding technique, working through the grits, and a thorough cleaning prior to finish is important. If I want the best finish, I'll clean completely with denatured alcohol. The actual finish selected will be a determinant. Many that I have used and been pleased with are lacquer, shellac, CA, Behlen's Salad Bowl finish, Wipe-On Poly, Antique Oil, and others.

Whenever I am in doubt about any wood and finish, I use test pieces. Grab a few scraps from your original work, sand and clean it as your finished project, and apply the finish(es) you are considering. Make your mistakes there. Once you are content with the finish's ability to pop the grain, that's the one you want. Last item that will help with the appearance is after finish processing. Once the finish has cured, I find that you can 'punch up' a finish very nicely using Micro-Mesh. If you don't have it in your kit, I suggest you add it. Its modest price and nearly endless life make it a worthwhile addition. You can also give the work a buffing to help your finish and gloss along.

There are others available, but I own and use the Beall buffing system with the internal and external buffs and the Barry Gross pen buffing system. They both have their own applications and work well. I always allow the finish to fully cure prior to any Micro-Mesh or buffing application.

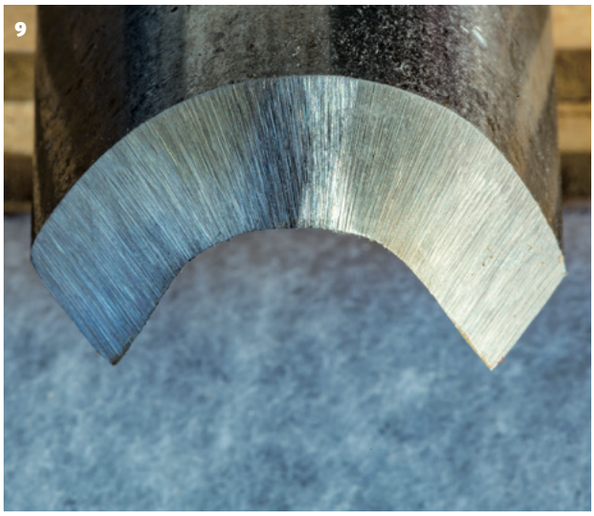
1 Getting the grain to 'pop' can be a process of material selection, overall shape, prep for finish, finish selection, and after-finish enhancements **2** Some species and figures look far better with a matte finish rather than a high gloss. You can always matte back a gloss or semi-gloss with the proper steel wool



3 Cyanoacrylate adhesive used as a finish will almost always make the grain pop. Easily applied, it is mistakenly believed to only be practical for small surfaces **4** I use CA finishes for all my pen parts because of its looks and durability. CA is mechanically and chemically tough, providing years of service and good looks **5** A simple segmented platter with a Wipe-On Poly finish. Matted back to a semi-gloss finish for a better look **6** One of my favourite finishes that punches figure up is lacquer. Out with the spray gun or HVLP and in with the rattle can spray lacquer. Fast, easy, and no clean-up to speak of **7** A must-have in my opinion, Micro-Mesh is available in larger sheets to cut into handy sizes and foam-backed pads. With care, it will last almost forever.

I'm not certain that I am using the correct grit wheels in my grinder. I've heard things from 36 to 120 from various places. What do you use for grinding and recommend?

For many years, I used a 7in slow speed Baldor grinder with traditional aluminium oxide (AlO_2) wheels in 60 grit. I used the same grit wheel on both sides of the grinder since I dedicated one side to cutters and the other to scrapers. The rests on each side were set appropriately. Slow speed was chosen – since I had to buy the grinder anyway, why not get a slow speed? The 7in was dictated by the weight. An 8in grinder, which I really wanted because of the radius of the hollow grind, was far too heavy with Baldor's beefy cast iron construction. A 7in was the fallback, being much lighter and therefore manageable. Sixty grit was chosen since it served well to sharpen but also to shape. Shaping with a finer wheel took too long and wore away too much wheel.



8 Whatever grit wheel you are using will be directly transferred to your tools as you sharpen them. Depending on your work in process, a coarse grit can add sanding work **9** Cutting tools take on the same grit pattern. Usually this isn't an issue for roughing and shaping. Understand that every cutting edge is a serrated knife edge.

That grinder served me well for nearly 20 years until just recently. I've put it in semi-retirement using it for any massive steel removal tasks. Just too heavy for me now. I built two new grinding systems recently. Both are identical using inexpensive, slow-speed 8in grinders. They sport CBN wheels and the Oneway Wolverine grinding jigs. Again, both sides of both grinders have identical grits. The rests are set as in the past. Left side set and used for cutters and the right side set and used for scrapers. I made two set-ups so one stays in the basement workshop, and one lives in the garage shop and can easily travel when I demo and teach. One of the new grinder stations has 60 grit CBN wheels while the other has 220 grit CBN wheels. When I ordered the wheels, I picked 60 since I was happy with my 20 years of experience and 220 just to try something different. I don't pay attention to either since they both work well in my applications. Depending on your turning materials, the amount of sharpening you do, and the as cut surface finish you want, you pick your grinding grit to remove metal fast enough. You also want a tool that has a fine enough scratch pattern to not create lots more work. For example, if you turn mostly blackwood, you probably don't want to leave a 36 grit scratch pattern in your wood.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Of course, you can use a stone or hone after grinding, but why add more work? If you are roughing architectural work for painting, you probably won't be troubled by a 36 or 60 grit wheel. It will sharpen fast and get you back to work quickly. As noted earlier, you don't want to be shaping with a 350 or 600 grit. That would probably be okay for sharpening. My suggestion is that unless you have special needs, you'll do well with anything between 60 and 120 grit.

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10 Coarser grits that are transferred to detail-type tools can be problematic. I've never run into these issues but I've heard from others that it can occur
11 My original 7in Baldor 60 grit grinder system. Twenty years of service before being semi-retired based on the heavy weight when transporting
12 The new sharpening systems. Eight inch, slow speed grinders with CBN wheels. One with 60 grit wheels and the other with 220 grit wheels.

I'm looking at the different carbide tools and their advantages. I know that the various makers all tout their desirability. What is your take?

I've been a long-time user of carbide tools having started making my own 20 or so years ago. Mine were crude by today's standards. They were carbide cutters from the machine shop that I fastened to a piece of cold rolled steel bar. Filing a flat on the shaft at the end, drilling and tapping it for the correct screw, and mounting the cutter was all it took. My main use then was to cut away excess inlaid turquoise or other stone from bowls or other turnings. That application as well as any other abusive situation, such as debarking green wood, or turning woods that might have nails or staples, worked well.


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13 Just a small sample of the carbide cutters now available for woodturning tools. Many of these cutters will create curls as compared to the traditional machine tool cutters.

Once a cutter was too worn, you simply loosening and rotated to a new edge. The machining tool carbides worked well enough for my needs. The modern carbide tool designs are far more conducive to cutting wood much like a standard cutting tool. I have a pretty well-stocked shop with both standard high-speed steel or powder metal tools along with carbide tools. I use both HS speed tools and the carbide but tend to use the carbide tools for anything abrasive or abusive to the traditional HS speed steel tools.

There are many folks happily using modern carbide tools for nearly every turning application since they don't require sharpening.