

Minnesota Woodturners ASSOCIATION

IN ASSOCIATION WITH THE AMERICAN ASSOCIATION OF WOODTURNERS

Layered Bowls

By Jim McPhail

Jim McPhail shares his techniques for these turned gems that excel in showing off the beauty of wood.



At the Utah Woodturning Symposium in June, Jim McPhail demonstrated to overflowing crowds. All eyes were focused on his process for showcasing wood. Although Jim doesn't claim to have invented the technique he uses, we know of no other turners who have built a business around this process. Here is Jim's story.

So what's a layered bowl?

Layered bowls are turned from stacked layers of a variety of

woods in difference thicknesses. Segmented bowls are similar, but many of the segmented layers are turned from several species of wood to create a pattern. Layered bowls also differ from laminated bowls, which generally feature wood of the same thickness.

There is an endless variety of concepts and combinations within the layered bowl framework. For example, the bottom of a layered bowl can be a two-piece, book-matched layer; a layer may be created from several alternate

laminations of veneer. Some favorite combinations are shown in the chart *opposite*.

Parts to a layered bowl

The basic layered bowl has a top and bottom layer, each often turned from the same wood species. The center layer is a contrast layer, often showing off color or figure interest.

For this article, Jim assembled a 1½×3½" bowl, above, from cocobolo, black ash burl, red palm, and veneer accents of black marfum and persimmon. The detail *opposite* locates each species.

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PRESIDENT'S CORNER



Carole Magnuson

We are half way through this year and have a lot to do before the year- end wrap up and election of officers.

As you know, about half of our board transitions each year. We start now to put a board in place for next year. We know that all of you have enjoyed the results of the board's work this year, but candidly, it takes continuous turnover of new enthusiastic members to keep the energy going.

Finding volunteers to take hold and take on responsibility is the hardest thing we do every year. So, you ask, what do we need? The very first think we need is a nominating committee and a chair for that committee. We would like 3-5 members on that committee to poll the membership and find new board members.

These are the spots that will have to be filled in 2011.

President
Vice President
Program Chair
Newsletter Coordinator
Members at large

The board positions are two year commitments. We have the picnic coming up Saturday, August 7th, at Central Park in Eagan. It is the same place that we had it last

year. We would like to have the nominating committee in place by then.

We have a membership count right around 250 people. It takes a core group of about 25 to run the club. It's actually fun and rewarding. You meet terrific people and put on good meetings. You make friends, and even keep them, even though they sometimes don't speak to you for weeks at a time. We learn lots of new things about our terrific hobby and hopefully, move the spirit of the club forward in a positive way. There, of course, are challenges, but I think the adventure is worth it.

Would you please consider serving? If you would like to be on the nominating committee or serve on the board, will you please let me know? If you would like to offer to demo next year, we would appreciate it .

We all know that we will be having to make a huge commitment to the AAW for the symposium next year, but that will go a lot easier if there is a strong board in place to take the reins. Please consider volunteering.

Another bit of news: The challenge for the picnic is anything "bar-b-que". Use your imagination. Craft Supply gift certificates await the winners.

We look forward to hearing from you.

Carole

That Damned Natural Edge Bowl

by Bob Jensen

This is the story about how I got into turning, now believe me I am no writer so try to follow along as best you can.

I have been a hobbiest woodworker for many years, it scratched my itch just fine, it was rewarding, fun, exciting and did everthing for me that I needed my hobby to do and I remember everytime I saw a wood lathe it just reinforced my

convictions that I would never own one as it was usually being demoed at some wood-working show. It was usually

a shopsmith lathe used to turn a furniture leg with a duplicating attachment. It looked as boring as watching paint dry so I never gave them a 2nd glance.

Then sometime in 2002 Fine Woodworking magazine had a picture of a natural edged bowl and I stared at that bowl off and on for a week. Eventually I just had to try it. I was totally enamored with that bowl, I would catch myself staring at that picture, I was hooked like a fish and wanted a lathe and the sooner the better.

I searched the internet, found out Oneway was one of the better names for lathes, they just happened to be coming out with a new

small lathe in my price range so I ordered one. Now keep in mind I had no idea about how to use it, plus knowing all tools and accessories I would need. I figured I would find all that out when the lathe showed up. I was sure it would come with an instruction manual that would tell all, well.....not so much.

Oh.....along the way I also talked my best friend Ken Schwichtenberg into ordering one also.

The lathe showed up one day, a neighbor had some old lathe tools from his grandfa-

ther. I stuck a 6" diameter 12" long branch of maple from my firewood pile on the lathe and stabbed at it with the tools. In hindsight these were homemade tools, probably could not have cut yourself with them if you wanted too. I quickly learned I needed some help or I was going to be the owner of an expensive white boat anchor and sooner or later one of these missiles was going to hit me.

Another internet search and I found a place called Craft Supply in Utah and they had a week long class in a couple weeks for beginners and so I called Ken and told him I had made airline, car rental, hotel, and weeklong class reser-

vations for us and we leave in 2 weeks.....as I remember he called me a few choice names but he eventually got over it.

Since 2002 I have been fortunate to be able to have seen most all of the worlds best woodturners, I have been to several symposiums, been to 3 other week long classes at Craft Supply and certainly back in 2002 I never dreamt it would turn into this disease called woodturning that turned me into an owner of 4 lathes and more gadgets and gadgets than one person should need.

So where is this novel leading you ask? Well our past newsletter editor Jeff and our current editor George both say "no one reads the newsletter" so this will be a test.

"NATURAL EDGE BOWL HANDS-ON"

There will be a hands-on session at my shop in Fridley on Saturday June 26th from 8:30 until 4:30. There are several good places to eat around here or you can bring your own.

I think we should be able to get three small bowls done. Some requirements (rules).

1st, this is **not for beginners**, you must be able to sucessfully turn bowls completely on your own, and you must be able to sharpen your own tools sucessfully.

2nd Bring the appropriate tools and material.

These are the skills that set you apart from the beginner.



3rd. you must be a member in good standing of both the MWA and the AAW There are NO EX-CEPTIONS to these requirements.

Each participant will be required to have both MWA and AAW membership cards with them, They will be checked and and without them you will be unable to participate. This is because of insurance requirements.

Eight people can be accommodated. I will show how I do natural

edge bowls and perhaps you can show me some new things that will change my ways. An exchange of ideas?

In addition to the 8 intermediate/advanced turners, 2 beginners, or newbies can attend to watch, not turn. They also must also be members of both the MWA and AAW. They will be able to observe, ask questions and learn without getting in the way.

There will be no e-mail blast

on this hands-on session, it's only advertisement is here in the newsletter. Past hands-on session have filled within minutes of e-mail blast so it will be interesting to see what happens.

1st 8 people that qualify..... see the rules...and contact me **by e-mail** will be in.

Contact Bob at:

1woodworker@earthlink.net

Windsor Stool with Jim Van Hoven and Mike Siemsen



Date: August 21st (you must turn your parts beforehand)

Cost: \$90 for Minnesota Woodturners Association Members

Materials: \$35

Course description

Build a 19" Windsor style shop (utility) stool. This is a great project for turners to exercise both spindle and faceplate skills. Each student will be furnished a full size drawing that will enable you to turn the seat, four legs, and three stretchers beforehand and at your convenience. The drawings will allow the turner to make the necessary story sticks to note the highlights of the piece and do the repetitive work. In the one day class we will teach you how to assemble your parts using the traditional tools and skills of the early Windsor chairmaker.

You will want to sign up well in advance of the class so you can have all of your parts turned and ready for assembly on August 21st.

For more information go to Mike's web page at www.schoolofwood.com or call Mike at 651-257-9166.



Three Mugs by Greg Just.
Thanks for sharing Greg.

Some Tool Storage Ideas



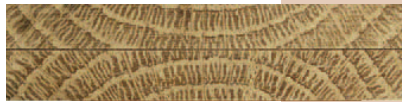
Thanks to Jim Jacobs and Bob Jensen....if you have a tool storage idea or any other turning tip or trick take a pic and send it to me.



7 favorite layers



Center (pith) cut oak



Book-matched flat-sawn oak



Spalted maple (map figure)



Black palm texture



Red palm texture



Quarter-sawn lacewood



Two layers riff-sawn lacewood

The side layers accent and separate the top and bottom from the center layer. Finally, the veneer layers further define the layers and add interest and detail to the bowl. The basic bowl may not need the side layers or may substitute multiple layers of veneer.

There are many options to make the center layer interesting:

- Highly figured burl, spalting, or other natural patterns.
- Grain figure based on how you orient the grain of the layer.
- Split center layer, creating a pattern.

Even-layered concepts

There is no limit to other concepts and combinations. If you make different colored layers with the same thickness of wood, you create a more formal, regimented design. Variations on even layered bowls include:

- Riff-sawn layers, a “basket-weave” pattern.
- Center layers of spalted wood, cut and re-glued with veneer layers. This reminds some shoppers of antique maps.



Maple burl top and bottom; five lacewood center layers. “I borrowed from other ‘round’ crafts by combining the texture of basketry and the shape of ancient pottery.”

Basic layered bowl components



Cocobolo top and bottom; sequentially cut layers of spalted maple. “I call this series map bowls because the pattern reminds me of an old globe map.”

- Natural wood figure, cut and re-glued with veneer layers.
- Laminated layers of veneer.
- Even layers, creating a graduation from dark to light values.



Bloodwood top and bottom; sequentially cut layers of honey locust. "I cut the center layers for this bowl with the pith as the center layer; the flame figure was just good luck."



Holly top, African blackwood bottom; alternating layers of hard maple and black castello. "This is one of a series of black, white, and grey bowls."



Cocobolo top and bottom; layers of red palm cut from three different boards. "I am always looking for wood colors and textures that will create a graduated effect."



Sizes and shapes

The complexity of the design and production of layered bowls goes up exponentially with the size of the bowl. I've found that textures and figures that look great on a 3"-diameter bowl may get completely lost in a 7"-diameter bowl. Most of my bowls are between 2½" and 5".

Layers must be dry (stable) to ensure that you don't have a pile of wood rings a few years later. You'll need to sand flat and evenly thin (or thick) to ensure that they glue evenly and turn symmetrically. You can consider bowls from two basic viewpoints: bowls viewed from the side and bowls viewed from the top—what I call "outside" bowls and "inside" bowls.

Outside bowls have thicker layers, which create bowls that are high enough that the elevation view is the most interesting. Inside bowls have thin layers, which create bowls that are flat enough



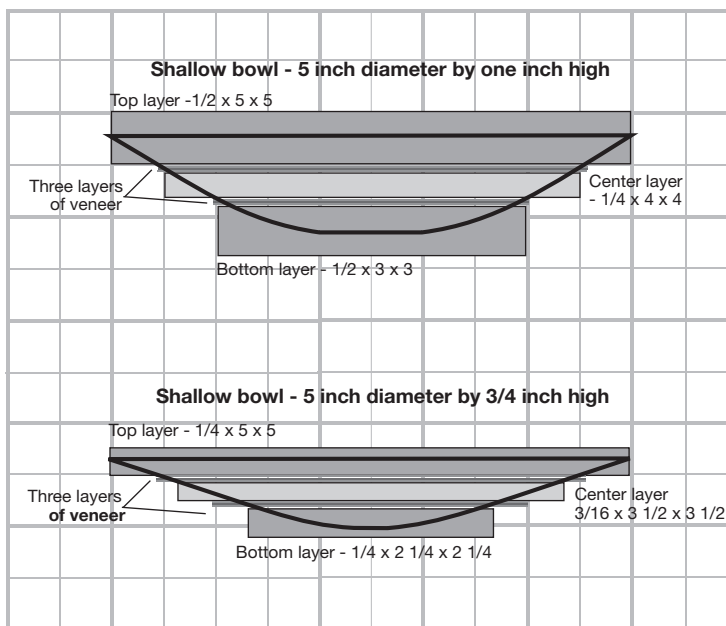
that the plane view is the most interesting.

You can also find inspiration from other disciplines, such as pottery bowls.

The shape of the bowl often depends on the design concept you create when you choose woods and combinations of woods. A bowl with a great-looking bottom layer obviously needs to have a wide-bottomed shape to show off the figure. If you want a map bowl to look like a globe, you, of course, need to make a "half-round" bowl.



Shallow Bowl - Stepped Glue-up



One way to develop shapes is to buy a tablet of quarter-inch scale graph paper as shown *above*. Draw a box showing the height and width of a bowl with a centerline drawn top to bottom. Then you can try a wide range of shapes on one side of the centerline; the ones you like can be completed by folding the graph paper on the centerline and tracing the side you've drawn onto the other side of the centerline. It's a lot easier than trying a bunch of shapes on the lathe!



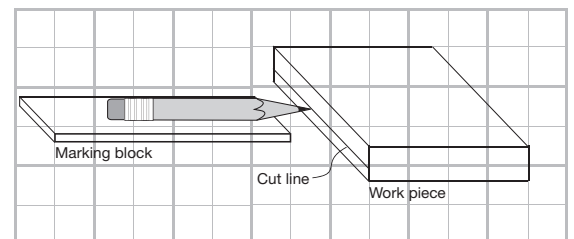
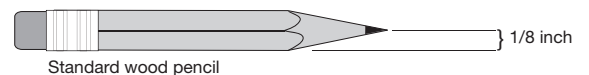
Resawing blanks

When I get ready to resaw blanks, I rely on a standard #2 pencil—regardless of the thickness of the stock—to find the desired thickness. Here's how.

As shown in the illustration directional, a standard #2 pencil will draw a line $1/8$ " above its base. Knowing this, you can make a set of marking blocks as shown *above* that will streamline the marking process.

—Jim McPhail

Marking Blocks



Marking block height + Pencil = Cut line height
 [Example: $3/16$ th inch block + pencil ($1/8$ th inch) = $5/16$ th inch cut line height]

Cut and assemble

Once you've selected your layers and appearance, it's time to cut, assemble, turn, and finish the pieces. Here are some tips to improve your results:

Bandsawing. If you're going to do a lot of resawing, you will get a better result from a 3-teeth-per inch (tpi) blade at least ½" wide. I prefer a ¾" 3 tpi skip-tooth blade.

Sanding. It's important to sand the glue surfaces smooth and flat. I recently started using a Performax drum sander that has helped me sand faster and more accurately.

Gluing. I use cyanoacrylate (CA) glue for all my assembly and first coat of finish. A 13-layer, four-hour glue-and-clamp job with shop glue takes only about 30 minutes with CA glue. The CA fumes will make your eyes water, so use in a well-ventilated area.

Waste blocks. If you decide to turn a lot of bowls that are 7" or less in diameter, make up a set of waste blocks fitted to your chuck. (My blocks are made from 2×2" scrap blanks, 3" long.) When I have used a block to turn four or five bowls and the block is down to about 1" long, I glue a 2×2" plug onto the working end of the block in order to use it again.

Surface finishing. The steps to sand and finish the bowl include grits 180, 240, 320, and 400. Spread a thin coat of CA glue on the bowl surface after the 320-grit sanding. The thin CA will act as a sanding sealer and usually fills any thin gaps between layers.

Wipe on the glue with the lathe at about 200 to 300 rpm and immediately wipe off the excess with a soft cloth before the CA glue sets. Use additional coats of CA as needed for a final finish.



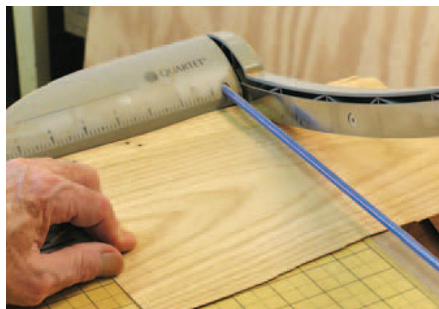
1 Bandsaw each layer for the bowl to approximate thickness desired. For additional stability while resawing, spot-glue scrap block to the side of the workpiece.



2 Drum-sand each layer to final thickness. (The dust flap was left open for photography purposes.)



3 Cut layers to final size. Stack pieces in proper order, and number top to bottom.



4 Choose contrasting or accenting veneer colors. With a heavy-duty paper cutter, trim veneer squares about ½" larger than the bowl layer.



5 Place a veneer square on a piece of wax paper, and spray activator on the veneer. Then squeeze a generous spiral of CA on the layer to be glued.



6 Press layer onto the veneer and quickly move it in a rotary motion to even out glue between the two pieces. Activated CA will set in about 8 seconds.



7 Use a sturdy pair of scissors to trim excess veneer and CA from all four sides.



8 Do not use activator to glue same-size components. You will have about 30 seconds to position layers. Note registration lines for alignment.



9 Mark diagonal centering lines on bowl base. On dark woods, mark with a white gel pen as shown above.



10 Using the center mark, spin a circle with a compass to the edges of the base layer.



11 With a bandsaw, remove the corners. Keep the best corner as a record of the woods and their thicknesses.



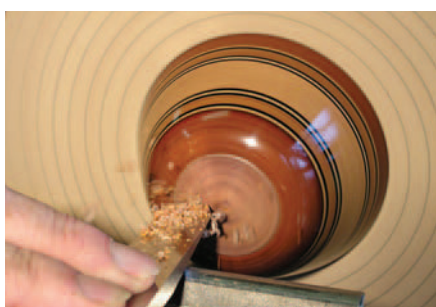
12 Using the centering marks, adhere a waste block to the bottom of the ready-to-turn piece with CA glue.



13 Turn the outside shape and sand to 320 grit. At about 300 rpm, apply a thin coat of CA and immediately wipe off excess. Polish with Micro-Mesh.



14 Turn the inside of bowl, then finish the inside by repeating the finishing steps used on the outside of bowl.



15 Part the bowl off the waste block after spraying inside and out with one coat of lacquer. Turn and finish bottom (shown mounted on a vacuum plate).

Finishing. A combination of CA as a sealer and Micro-Mesh as an abrasive/polishing agent are key factors in a really fine, touchable finish. Depending on the woods you incorporate in your bowl, you can either use the Micro-Mesh immediately after the CA or lightly sand the surface with 400 grit before using the Micro-Mesh.

Start with the coarsest Micro-Mesh grit, 1500. The amount of sanding residue on the sheet after each pass is an indication of when you need to proceed to the next grit. I use 1500, 2400, 3600, and 6000 grits, with 12000 used to polish the bowl after it's been lacquered. Apply a single, thin, wet coat of lacquer on the bowl immediately after the Micro-Mesh to avoid dust or fingerprint oil from marring the surface. (I use Deft brand gloss lacquer in an aerosol can.)

Jim McPhail (JimMcPhail.com) is a member of the Southern Highland Craft Guild and is on the Board of Carolina Mountain Woodturners, AAW's largest chapter. He lives in Fairview, North Carolina.

Sources

Wood. Cormark International (cormarkint.com) is a direct importer of African hardwoods at wholesale prices.

Veneer. Certainly Wood (certainlywood.com) stocks more than 100 varieties of veneers.

CA glue. ARGCO (argco.com; 877-747-4744) is a national supplier of plumbing materials. Argco sells CA in 1-pound or larger quantities. The activator comes in 15-oz. spray bottles. Contact Bruce Hallmark at 877-747-4744 or Bruce@argco.com. I prefer thick for adhering layers and thin for finishing.

Micro-Mesh Abrasive. Gamco Services (gamcoservices.com; 407-865-3484) is a metal-shop supplier that sells Micro-Mesh abrasives in 12×12" sheets at \$10.10 each.

—Jim McPhail

Thank-you to the American Association of Woodturners for allowing our use of this article



Briefs...

The Minnesota State Fair is a great place to show your wood turnings. It is free and registrations is easy. Registration is done on line at mnstatefair.org. Click on competition and follow the guide-lines.

Tim Heil will be demonstrating Woodturning at the Wooden Boat Show in Grand Marais, MN. on June 18 and 19, 2010. Hours are 9:00 AM to 4:30 PM. More information available at northhouse.org. Everyone is welcome and it's free.

The wood raffle is a great tradition for our club. It acts as a fund raiser plus it allows all of us to experience a variety of woods. When you select wood to bring for the raffle bring only the best. If it is cracked, or "punky" put it in the fireplace. Bring the best wood you have and you can expect to get the best wood in return.

I really like turning on my 6 speed jet mini but changing speeds was always a bit cumbersome. When the capacitor on the motor went out I decided to upgrade the belt changing process. I built a wooden platform which is hinged to a board which the lathe is mounted on. The motor is held in place with 2 big hose clamps. The toggle clamp keeps light tension on the belt. I can now change speeds in a fraction of the time using only one hand.

Jim Jacobs (sometimes, in our newsletter, known as Jim Jefferies)

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TREASURER'S REPORT

May 26, 2010

2009

Actual

Members 277

Income \$6,661

Expenses [\$8,735]

Gain [loss] [\$2,074]

2010

Budget

Members 260

Income \$13,658

Expenses [\$13,658]

Gain[loss] 0

2010

YTD Actuals 5/26/10

Members 251

Income \$12,084

Expenses [\$8,415]

Gain \$3,669

Cash balance 5/26/10 \$6,154

The professional Kip Christensen demonstration cost the club \$606 to host. The club purchased 5 new Delta Mini lathes for \$3,155. The club sold 7 old Jet mini lathes and an assortment of tools (\$972) for a net cost for the new lathes of \$2183. We continue to grow with 27 new members for 2010. The club purchased flowers for the two members involved in the April accident. .

Pam Johnson, Treasurer

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First Class