North Carolina WOODTURNER

Journal of the North Carolina Woodturners Association

A Chapter of the American Association of Woodturners

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Visit us on the web at www.geocities.com/nc_woodturners

THE PRESIDENT'S MESSAGE
by David Kaylor

We had a gratifyingly large turnout at our February meeting. I think that shows that there are lots of members who feel the need for basic and simple demonstrations. Ric Erkes has done a great job of balancing our program for all levels of turning: beginning, intermediate, and advanced. Thanks to Ron Mechling for showing us the variety of ways of approaching turning wine stoppers, and to Ric for demonstrating basic techniques as well as simple ways to add surface decoration, as he turned flower arrangement containers.

Have you thought of how much we would miss the sweets if Mary did not bring them? Thanks to Mary for her "sweet" service, and for all the other ways she makes our club work smoothly.

Did you miss the coffee? I did. Would you be willing to take on the task of preparing it? Jesse Wilkinson arrives early for every meeting, spends lots of time and energy getting the equipment up and ready, including the coffee makers. He deserves more support than he gets. Will you step up and help him?

Edgar Ingram and I met February 10 with representatives of Piedmont Triad Woodturners (Greensboro) and Woodturners Guild of North Carolina (Raleigh, formerly Triangle Woodturners) to begin planning for our jointly-sponsored November 5-6 Symposium in Statesville. This event will offer our members several opportunities: (1) to see some excellent demonstrations, on topics from basic to advance; (2) to gain experience in demonstrating, preparing the way to be demonstrators at the national or other regional meetings; (3) to place our work in the gallery (each attendee can bring three pieces); (4) to meet and talk with other turners; (5) to see and buy the wares of our vendors, whose contributions make the symposium possible; (6) to volunteer to help. Keep the symposium in mind during the spring and summer. Plan to attend. Be ready to volunteer for the many tasks we will have to accomplish to make it a success.

The American Association of Woodturners will have its annual national symposium in Overland Park, Kansas, July 22-24. Attending that event is an amazing and inspiring experience. My first Symposium was the in Akron in 1998, while I was still very much a beginner. It opened a whole new world of woodturning to me. I even attended a demo by our own Don Olsen! Don will again be a demonstrator this year. Start thinking about it. If you can attend, you will be greatly rewarded.

I regret that I will miss our March meeting. I will be in Haiti with a Presbyterian Church mission trip. Jim Miles, a member of our Board, and a very talented woodturner, will be our demonstrator – for details about his demonstration, see Ric Erkes's column. The Board will meet at 10:45.

I hope to see you in April.
David

2005 Demonstration Reviewers Wanted

Thanks to Ed Mackey for writing the review for the February demonstration.

We need volunteers for reviewing demonstrations this year. Contact John Uteck at 704-395-0728 or by email (john-uteck@carolina.rr.com) to sign up for a specific month.

Member News - by Mary Bachand

Please welcome Dave Fisher, Steve Hoyle, and Max Schronce, all from Lincolnton, to our group.

If "Mother Nature" cooperates, I will bring new directories with your membership cards attached to our March meeting. Of course, some of you have never picked up your 2004 directories and cards.

I have the name tag renew boxes with me. It is my plan to cull the tags of those who didn't and rearrange the tags. SO--your tag may have a new number on the back. If so, please use the slot of your new number.

Library News - by Mary Bachand

Years ago I read in a craft catalog that "no library would be complete without---"a certain set of books. So-I ordered the set by C. Holtzapffel for our library. And watched them gather dust! Yes-these are very thick and rather deep books-not a bunch of pretty pictures. But-we finally have someone who was willing to check them out. Thank you-David Allen!

I am returning the DVD "Sculpting Wood" with Trent Bosch as it is defective and am asking for a replacement. For the library I have ordered Segmented Turning by Bill Kandler. Jim Miles suggested this book.

My new theme is "Have Money, What Do We Need?" Please, folks, I need some ideas. I am not a turner and I haven't the faintest idea what would perk your interest.

Next Meeting: March 12th at 1:00 pm
Demonstrator: Jim Miles
Demonstration: Bowl Turning

KLINGSPOR'S WOODWORKING SHOP
"Quality Tools and Supplies for the Woodworker"

Meet at Klingspor's in Hickory, 856 21st Street Dr. SE (828-326-9663)

Program Notes - by Ric Erkes

Hopefully, by the time you read this you have had a chance to practice your tool skills with one or more of our February project demos. Jim Miles is going to take us to the next level by walking us through the steps of completing a turned bowl. Jim is a member of our board and an instructor at the Icehouse Woodturning facility in Davidson. Jim will walk us through initial wood selection, orientation and mounting the blank on the lathe. He'll then demonstrate the use of a bowl gouge to achieve the shape he desires while discussing his thoughts on design. He'll follow up with his technique for drying 'green wood' bowls. Since sanding is an integral part of a nicely finished piece, Jim will also give us his short version on sanding tips. If time permits, Jim will show off his Grandfather's 100 year old lathe. Lathes have certainly come a long way.

If you are a new turner, this is a must see demonstration. For those of us that have turned a few hundred bowls already, you know as well as I do, that every time you see somebody demonstrate there is always something that clicks or resonates, "maybe I'll try that" or " never thought of it that way". In any case, this is a demo to come prepared to ask your questions or give your own insights.

Okay, I'm really serious now, put this down, I'll wait, and circle the first weekend in November to be at our Symposium. You back? We are planning on 20 back to back demonstrations to appeal to both new and experienced turners. The Symposium is held in the Statesville Convention center. If overnight reservations are needed, local hotels will have special rates. A gallery of turned work will be on display ranging from museum quality to someone's first pride and joy. Be prepared to bring a few pieces to share your inspirations. You can even stick a price tag on them if you want. The idea is not to win best of show or bust. No matter where you are in the turning spectrum, there is always somebody wishing he/she could do just what you did. More Symposium information will be coming along as our plans firm up.

I still have a few months open to schedule demonstrations for us this year. Believe it or not, I really do want your input. To put it in flying terms, I'm almost out of ideas and airspeed. If you know of a nationally known turner touring the country clue me in. If you went to a regional symposium and saw a demonstration that would be worth having at our club, clue me in. See something on the internet of interest, clue me in. If I get more demonstrators than I have months left, there is always next year. Now don't shove this aside… think about it… let me know, and I'll schedule the demo to clue us all in. I expect over 100 emails, rate@adelphia.net. If I don't hear from you, I am going to assume you circled the first weekend in November and never came back to finish reading this, but at least we'll see you at OUR Symposium.

NCW Calendar of Events

Mar. 12 - Jim Miles - bowl demo.
Apr. 9 - Russ Fairfield - Polychromatic platters.
May 14 - Elvie Jackson - hollowing.
June 11 - John Penrod—lidded vessels.
July 9 - Don Olsen - "Various Ways to Turn Crotches"
November 5-6 - Carolina Symposium.
December - Holiday Festival.

John C. Campbell Folk School

For several years, the John C. Campbell Folk School has offered a half scholarship to a member of our club, which the club matched, giving one of our members a week of classes under excellent instructors. They have changed their policy, so that all scholarships will be based on financial need. Anyone who would like to apply will need the endorsement of our Board of Directors. For more information, visit their website or call them for a catalogue (addresses elsewhere in this newsletter).

Want to learn something new about woodturning?

If you are interested in learning new skills, or improving the skills you have, contact one of these NCW members:

* Dean Amos (Sandy Ridge, NC) 336-871-2916.
* Gene Dampier (Banner Elk, NC) 828-898-6143.
* Ric Erkes (Davidson, NC) 704-896-3302.
* Edgar Ingram (Statesville, NC) 704-876-4576.
* David Kaylor (Davidson, NC) 704-892-8554.
* Glenn Mace (Mocksville, NC) 336-751-1001.
* Sam McDowell (Statesville, NC) 704-871-9801.
* Grant McRorie (Rutherfordton, NC) 828-288-9572.
* Ron Mechling (Shelby, NC) 704-487-0506.
* Jim Miles (Cornelius, NC) 704-661-0600.
* Dick Nielson (Gastonia, NC) 704-864-1742.
* Don Olsen (Lincolnton, NC) 704 735-9335.

... or see what's offered at one of these Woodturning Schools

Arrowmont School of Arts and Crafts, Gatlinburg, TN
865-436-5860
(www.arrowmont.org)

Ice House Center, Davidson, NC
(704) 892-7323
(www.icehousecenter.org)

John C. Campbell Folk School, Brasstown, NC
1-800-FOLK SCH
(www.folkschool.com)

If you want to volunteer as a mentor, please contact John Uteck with your information to include in the newsletter.

Demonstrator Review

by Ed Mackey

At this meeting, we were fortunate enough to have 3 demonstrations from our own members. Ron Mechling showed us how to make bottle stoppers, David Kaylor demonstrated turning Napkin Rings and Ric Erkes showed us how to turn a small bowl with some added texturing.

Bottle Stoppers

Ron's demo of bottle stoppers proved to be quite interesting. His demo covered:

* Preparing the wood
* Attaching the wood to the lathe
* Turning
* Sanding
* Finishing

Preparing the wood. Ron starts out with a piece that's 1.5 x 1.5 x 12 inches. To speed up the turning process, (Ron usually turns 4 dozen at a time) Ron takes the wood pieces to the bandsaw and cuts away the corners. He points out that this is not necessary; it just speeds up the turning process. Using a roughing gouge, Ron turns the piece between centers and forms a cylinder. Riding the bevel is emphasized. It's worth noting here that Ron uses his thumb to deflect the chips. When the wood is trued up to a cylinder, he uses the bandsaw again to cut the pieces into 2.25-inch segments. These are then taken to the Drill Press and a 23/64ths hole is drilled into the wood (end grain side). This is where the bottle stopper will attach to the wood . The 23/64ths size is 1/64th less than 3/8ths and this is intended to achieve a nice snug fit. A jig at the drill press to center the stoppers is helpful. The depth of the hole should be 3/4 inch.

Attaching the wood. Now that the stopper is ready to be turned, it needs to be attached to the lathe. Ron pointed out that there are several ways to do this. These include:

* Collet
* Jacobs chuck
* Small spur drives
* Bottle stopper adapter

Ron had a sample of each type, and pointed out the pros and cons of each. In his demo, Ron used the bottle stopper adapter and the collet to hold

#2 Morse Taper, 3/8" Collet

the stoppers. The bottle stopper adapter is similar to a screw chuck in that it has threads that the piece screws onto. The collet is used to hold a dowel that is pushed into the 23/64th hole in the bottle stopper. The collet is attached to a drawbar (i.e., a rod threaded through spindle.)

Now Ron begins to turn first stopper. Ron uses 4 tools to do his stoppers.

1 Roughing gouge

2 Spindle gouges (Both freshly sharpened. The second is to use when the first becomes dull)

1 Round skew

The first stopper Ron turned was Cocobolo and was held with the Bottle Stopper adapter. Ron pointed out that some folks are allergic to this wood and that it's advisable to have a dust collector near the work. The first task was to true the stopper. Ron emphasized riding the bevel when forming the shape. Ron showed his skillful use of the spindle gouges forming both the top of the spindle and tapering it down to where it will attach to the cork. For some added detail, he used a narrow parting tool to cut a few grooves in the stopper. He pointed out that the depth of the grooves should all be the same.

Sanding. The next step in this process is to sand the stopper. Ron mentioned that his normal grit changing routine is as follows: 150, 180, 220,240, 280, 320, 400 and finally 600. If the wood allows, he might go with 180,240,320 and 600. Ron indicated that he always doubles the sandpaper; it just seems to work better. He indicated that he doesn't mind sanding and finds it therapeutic. Don Olsen asked if he hired out...but I don't recall a deal being made.

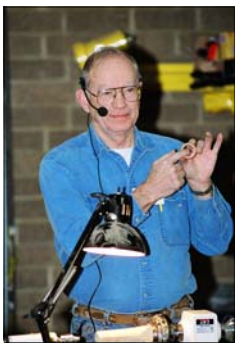
Finishing. For this stopper, Ron used Bri-Wax. He mentioned that this was a Carnauba based wax. He applies the wax using a small cloth while the lathe is running. And after only a short while, 20 seconds or so, he buffs it with a clean soft cloth.

Now the stopper is "unscrewed" from the adapter. This stopper was then screwed on to what Ron termed as a Chrome Band stopper. This stopper has the cork, followed by a chrome band and 3/8 screw that matches the 23/64th hole in the stopper. Getting a tight fit may require some assistance by using a vice to hold the stopper while the wood is screwed on. It's advisable to use a cushion of some sort, like a rubber strap to avoid marring the chrome while in the vice.

The process for the next stopper was similar to the first. This second stopper contained a 3/8-inch dowel in the 23/64th inch hole in the stopper. The collet and drawbar was used to hold this stopper. Turning was also similar except the parting tool was not used for adding detail to this one. Instead the spindle gouge was used to form some decorative coves and the round skew was used to get even cleaner cuts.

Ron used the same sanding process on this stopper as the first one. Instead of Bri Wax, Ron used Mylands Friction Polish for this stopper. This is a shellac based product that produces a very high gloss. Ron points out that it might take some experimenting with this to get the desired result. Putting too much on can cause problems.

Napkin Rings



David Kaylor was our next demonstrator and showed us how to turn napkin rings. The process included the same basic steps Ron Mechling showed us previously in turning bottle stoppers.

* preparing the wood
* attaching the wood to the lathe
* turning the piece
* sanding
* finishing

David noted that his approach is similar to the article published in the summer 2004 issue of American Woodturner by Jerry Hubschman. The wood used for the ring can be from several different sources. David used a piece cut from a Peach branch and another from a scrap salvaged from a bowl. When taken from a branch, he starts with about an 8 -10 inch long limb turned to a cylinder (between centers) about 2.5 inches in diameter. Then using a band saw, they can be cut into slices that are about 1/2 to 5/8th wide.

When the wood has been selected, David starts off by using a 1.25 inch forstner bit to drill a hole through the center. He notes that it's important to get a nice clean cut in order to minimize tearout. If the forstner bit needs sharpening, it would be a good idea to drill to a depth where a pilot hole appears in the other side and then turn the piece over and drill starting in that pilot hole. Again, this is to avoid tear out.

Once the ring has been formed, the next step is to attach it to the lathe. For this David has made what I would describe as a jig held in a chuck that allows the ring to be mounted on. To make the jig, a square piece of wood about 10 inches long and about 2.5 inches wide was used . A hole was drilled in the center of one end about 6 inches deep. The size of the hole is was about 5/8ths but should really be determined by the size of the live center adapter used to tighten into this hole. Also a few kerfs were cut to allow for expanding when the ring is slipped on. This was then turned between centers with a tenon formed in order to hold it in the chuck. It was turned to just slightly less than 1.25 inches.

Once the jig is mounted in a chuck, the ring is then slipped over the open end and the tail stock is brought in with the live center making snug contact here, just enough to expand the jig to hold the ring nice and tight.

David uses a roughing gouge to true up the outer edge of the ring. At this point it's strictly up to the turner to add whatever decorative turnings he chooses. After squaring up the edge, David added a slight cove to the front edges with a spindle gouge. Then the thin parting tool was used to cut a few decorative grooves in the center of the ring. A wire held between 2 wood handles was then used to burnish the ring in these grooves.

Turning was then complete and David sanded thru his normal grit sequence. After sanding, David applied a lacquer sanding sealer and noted that this was the approach that Chris Stott uses. After buffing with a paper towel, David applied Bri Wax and buffed the outside of the ring. The ring was then removed. He noted that since he used a very sharp forstner bit, the cut was clean and only minor sanding was needed and could be done by hand. BriWax can then be applied to the inside of the ring and buffed by hand. The Napkin Ring was complete.

Flower Arrangement Bowl

Next, Ric Erkes demonstrated how to turn a small bowl intended to hold flower arrangements. He showed us a sample of what the finished product looks like. Its a bowl about 6-8 inches in diameter and about 2 inches deep. The top of the bowl is only hollowed out in the center in order to accommodate a "Flower Arranger". These are available from Packard woodworks and Craft Supplies (for about $7.00). This is an insert made of black anodized cast aluminum with steel prongs that hold the flowers upright, in water and in position. The top of the insert is about 3 inches in diameter and the bowl portion of the insert is 1 and 3/8ths diameter and 3/4 inch deep. (This I found in the Packard catalog)

Ric noted that dry wood works best since it doesn't move and fitting the insert later on requires stability. The bowl blank Ric used was pre-drilled and then mounted on a screw chuck. Tip: wax the screw to allow for ease of getting the blank on and off. If need be, use thin laminates as shims so the blank does not have to be screwed too deep. For safety, Ric brings the tailstock up to the blank. Also for Safety, Ric emphasized wearing a full face shield.

Then Ric began to turn the bottom side of the bowl. He noted that many turners true up the outer edge before turning the bottom, but he simply starts turning from the center to the edge (which eventually trues up the edge). Ric demonstrated pull cuts and push cuts and the benefits of each. He also showed how raising and lowering the gouge handle affects the direction of the cut and consequently, the resulting shape. Ric also emphasized the importance of using very sharp tools to get the cleanest cuts.

When the outside of the bowl was roughly shaped, Ric began to focus on the foot of the bowl and prepare it for reverse chucking. Knowing the size of the chuck that will hold the bowl will determine the size of the tenon to form. A pencil line was drawn on the turning

bowl indicating the outside edge of where to turn the tenon. Since Ric has 2 chucks, he's made 2 matching jigs that sit on the live center, that allow for an accurate pencil line to outline forming the tenon. A parting tool was then used to turn the tenon used for reverse chucking making sure that the shoulder was flat in order to get a good fit with the chuck when reversed.

Ric continued to shape the outside of the bowl and then refined the shape of the foot. Here he demonstrated the use of pulling, or slicing, cuts with the gouge handle as low as possible. The direction was from the center to the outer edge. He also showed how to get a nice clean cut at the shoulder of the foot.

When the bowl was reversed in the chuck, the top of the bowl was trued up. Calipers were used to measure the diameter of the rim of the insert. Then Ric used the calipers to scribe a line in the front of the bowl where the rim would sit. I often wondered how this was done, so reviewing this tape was quite useful to me. With the lathe turning very slowly, you guess at where the left side of diameter would be and lightly scribe the left point of the caliper. When the scribe mark appears, line up the right side and then adjust the left side to where both points are on the same line and scribe a bit deeper. A parting tool was then used to form the location of where the rim of the insert would sit. The depth of the rim was about 1/8th of an inch. The rim only needs to sit on about 1/4th of an inch so it does not need to be flat to where the bowl portion begins. Ric then hollowed out the bowl portion and did a dry fit with the insert to ensure a good fit. A tight fit where the rim sits is not advisable as the wood may move later on. Try for a loose (but not sloppy) fit.

Once the insert area was completed, the remaining portion of the front of the bowl was turned. Here Ric demonstrated the multiple uses of the texturing tool and skew to add decorative details to the front (top) of the bowl. Ric also showed us how to burnish a groove in the side of the bowl with 18 ga. wire and how to burnish the top of the bowl by cutting a groove and burnishing with a piece of wood the size of the parting tool used to cut the groove.

When this phase was complete, the bowl was removed from the lathe and re-attached using a jam chuck approach. A block of wood was attached to the chuck. For cushioning and protection of the surface, a paper towel was placed on the top of the bowl, and a drawer liner placed on top of the towel, and these 3 pieces were placed between the block of wood and the tail stock's live center which was inserted in the center mark on the tenon. The bowl turned and appeared to be perfectly true.

Now Ric refined the turning of the foot by removing most of the tenon with a curved gouge that allows getting real close to where the tail stock's live center meets the tenon. Additional texturing and circles were added to the area just inside the foot. The only remaining item was a small amount of sanding to get rid of the area between what was left of the tenon and the live center.

This completed the demos for today. Many thanks to Ron, David and Ric …all were well done and well appreciated. *(editor's note: be sure to sign out the video for this month's demonstration, not only for a refresher on the demonstrations, but also to see the tools and jigs used.)*

2005 Challenge Projects

March - scrap wood project.
April - Celebrate daylight savings time at 2 a.m. on the first Sunday of April - turn a clock or watch.
May - alternative materials - including tagua nuts or banksia pods (available at Klingspors), alabaster, or other.
June - plywood project.
July - 2x4's - use no more than one 8' long 2x4.
August - turn a bird, animal, fish, etc. - either multi-center turning, or multiple turnings joined.
September - then and now! Bring in one of your early turnings, and one of your recent ones.
October - wearables - something to wear.
November - Symposium Gallery.
December - birdhouse ornaments.

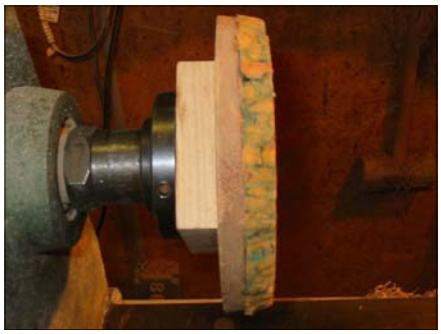
Raffle

Don't miss out on your chance to win

some great things in the monthly raffle, including tools, finishing supplies, CA glue, wood sealer, jigs, wood, etc. See Ken at the start of the meeting or during the break to purchase your tickets ($1 each, or 6 for $5, or 13 for $10).

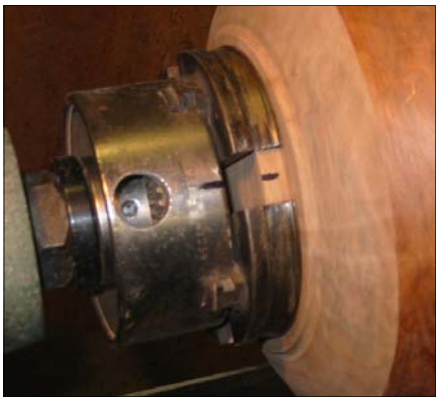
NEWSLETTER ARTICLES DUE MARCH 25

Now that the bowl is dry it's time to do the finish turning. You'll find that drying process has left the tenon out of round and the face where the jaws seat uneven. The first requirement is to true these surfaces so that the chuck jaws seat correctly. An easy way to do this is to use a piece of plywood faced with router pad. Glue a true 3"square of wood to the plywood, clamp it in a chuck or drill a hole precisely in the center of the square and use a screw chuck then round the plywood to an appropriate diameter. You should give the plywood a slight convex face. Glue on the pad with rubber cement and trim it to the same diameter. I have 3-4 of these padded units to use on various size bowls.



I use a dedicated screw chuck but all 4 jaw chucks come with a screw center. Now put the open end of the bowl over the pad and position the live center into the center hole left from the rough turning. Turn the tenon round and face off a flat. Now is also a good time to decide the shape of the bottom and do the preliminary cutting while it's on the pad.

Fasten the tenon carefully in your chuck being sure to seat the jaws against the flat. Use both keyholes to tighten the jaws. Notice that I've placed a mark on the tenon opposite a mark on the chuck. At some point you might want to remove the bowl from the chuck and it's wise to be able to replace it in its original position.



Now we are ready to do the finish turning. As I've said before if you need help in tool control and proper cutting techniques please make an appointment with one of the mentors listed in the journal. I feel that each bowl you turn needs some distinguishing characteristic, some feature to set it apart. I've chosen to leave a band of wood at the rim. Keep in mind that after finish turning the bowl may again go out of round due to the release of stresses or due to further drying. If you plan on incising the rim with cut lines, burn lines or texturing you might get skipped portions. If this is your plan then do the finish turning in two steps letting the bowl acclimate before the final turning.

Lets talk about sanding. Many of our demonstrators emphasize how they hate sanding. I liken it to ironing a shirt and I don't mind it all that much. Sanding just takes out the wrinkles. I do the best job I can with gouges and scrapers. Spritzing with water then taking very light cuts with a freshly sharpened gouge will often clean up troublesome areas. I start sanding with a grit that will nicely cut the wood I've chosen. That is often 60 or 80 grit. In my mind the final finish doesn't depend so much on the last grit used but on how well you use the first one. It's where I take the most time. I probably spend 75% to 80 % of my total sanding time with the first grit and the rest with the all the others up through 400. Sand paper, too needs to be re-sharpened from time to time. The same rule applies to sandpaper that applies to gouges. You don't re-sharpen when it's dull, you re-sharpen when it's not as sharp as it should be. Throw it away and put on a fresh piece. If you discover a place that isn't cleaning up properly don't hesitate to go back to a lower grit. When power sanding the work turns slowly and the paper moves fast.

I started this series by promising to help you avoid mistakes that would identify you as a beginner. Here's a second suggestion. A clunky bowl is a giveaway. Go ahead and take that extra cut. I try for an even wall thickness not greater than 1/2" and more typically 1/4" to 3/8", depending on the diameter. Here's another caution. If you power sand the inside bottom there is very apt to be circular waves there. You get rid of these by stopping the lathe and moving the sanding pad from side to side horizontally with the grain.

Next month we finish the bottom without using a vacuum system.

Each month Don will have tips, techniques and suggestions which will be of most interest to those members who are in the early stage of their turning career. If any member has a question or subject they would like to see covered send an e-mail to Don at donoetjen@aol.com.

Alcohol soaking method for drying bowls

by Dave Smith (www.woodnheart.com)

(Reprinted with permission from Dave Smith and Woodcentral. For more information, see www.woodcentral.com and select the "turning" message boards, and search for alcohol drying)

Background:

Drying roughed turned bowls has always been a challenge for wood turners. You need to balance the desire to finish a piece as soon as possible with the inherent tendency of wood to warp and split when dried too quickly. Wood turners have employed various methods to maximize the drying speed while minimizing the degradation of the wooden shape being created. Over time each method has collected its own supporters and detractors with respect to the relative effectiveness of the process.

Criteria for a good drying process include ease of use, cost, and consistency of results. A process that is difficult to use, even though it produces good results, will garner few adherents. Likewise, an expensive protocol may appeal to a commercial turner who can expect to recoup the investment but it may be cost prohibitive for the average wood turner. Consistent results without labor intensive monitoring or manipulations are a major benefit of any method.

The most common method of drying wood bowls is placing them in a paper grocery bag. The theory is that the permeable paper produces a micro climate around the bowl. The bowl dries slowly with a small differential moisture gradient across the bowl sides. This method works well but it is slow.

Boiling can improve the stability of the wood by rupturing the cells, allowing moisture to more readily migrate to the surface and evaporate. Boiling is time and labor intensive, consuming requiring considerable space for a large pot and heat source. Since most people don't want to boil bowls in the kitchen, it is necessary to set up some way to boil outdoors which can be a big drawback in cooler climates during the winter months. Boiling can also be dangerous. A good friend of mine was severely burned when a plate blank wedged in a boiling pot of water, sealed the pot and led to a steam explosion.

Soap soaking has gained popularity in recent years. A bowl soaked in a soap solution is supposed to be easier to turn because of the lubricating action of the soap. Bowls are said to dry faster and crack less after soaking but some people report that there is still a fair amount of distortion of the finished piece.

It was my experience with soap soaking that led me to the alcohol soaking procedure I use today. When I researched soap soaking and read the discussions on wood working forums, the consensus was that it was the surfactant in soap that allowed the wood to dry faster.

Researching the MSDS (material safety data sheets) for several commonly used soaps revealed that the surfactants were listed as being alcohols. I reasoned that using alcohol for a soaking solution might be a simpler method. The most readily available alcohol is denatured alcohol found in the paint section of any hardware store. A gallon of denatured alcohol costs from 10 to 12 dollars.

A search on the internet noted several instances of alcohol soaking of archeological artifacts to displace water in a complicated protocol for stabilizing and preserving historical wood pieces. Alcohol soaking is used as the first step in of a process to replace water in the wood with a stable inert binder that will maintain the shape of the artifact and prevent further degradation. The fact that alcohol is used to displace water in archeological artifacts suggests that it might also work to displace water in green wood thus speeding up the drying process.

My testing involved a large variety of wood species. In each case, the results have been consistently good. Types of wood included some traditionally hard to dry woods such as apple, plum, cherry and mulberry.

The test consisted of turning two similarly sized bows from the same type wood. One bowl from each sample was soaked in alcohol then both were dried in the same manner. Several methods of drying were used from the most conservative, a paper bag, to the most radical of placing the bowls uncovered on a wire rack in my heated, dehumidified shop. I recorded the weight, date and time when the bowl was set aside for drying and then recorded the weight daily when possible. After the bowl stopped losing weight it was considered dry or at equilibrium with the surroundings. The data showed that small thin (1/2 inch thick walls) bowls would reach equilibrium in 4 to 5 days. Using this data, I developed a process that was quick and consistently yielded usable bowls.

Here is a set of roughed out apple bowls that were cored from the same block. After more than a year they are still in good condition and ready to turn when I get a chance.

The Process:

Bowls are roughed out to 1/2 inch wall thickness for pieces less than 8" in diameter. Over 8" in diameter, I leave a wall thickness of 5/8 to 3/4 inches. Since my lathe is limited to 12 inches, I have not tested bowls larger than that for optimum wall thickness. I often turn utility pieces with a finished wall

thickness of a quarter to half an inch. In these cases the roughed out wall thickness needs to be thick enough to allow for distortion. No drying method will completely prevent movement of the wood when it dries, so plan your roughed out blank accordingly.

Once the bowl is roughed out it is submerged in denatured alcohol for at least 2 hours. Larger, thicker bowls need to soak longer to ensure good penetration of the alcohol. Longer soaking time does not appear to damage the wood.

Remove the blank from the alcohol and let it air dry for about an hour to dry the surface.

Now wrap the outside of the bowl in heavy paper such as a grocery bag. Secure the paper with a couple of wraps

of masking tape around the rim. Fold the paper over the rim, trim off the excess, and place the bowl upside down on a rack to dry. If the bowl set on the foot it may not rest evenly due to the paper and the air may not circulate as well. The inside of the bowl needs to be exposed to air.

The reason for wrapping the outside only is the theory that it will create a compressive stress on the bowl by drying the inside quicker than the outside. As the inside dries it shrinks which pulls on the outside causing it to compress. This compressive force minimizes cracking during the drying process. Thinner walls yields less distortion and fewer cracks by decreasing the maximum stress developed between the inside and the outside.

The alcohol I use for soaking bowls is denatured ethanol alcohol, straight from the can. I do not recommend methanol due to health and safety concerns. Although I did successfully test some bowls in isopropyl alcohol I did not like the smell. Isopropyl is not readily available in concentrations greater than 70% while denatured ethanol normally is 95%. Alcohol is added to a container as needed to cover pieces. During soaking, some alcohol will be absorbed, so a small amount will be lost when each bowl is removed and must be replaced with fresh alcohol. Because of this I have not worried about the dilution of the solution over time. The results have been consistent for bowls soaked in fresh alcohol and those soaked in solution used many times.

One concern was the possibility that alcohol used to soak dark wood would become a dye and discolor lighter colored wood subsequently soaked in the solution. There has been no indication of this happening.

The solution does collect wood dust and other debris over a period of time, so I strain the solution when transferring between containers. A kitchen strainer place across a container with a paper towel filter is sufficient to remover the big hunks.

Containers used for storing soaking alcohol should be non metallic. Alcohol is about 95% alcohol and 5% water when purchased. As bowls are soaked in it, the moisture content of the solution will increase, which, along with other impurities leached from the wood will attack metal containers.

I use plastic ice cream containers for soaking bowls and storing used alcohol. A one gallon container will accommodate a bowl 8" in diameter by 5" tall. A two gallon ice cream container will hold a turning 8 1/4" in diameter and nearly 10 inches tall.

For larger bowls, a 13qt stainless steel bowl will accommodate 13" diameter bowls that are less than 6" from the rim to the bottom of the foot.

To cover a large bowl, place a sheet of heavy plastic film over the steel bowl and secure it by wrapping the rim with clear packing tape. If you stretch the tape, the cover can be removed and replaced as needed while providing a reasonably good seal.

Still larger bowls can be placed in a

heavy plastic bag and then nested into a pile of shaving to conform to the bottom of the bowl and limit the amount of alcohol needed to cover the bottom. The inside of the bowl can also be filled to reduce the volume of alcohol needed to completely cover the bowl. With a little bit of ingenuity the amount of alcohol required to process large bowls can be held to a reasonable quantity.

Other Trials:
In order to verify the results I had obtained with alcohol soaking, I asked several other tuners to try it. I wanted to get a cross section of turners with different experiences and specialties. Some of those who provided data included Bill Grumbine, Dominic Greco, Mark Kauder, and Jennifer Shirley.

Mark Kauder has used the method for 3 bowls, two from box elder and one from sycamore. He bought a slab of freshly cut Ambrosia Sycamore, 4" thick and not sealed. He cut three 16" diameter blanks from it, roughed them out, then used the alcohol soaking method on one of them while completely covering the other two with Anchorseal. When he later pulled them out, the Alcohol Soaked on seemed dry, and had warped only about 1/2" across the grain. When he turned it, it was dry, and has not moved since. The two Anchorsealed ones had both warped/shrunk 1" across the grain and had "Potato chipped" or cupped about 1/2". After chucking them up and getting them round again, they still continued to move. Mark reports he will use the alcohol soaking method when he turns solid wood.

Dominic Greco has completed more than a dozen pieces using the alcohol soaking process. He has used the process on many types of wood including; Box Elder, Norway Maple, Osage Orange, Cherry, Chinese Elm, and Apple. When asked what the worst problem was Dominic responded, "The piece of Osage Orange cracked during drying, but I believe this was a crack that was present in the blank, and not a direct result of drying". Dominic uses a moisture meter to determine when a bowl has completed drying. After 2 weeks he reports that his pieces are at a moisture content of 6%. None of his finished pieces have distorted as of the writing of this article, and Dominic reported that it is now the only method he uses for drying bowls.

Bill Grumbine used the alcohol soaking method in late 2003 to fill Christmas orders he received during a Thanksgiving artist show. Bill has been an enthusiastic supporter of the method.

Jennifer Shirley soaked one walnut bowl before reading the fine print as, she calls it, and left it in the alcohol for four days. When she removed it, she simply left it on a shelf exposed to air. Four months later the bowl exhibited no problems other than the normal out of round when she finished turning it.

Conclusions:
Although I collected data in a consistent manner and attempted to control variables, this is not a strict scientific study. The study did not verify my theory of why the process works. The study does show that soaking green roughed out bowls in alcohol does reduce the time necessary to bring them to equilibrium with their surroundings. Wrapping the outside of a bowl reduces distortion and checking. Testing by other wood tuners has verified that the protocol works consistently. The process is simple and relatively fast. The expense of denatured alcohol is minimal compared to the savings in reduced bowl losses, but the biggest saving is time. Using the alcohol soak method reduces the drying time for roughed out bowls from months to weeks.

Dave Smith

The 19th Annual National AAW Symposium Overland Park Convention Center Overland Park, KS July 22-24, 2005

(www.woodturner.org/sym/sym2005)

The Annual AAW symposium is the highlight of the woodturning year. We meet in a different location each year, rotating throughout the regions of the continental United States. The symposium has become the most attended woodturning event in the world.

Each symposium features three days of woodturning demonstrations and meetings. These are lead by numerous internationally known woodturners, the highest quality woodturning instructors, and knowledgeable local talent.

Multiple rotations are held simultaneously so the attendee has many different types and styles of woodturning demonstrations available. Many of the demonstrations are held multiple times so the attendee has the opportunity to attend sessions they may have missed. Each symposium has had a unique flavor, but most of them have had the following features:

* A Fine Rotation Schedule of the World's Best Woodturning Demonstrators.
* An Instant Gallery like no other on Earth. This gallery includes pieces brought to the event by the attendees.
* A Banquet in the Middle of the Weekend.
* An Auction of Tools, Wood, and Fine Woodturnings. Funds from the Auction Fund Scholarships for Woodturning Education.
* The Largest Woodturning Trade Show Anywhere. This Includes Tool and Lathe Manufacturers or Their Representatives as Well as Vendors of Wood and Other Materials and Supplies Related to Woodturning.

FEBRUARY GALLERY

Photos by George Wunker

Editor's Note: Since I didn't receive the name cards this month to identify the gallery pieces, thanks to all those who brought their turnings *!!!!*

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FEBRUARY GALLERY - Photos by George Wunker

Remember, our meetings are always at 1:00 on the second Saturday of the month at Klingspor's Woodworking Shop in Hickory unless otherwise noted in the Journal.

NEXT MEETING: March 12th at 1:00 pm