



# *North Carolina* **WOODTURNER**

**Journal of the North Carolina Woodturners Association**  
*A Chapter of the American Association of Woodturners*

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Volume 12, Number 10

October 2002



**September 2002 - Challenge Project Winner**  
**Spalted Maple and Walnut**  
by Sam McDowell

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## THE PRESIDENT'S MESSAGE

By John Winslett

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Our September meeting was not only a technical education, but also an excellent example of skilled turning. John Hill is always an entertaining and talented demonstrator. Thank you, John.

We asked for a show of hands for a mentor/student program. Many hands rose but I only saw 3 names on each list. Please let me know if you are willing to participate. Call me at (828) 859-9863, email, [jwinslett@charter.net](mailto:jwinslett@charter.net), or mail at 1753 Warrior Drive, Tryon, NC 28782. We will have further discussion at our October 12th meeting.

Our host, the Woodworking Store, is forming a book to display the work of our members as well as other artisans in wood. They would like to have a picture of your work along with a description of your process. This will provide other customers with examples of what can be created in woodworking and turning. Forms are available from the store.

The store is also hosting a large woodworking extravaganza at the Hickory Convention Center, October 18th & 19th. We will have a booth and will be demonstrating turning techniques. I NEED VOLUNTEERS ! Please let me know no later than our October meeting if you are willing to help. Earlier would be better! We also need members to man the booth to explain our purpose and handle sales of gallery items that members wish to sell. You may also display work without a sale price. Numerous items were sold last year. I would recommend moderate price items - not museum quality!

We are in good shape financially and hope to stay that way. You are reminded, however, that we are a tax-exempt 501c3 organization and consequently donations made to the North Carolina Woodturners Association are deductible on your income tax return. While not a charity, we are non-profit!

Your Board voted to purchase some new tables since several of our old ones are beyond repair. We plan to obtain plastic ones that are light weight, yet strong.

We appreciate Mary Bachand's efforts in preparing goodies for our meetings. However, they ain't free! Please put your money in the box and be generous. Remember what you would pay outside!

Don't miss the October 12th meeting. Bill Johnston is our demonstrator and I can guarantee you will be better informed and skilled by his teaching. I know first-hand - having taken a course from him. See you there. The Board will meet promptly at 11:00 and we start at 1:00.

John

## Coming Events - by Ric Erkes

October 12th. Bill Johnston, an accomplished turner and demonstrator, will demonstrate multi-axis turnings.

<http://home.pinehurst.net/johnston>

[http://www.kestrelcreek.com/AIR/Bill\\_Johnston.htm](http://www.kestrelcreek.com/AIR/Bill_Johnston.htm)



November 9th. Al Basham will be discussing hollow form turning and the use of his custom made tools.

December 14th. The annual Christmas Party and Auction.

January 2003. Scott Ollis will be turning a 'square' bowl.

## Member News - by Mary Bachand

We welcomed new member Bill Piastuch of Banner Elk, who attended our meeting for the first time. Gene Dampier had recommended our group to Bill. Then, after our meeting, we got another member from Banner Elk - be sure to welcome Robert Erardi.

We really missed a "kodak moment" at our September meeting, as there were some very special people attending. Tony Bradley, Tom Fitz, Dick Nielsen, Jack Stewart, and Edgar Ingram, all former NCW presidents who each served two years, were there. In several months John Winslett will join this fine group. (The only other former president, and no longer a NCW member, is Bob Fisher who served one year.) I could kick myself for not realizing, at the time, that this was a special happening. George Wunker could have taken their group picture for the journal.

The gallery challenge for August had been "back to school" and J. D. Reinhardt had turned a fantastic apple complete with caterpillars for the teacher. When he found out that I'm a teacher, he made an apple for me. My fourth graders were quite excited with it.

Don Hildebran made a turning tool, sorry Don but I'm not sure what it was, which sold to a member at our meeting. Then Don donated the money to the library to replace some of our equipment that disappeared with our "vanishing" member.

**NEXT MEETING: OCTOBER 12th at 1:00pm**

**Library News** - by Mary Bachand

I ordered the three video set from AAW about the 2002 symposium. When I received the AAW order, they sent a replacement for our Mark St. Leger video which had poor audio. This will be available at our October meeting.

Thanks to the gift from Don Hildebran, I ordered the video, "Turning Bowls" with Chris Stott to replace one of the missing items. If any of you know where I can get "Tool Making for the Woodturner" with Al Basham, "Sharp Tools for Woodturners" with Melvyn Firmager, and "Spindle Turning" with Mike Darlow, please let me know. Those need to be replaced and I don't find them in the Packard catalog (the only one that Ken has at this time). The other 2 items that "disappeared" have duplicates in our library. I also ordered the book, "Masterful Woodturning" by Gary Roberts.

Did I brag too soon? Four of you have a number of "overdue" items and although two of you returned some items, I am still missing two books, one by Dick Sing and one by Mark Lindquist. So check your "put-down-until-later" places and maybe you will find the books. Each of you will need to return your items with the extra rent money in October or, as the board directed, you will become "famous".

**Demonstrator Review** - by David Kaylor

Our September meeting featured John Hill demonstrating the making and use of a vacuum chuck. The major advantage of a vacuum chuck is the ability it provides to turn the bottom a bowl so that it looks as beautiful as the top. John says he would rather the bottom be better than the top, if one is better than the other. Noting that the first thing most admirers do is turn the bowl upside down and look at the bottom, John wants them to say "Wow!" when they turn it over.



John asserted that while it is certainly not necessary to have a vacuum chuck, and that one can accomplish the same tasks with other methods, once one uses a vacuum chuck, one will not be satisfied without it. With that warning, maybe some of us should have left the meeting, so we would not be trying to figure out how we can find the necessary cash in a failing economy to buy one.

John's first step was to describe the components of a vacuum chuck. The first necessity is a vacuum pump. John's is a three-quarter horsepower Gast pump purchased from Grainger, which will pull 10 CFM of air at a vacuum of 25 inches of mercury. While this is more than necessary, the pump needs to be powerful enough to hold porous woods, which leak air "like a bundle of straw." Noting that Woodworking Shop does not carry vacuum pumps (if they did, one should patronize them), John informed us that Packard has a one-third hp, which pulls 26" of mercury for \$330 plus shipping. Members chimed in with other information about "better deals" on surplus pumps. [For those with access to the internet, eBAY, and other on-line auctions are a good place to look—just know what you want, know your model numbers, etc.]



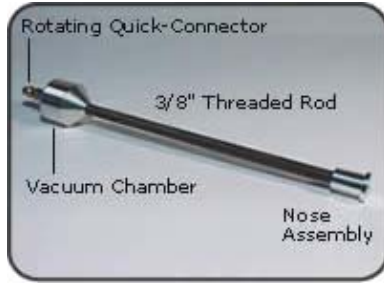
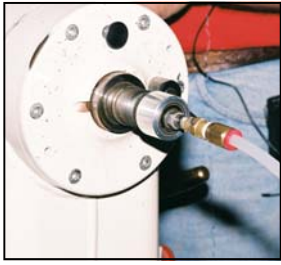
The second necessary component is a line connecting the pump to the lathe. The line should contain a tee and a ball valve, for adjusting the amount of vacuum, or cutting it off completely. This is necessary for two reasons: (1) the vacuum pump might be powerful enough to crush fragile vessels, and (2) it allows one to remove the workpiece without turning off the motor.

A third component is a vacuum gauge to show how much vacuum pressure is applied to the vessel.

Fourth, an in-line filter to remove dust and wood particles, for the protection of the pump. John noted that a 5 micron filter reduces the airflow too much; a 40 micron filter is sufficient.

Fifth, clear plastic tubing, strong enough not to collapse, to connect to (sixth) a quick connect apparatus. This





apparatus requires a cone of aluminum or wood to fit partially into the headstock; it must have a bearing that allows rotation, and be connected to a threaded lamp rod long enough to go through the headstock; and an end-piece that will fit into Morse taper and screw on to the lamp rod. Such a connection device can be made by a machinist, or it can be ordered from Packard for around \$70.

The last component is the chuck, which costs almost nothing (Whew!) except a little time. John proceeded to demonstrate how well the vacuum chuck holds by using a roughed-out bowl he brought with him. As he turned off the pump, he noted that especially if one turning wet wood, the pump should be allowed to run for a few minutes to dry out the accumulated moisture.



John's next task was to teach us how to make the chuck. First, John recommends dedicating a face plate to the chuck. Attach the face plate to a glued-up block of three-quarter inch MDF, band-sawed slightly larger than the four-inch by one-quarter inch PVC tubing to be attached to it. Then turn the MDF block so that the PVC tubing (of varying length, depending on the particular use) slides snugly onto it. Adjust the PVC so that it is parallel to the spindle, by turning it slowly and tapping it into alignment. Then square the end with a chisel (John used a bowl gouge).



Remove the faceplate and seal with medium CA glue where the PVC contacts the MDF, both inside and outside. Otherwise, air will pass through, weakening the vacuum. Re-attach faceplate, and turn a small rounded groove in the outer edge of the PVC to hold a piece of one-quarter inch O-ring material (available from Packard). Then drill a hole through the MDF so the vacuum pump creates the vacuum inside the chuck.

Making the O-ring is the tricky part. John cut quarter-inch O-ring material approximately the needed length. Cutting the material square is a challenge. John used a home-made jig: a small board drilled through with a one-quarter inch bit, and then drilled part-way through with a slightly larger bit (for ease in inserting the O-ring material). With the material barely protruding through the hole, sand the material with belt sander. Repeat with other end, taking very light cuts until the O-ring is correct length to fit into the groove in the PVC. Apply thin CA glue to one end of O-ring, and quickly place the ends together in the groove of the PVC. Then peel the material out of the groove, and if you are successful, voila! you have an O-ring. John did it on the first try, but then he has had experience! (He does not use this technique on the soft O-ring material.)



Attach the O-ring to the groove in the PVC by applying medium CA glue in the groove, and then inserting the O-ring.

John explained that a chuck with soft O-ring material has the advantage of adjusting to an irregular bowl surface, but it is harder to make, and it is more prone to move slightly as one works on a vessel. The hard material is better unless there is leakage where it contacts the surface of the vessel.

After the break John turned a natural edge bowl, of spalted maple. He removed some bark and soft wood to seat the spur drive in solid material, and turned between centers. He explained how to adjust the bowl blank for the desired effect: First, by turning slowly by hand and moving the tail-stock end of the piece until align the two wings of the natural edge. Secondly, align the piece so that the pith is perpendicular to the axis. That way the high sides of the bowl will be equal, and the grain will be symmetrical on the inside bottom of the bowl.

John adjusted the lathe speed to its highest comfortable level, and turned the outside of the bowl, using a one-half inch bowl gouge with fingernail grind. He explained how he addressed the wood at an angle so that the cutting edge is not engaged, and then gradually rotated and opened the gouge until it began to cut (at about 45 degrees). He cut from the inside toward the outside, at an angle, rather than straight on, to avoid vibration and to provide a smoother cut. John continued cutting until he had the desired shape, with a tenon to grasp with a chuck. The tenon was short enough to avoid bottoming out and for the front surface of the chuck to rest again the bottom of the bowl.



The direction of the cut was from the base to the rim, except for the opposite direction near the very edge, to avoid splitting off the bark. John completed the outside with very light, sheer cuts, and then used a heavy scraper, ground to a 45 degree angle (similar to John Jordan's special scraper), to make sheer scrapes.

John then mounted the piece in a Oneway Stronghold chuck, checking to see if it was turning true – if not, he would adjust it. He began hollowing inside, using the same bowl gouge, starting near the outer edge, removing enough material toward the center to allow him to cut a groove as deep as the lowest point of the bark. Then he began more aggressively to remove material from the center, working from outside to inside, increasing the width of the opening with each cut. He established the final thickness of the walls as he went deeper, so that the bulk of material in the center of the vessel provided support to the wings. John explained that he keeps the handle of the gouge firmly against his body, as he lets his body move so that he and the gouge make a smooth arc.



With the inside complete, John attached the vacuum chuck, to turn the bottom of the bowl. He placed a piece of thin foam packing material (you can use a paper towel) between the chuck and the bowl to keep from marring it. Rotating the bowl by hand, and releasing the vacuum as needed to center the bowl, he then proceeded to turn the bottom.

John's demonstration was excellent, combining comments that would be instructive for newer woodturners with information and procedures that would be useful to more advanced turners as well. All this done within the time allowed, with good humor and clear, easy to follow language. Thanks also to Bob Muir for filling in without advanced notice as cameraman. There are a few glitches in the video (not Bob's fault), but it is a good addition to our library.



# SEPTEMBER GALLERY

Photos by George Wunker

*Big Leaf Maple Burl*



Ric Erkes



*Maple Burl*

Scott Ollis

*Dogwood*



Sam McDowell



*Cherry*

Don Hildebran

*Spalted Sycamore, Walnut, and Mahogany*



Jim Miles



*Cherry*

J. D. Reinhardt

## **Challenge Projects**

- October: Halloween theme.
- November: Thanksgiving or Christmas theme.
- December: Annual Christmas party - auction and gallery.

*If you have any ideas or suggestions for challenge projects for next year, please let me know. Thanks, John Uteck.*

# SEPTEMBER GALLERY

Photos by George Wunker

*Big Leaf Maple Burl and Mahogany*



John Winslett



*Redwood Burl*

Dean Amos

*Wild Cherry, 8" Ø*



Edgar Ingram



*Apple*

Clarence Cogdell



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# SEPTEMBER GALLERY

Photos by George Wunker

*Maple*



Don Hildebran



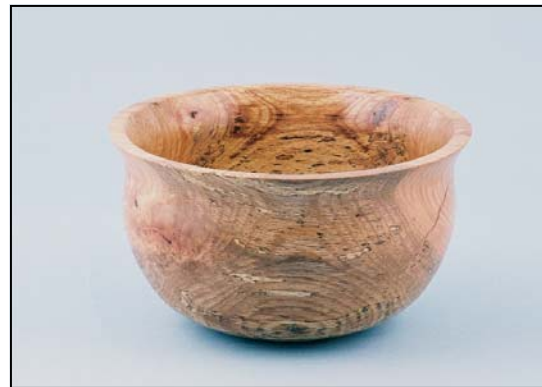
*Maple, 11" Ø*

J. D. Reinhardt

*Sycamore*



Jim Miles



*Oak, 10" Ø*

David Kaylor

*Dogwood Root*



Jerry Ostrander



*Black Jack Oak Burl*

Scott Ollis

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: October 12th at 1:00pm**