



North Carolina **WOODTURNER**

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

Volume 12, Number 9

September 2002



Maple "Apple"
August 2002 - Challenge Project Winner
by J.D. Reinhardt

THE PRESIDENT'S MESSAGE

By John Winslett

I was not able to attend last month's demo by Dick Nielson of his unique system of sphere creation, but I understand he provided an excellent program as I fully expected.

I understand we are still solvent financially - which is always comforting news.

Some things to think about: we will be electing 3 Board members to start their terms in January 2003. Anyone interested in serving the group, please see me. Also Ric will be seeking program review writers and he would like to spread the load. Let him know if you are interested.

You are reminded that our host, Klingspor's Woodworking Shop, is holding a woodworking tool and supplies show at the Convention Center in Hickory on October 18th and 19th (Friday and Saturday). We have been asked to participate as we did last year and will have a booth for display and sale of member turnings as well as a demonstration of turning which will be continuous through both days. To spread the load we will need your participation as both demonstrators and booth hosts.

Our September meeting will be special as we welcome John Hill, former member and currently President of the Carolina Mountain Woodturners. John is not only skilled but also entertaining! Don't miss it!

The Board will meet at 11:00, September 14. See you there.

John

Member News - by Mary Bachand

Please welcome these new members to our family: Russell Gullett of Hickory, NC; Bob Coleman of Charlotte, NC; and, Bill Piastuch of Banner Elk, NC.

Remember-if you know of a member who might need a card from us to cheer him or her up, please let me know. I try to keep a supply of cards for most occasions.

Library News - by Mary Bachand

I guess that no one wants to become "famous" by having their name listed in this column because the only overdue rentals belong to the "long lost" Steve Millwood. We do have a couple of members who have "connections" and they are trying to track him down. I have purchased the Robert Sorby video "Focus on Thread Cutting" and I am holding onto the remainder of the green box money with plans to buy the videos from the 2002 AAW Symposium.

Coming Events - by Ric Erkes



September 14th. John Hill will demonstrate vacuum chucking for us in Sept. John is the current president of the Carolina Mountain Woodturners Assoc. If you need a new approach to holding your turnings, come see how a vacuum chuck works. John always makes for a lively and informative demonstration.

October 12th. Bill Johnston, an accomplished turner and demonstrator, will demonstrate multi-axis turnings. See <http://home.pinehurst.net/johnston> or the Artist in Residence page at Kestrel Creek: http://www.kestrelcreek.com/AIR/Bill_Johnston.htm for more information on Bill's turnings.



November 9th. Al Basham, president of the Triangle Woodturners will be our demonstrator, discussing hollow form turning and the use of his custom made tools. If you missed his demo last Nov at our mini-symposium, now is your chance to see how an engineer does it.

December 14th. The annual Christmas Party and Auction is a social event and auction. Whether you just want to socialize, or sell something at the auction, or try to win an auction, this is the place to do be.

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

Email and the Internet - by John Uteck

Every month, when I send the newsletter out for publishing, I create an Adobe Acrobat "PDF" file, and post it on our website: www.geocities.com/nc_woodturners/ If anyone wants to be notified by email when I post the newsletter on the website, please send me an email at uteck@conninc.com and let me know.

As I'm sure many of you have also noticed, I have been delinquent in keeping the website updated - lately, all I've updated is the main page, with the next meeting date and current newsletter. Anyone interested in helping with the web page, or re-designing it, and keeping it more current, please send me an email letting me know what you can volunteer for. Thanks.

NEXT MEETING: SEPTEMBER 14th at 1:00 pm

Demonstrator Review - July 2002

by David Propst



Sam McDowell. July's primary demonstrator was our own Sam McDowell. Sam has been turning nine years. Much of Sam's early turning knowledge was self-acquired, which he commented was "not the easy way". In this

presentation he tried to show many of the tips he wished he had known in the first few years he began turning.

Sam showed how he sharpens on a Tormek water-cooled sharpening system. For sharpening, the Tormek is quick, repeatable, and produces a sharp edge with minimal metal loss. Shaping an initial grind on the Tormek will take about 20 minutes since it removes so little metal.

He turns green wood scavenged locally. He recommends keeping your ears open for chainsaws, getting to know tree service folks, landscapers, etc. as a source for your wood. He prefers spalted woods for its beauty. He summed this up with; "Wood is like a peach, it's best right before it rots."

Next he discussed how to orient the bowl in the log to achieve your goal with the piece. He recommends Richard Raffin's *Turned Bowl Design* book as an excellent resource for wood selection and bowl design.

For the demo, Sam turned an end grain vessel from spalted ambrosia maple. Before mounting on the lathe, he uses a centering disc made from Plexiglas, to determine the log's center of mass. Ideally an end grain vessel would be turned with the pith on center. The center of mass may be slightly off the center of the pith, however a log mounted at its center of mass will be much more stable during the roughing process on the lathe.

Sam combined his career as a US Airways pilot into the demo. To show how he visualizes the presentation and cutting of a gouge he had a wooden "airplane gouge" mock-up. He explained a gouge is a three dimensional blade wrapped around a round rod. For presentation of the gouge, he showed how the aeronautical concepts of pitch, roll, and yaw apply. He referred to this prop repeatedly throughout the demo to illustrate gouge presentation.

Study the log and determine which end is going to be the top and bottom. Mount log between centers on the marked centers of mass, and round out the blank on slow speed. Prepare the bottom end for a chuck or faceplate as needed. Sam uses a Stronghold chuck to hold the log after roughing between centers. After mounting in the chuck he again uses the tailstock for support and safety.

Sam then discussed how to choose the shape of the hollow

form so that it is pleasing to the eye. He then finished the outside of the vessel and began the hollowing process. After removing the tailstock from the lathe he drilled a center hole to the depth he wanted the vase to be.

To hollow the vase Sam demonstrated two types of hollowing tools: the Stewart tool and the outrigger stabilized Al Basham tool. Al is the president of the Raleigh area Triangle turning club and will be our November demonstrator. Sam sharpens the Basham tool bit on the Tormek at 75 degrees, and prefers the 5/8" Basham tool for its stability and ease of use; however, the Stewart tool is 3/4", thus less prone to vibration near the bottom a deep vessel.

To finish the outside of the vessel, Sam uses drill-mounted power sanding pads starting with 60 or 80 grit. He uses polyurethane for most of his turnings.

Sam gave an informative, interesting, and fun demonstration. Unfortunately, time ran out before Sam was able to demonstrate jam chucking to finish the vessel bottom. There is a video available for check out of this demo in the club library.

Sam's Tips

- To keep your face shield cleaner longer wipe it with a used dryer clothes softener sheet to reduce static
- Combating Tear Out: The first defense is a sharp tool, if that alone will not eliminate all tear out Sam saturates the wood with Deft sanding sealer. It dries quickly and hardens the fibers, which makes them easier to cut. The last approach is aggressive grit sandpaper.
- Sharpening Scrapers: To put a nice consistent sharp burr on scrapers use the Lee Valley Scraper Burnisher.
- Soft, rotten areas of wood can be strengthened with CA glue
- To see inside hollow forms a flexible lighted probe available in auto parts stores is quite handy
- There is only one cut that matters, the last one. The rest are just removing wood.

Gene Dampier. July's second demonstrator was Gene Dampier. Gene makes his own tools for 90% of his turning. Most of his tools are made from 3/8" HSS Bar Stock (5% Cobalt). He finds these tools often hold their edge for 2-3 hours. With four 3/8" tools he can turn a complete bowl and he says they never catch! His four tools are a straight across flat ground tool, a left hand rounded edge tool, a right hand rounded edge tool, and a straight tool ground at 30 degrees.

To mount the bar stock in the handle he rough rounds one end on the grinder and then drives it in the handle. His ferrules are cut from brass pipe.

Gene orders his bar stock from Wholesale Tools in Charlotte, NC (www.wttool.com, Phone: (800) 438-3580).

Demonstrator Review - August 2002

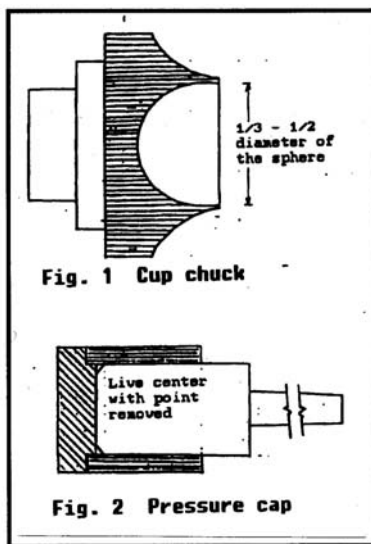
Intro by Ric Erkes; Article by Dick Nielson

Introduction. This month Dick Nielson took the mystery out of turning a sphere. When he finished his demo, I thought he was going to say, 'See, it's not too hard'. I'll be impressed though, if the first sphere you turn doesn't just keep getting smaller and smaller on the lathe.

Dick's demo is actually a repeat performance from July 1997. Since most of us probably don't have Dick's original review of his own demo, I'm going to take the easy way out and let Dick tell it again. Thanks Dick for the refresher.

Turning Spheres. by Dick Nielsen (July 1997)

In March of this year [1997], I attended a weeklong workshop at Arrowmont conducted by Christian Burchard of Ashland, Oregon, who has mastered the art of turning decorative spheres. It was a most interesting and informative experience, and I would like to share with you what I learned.



Spheres can be turned from a wide variety of materials including ivory, plastics, burly wood, exotic woods, plywood, and ordinary green wood such as oak, maple, beech, etc. Solid spheres turned from green wood will usually crack, but even cracked spheres can be pleasing to look at. Just as with other hollow forms, if the sphere is hollowed and carefully dried, it may end up with no cracks at all. Of course, you may find a block of

dry wood large enough for a 6-inch sphere with no cracks, but that would be rare. For an 8-inch sphere, it would be next to impossible. You may also be able to glue up something that would produce satisfactory results.

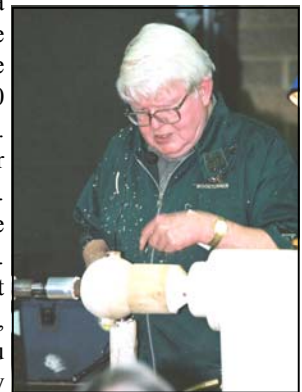
Before you start to turn a sphere, you will need to make a cup chuck for your headstock and a pressure cap to mount on your live center. First, screw a faceplate onto the end of a piece of wood about 4 inches dia. by 3 inches thick. (Keeping the grain of the stock in line with the axis of the lathe insures that the cup chuck will have more uniform pressure on your work piece.) True up the sides and shape the cup as shown in figure 1. Be sure the cup is deep enough so the sphere will not "bottom out." The part of the chuck which contacts the sphere should have a diameter about 1/3 to 1/2 that of the sphere. If you are going to make spheres of widely different sizes, you

may need more than one cup-chuck. Next, from a piece of hardwood, make a cap that will fit over your live center with the point removed. See figure 2. (If necessary, this cap can be held on the live center with a hose clamp.) The face should be flat. The reason for this will be explained later. A special flat-faced live center is available, but it is expensive. The homemade one will work well.

Now start with a log about one inch longer than it is thick, say 7 inches long and 6 inches diameter. Mount it between centers and remove the bark down to good wood. Use a pencil to mark the midpoint of the log. See figure 3. Begin to shape the sphere by removing stock to either side of the midpoint line, leaving a short tenon at the north and south poles. See figure 4. It is best to keep the sphere a little fat, as you can refine the shape later. If you remove too much stock, you will have to make the sphere smaller. Test the curvature by placing the cup chuck atop the sphere while it is still being held between centers. When the curve is about right, the cup chuck will fit nicely. If it is too fat, the chuck will not fit and will not be able to hold the sphere in the next step. Be sure that you can still see the midpoint line. If you can't, redraw it.

Now remove the log and install the cup chuck onto the headstock and the pressure cap onto the live center in the tailstock. Rotate the rough-shaped sphere 90 degrees and mount it between the cup chuck and the pressure cap. See figure 5. It should fit firmly and not rock around. The midpoint line now represents the equator of the sphere and should center on the headstock and tailstock. When the lathe is turned on, you will see the true sphere surrounded by the shadow of the excess stock. Carefully turn away the north and south poles and most of the shadow material. Mark a

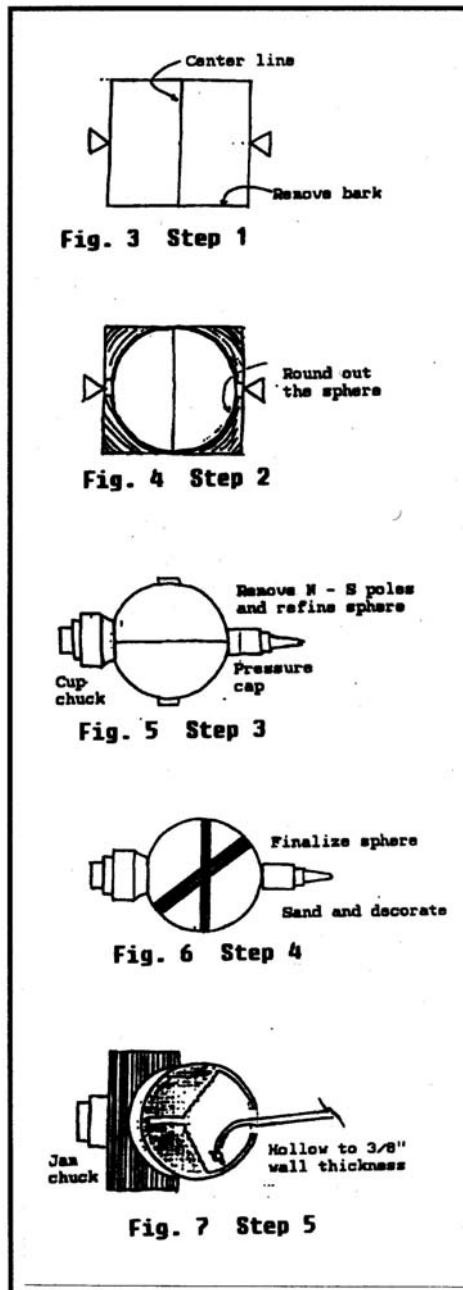
new equator perpendicular to the original equator, loosen the tailstock, rotate the work piece 90 degrees, and retighten the tailstock. Turn the lathe on and check for shadow material. Turn it away. Repeat this procedure until all the excess stock has been turned away. Now you should have a perfect sphere. It's as simple as that. Well, almost. If you are very lucky, you will make a perfect sphere in only three rotations. More likely, it will take several rotations. The idea is to sneak up on it. Do not be too aggressive when removing stock, as a catch may throw the work piece out of the cup chuck. If you remove too much material, your only recourse is to make the sphere smaller. The surface can be cleaned up with a little light shear scraping and sanding. Be sure to rotate the sphere in order to get the entire surface.



While the sphere is still being held between the cup chuck and the pressure cap, you may wish to apply some surface decoration in the form of parallel grooves. See figure 5. If you plan to hollow the sphere, it is important that you consider where the opening will be with respect to the surface decoration. (In some of Christian Burchard's spheres, bands of grooves are cut at various angles to each other so as to create a "field" or open space for the opening.) The grooves may be cut with the point of a skew. When you have completed a set of parallel grooves, loosen the tailstock and rotate the sphere to another angle. It is important that the parallel grooves be cut cleanly and to equal size and depth. The need for this will be most apparent when you have intersecting grooves. At the point of intersection, the grooves will form small diamonds. If these diamonds chip out, or if the grooves are not of the same depth, the effect will be spoiled. Color can be added to the grooves with water-based acrylic enamel. It won't matter if some of the paint spills over onto the surface of the sphere. This can be sanded off later. Also, you can color some of the "fields" between the bands of grooves with aniline dye or India ink. The grooves will extend all around the sphere.

For a different effect, the grooves may be turned with the sphere placed off-center. To do this, remove three of the four screws holding the cup chuck onto the faceplate. Rotate the cup chuck to one side. (About 1/4 inch will do.) Reinstall the screws. Now with the sphere mounted between the cup-chuck and pressure cap, it will gyrate around an off-center center line. The reason for making the pressure plate flat will become clear. The sphere now touches the pressure cap off-center. If the pressure plate were concave instead of flat, it would try to force the sphere back to the original centerline. Using a diamond-point cutter, carefully approach the wood until it just begins to cut. The groove thus formed will extend for a short distance before the wood moves away from the cutter. Repeat the cut in the same location, making it a little deeper. The groove will become longer and extend farther around the sphere. By making cuts of different depths, and by rotating the sphere to various positions, you can create some very attractive designs. Try it and find out for yourself.

To hollow the sphere, you will have to make a jam chuck. To do this, mount a piece of side-grain, green stock onto a faceplate. (Green wood holds the work better than dry wood.) True it up and make a recess a little smaller in diameter than



the sphere, just as if you were making a bowl. Be sure that the recess is deep enough so the sphere won't "bottom out." When you get it right, the sphere will fit nicely and securely in the chuck. Before jamming the sphere in place, be sure that you know where you want the opening to be located. At this point, it is a good idea to scribe a pencil line at the junction of the sphere and the chuck. If it becomes necessary to remove the sphere, or, heaven forbid, the sphere should pop out on its own, you can put it back into the same position.

Knowing the diameter of the sphere, drill a hole to about 3/8 inch from the bottom. With this hole as a guide, proceed to hollow the sphere as you would any closed vessel. It is easy to check the wall thickness for the top half of the sphere, but it may be necessary to take the sphere out of the jam chuck occasionally to check the bottom half. Take care. (The most common mistake the students in our class made was getting the bottom too thin.) You can make a 1/2-inch wide slot along one side of the jam chuck, extending from the rim to the bottom of the recess. This slot can enable you to measure the wall thickness without taking the sphere out of the chuck. If you do this, it will be necessary to put a large hose clamp around the chuck to assure a firm grip around the sphere. When the sphere has been hollowed, colored, and sanded to your

satisfaction, you may wish to change the shape of the opening from round to square or triangular to match the shape of the "field" surrounding it.

That's about it. All you have to do is try it and practice, practice, practice. I am sure that some of you will come up with your own variations on this theme and produce some spectacular results.



AUGUST GALLERY

Photos by George Wunker

Mahogany, 14" Ø



Don Oetjen

Quilted Maple, 6" Ø x 2½"



Ric Erkes

Cherry, 5½" Ø x 6"



J.D. Reinhardt

Wild Cherry, 4" Ø x 7"



Edgar Ingram

11" x 11" x 2"



Ric Erkes

Oak, 12½" Ø x 5"



Challenge Projects

- September: Spalted wood.
- 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 tell John Uteck.

AUGUST GALLERY

Photos by George Wunker

Wild Cherry, 7" x 1 1/2"



Edgar Ingram

Walnut, 10" Ø



David Kaylor

Walnut, 7" Ø x 3"



Ric Erkes

Oak Burl, 12" Ø



Don Olsen



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AUGUST GALLERY

Photos by George Wunker

August 2002 Challenge Project Entry
Back-to-school; i.e., something for teachers or students



Various Woods

Mike & John Michael Ehlen

Oak burl, 6" Ø



Don Olsen

Oak, 5" Ø



David Kaylor

Mahogany, 14" Ø



Don Oetjen

Camphor, 5" Ø x 4"



Joe Helms

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: SEPTEMBER 14th at 1:00pm