ELEGANT TWO-PIECE URN • SHOULDER ISSUES AND THE WOODTURNER • BASIC STAVE CONSTRUCTION FOR THE LATHE

AMERICAN WOODTURNER

Journal of the American Association of Woodturners

October 2020 vol 35, no 5 • woodturner.org

BARELY THERE TWIG POTS

HOWARD LEWIN A PIONEER IN PROFILE

INTERSECTING TALENTS: THE MAKING OF *PARADOX*

WEAVING BASKETRY INTO WOODTURNING

Craig Lofton California

When I started woodturning in 2001, I realized I needed professional help. I Googled "woodturning," and David Ellsworth was the first search result. I signed up for a class and have had a valued friend, teacher, and critic ever since.

For the first ten years of my woodturning career, I lived on Maui, where I had access to a seemingly unlimited supply of fine wood and plenty of time to concentrate on turning. My work was quite broad—koa and mango calabashes, milo hollow forms, and large Norfolk Island pine vessels. I worked six to eight hours a day and was relentless in trying to find my own voice.

Then, I heard Bill Luce talk at an AAW Symposium about his tireless focus on improving his forms. He described making hundreds of bowls all the same shape, refining and focusing on every cut, every millimeter. That talk inspired me anew. Rather than trying to "find my own voice," I focused simply on improving my skills. After about a year in this mode, I saw a marked improvement in my forms. Even though I never met Bill Luce, he was a tremendous inspiration.

In 2014, we moved to Santa Fe, New Mexico. While talking with a sculptor friend there, I had an epiphany: I should cast a wooden bowl in bronze. I envisioned a black exterior with the original bowl's wood grain showing, and a contrasting, highly polished interior. I set out to learn the disciplines of the lost-wax method. It took several months to make my first piece, but when it was finished, I had its mold so I made several more editions in much less time.

Every bronze piece I make starts with a bowl or vessel turned on the lathe. I love working with bronze. It's a great material, but first and foremost, I am a woodturner. ■

For more, visit lofton.us.

From wood to bronze

Hackberry Mother, 2015, Hackberry, 5" × 5" (13cm × 13cm)

Untitled Bronze Casting from Hackberry, edition 3 of 5, 2015, 5" × 4" (13cm × 10cm)

The author's process starts with a simple turned bowl, from which bronze castings can be made.

Casting and polishing

Pouring hot bronze at Shidoni Art Foundry in Tesuque, New Mexico, 2015.

After casting, the author polishes the bronze bowl while it is secured in a vacuum chuck. Silicone bronze is 96% copper, and the extremely fine copper dust is hazardous. Craig is careful not to breathe it or let it absorb into his body, hence the "Breaking Bad" suit.

Yamanuooto, 2017,
6" × 6" × 6"
(15cm × 15cm × 15cm)

This bronze casting was part of the AAW's 2017 POP exhibition, *The Sphere – Second Round*.

Untitled Bronze Casting from Hackberry, edition 3 of 25, 2019, Powder blue patina, 6" × 7" (15cm × 18cm)

Untitled Bronze Casting from Natural-Edge Hackberry Vessel, edition 1 of 3, 2019, 6" × 7" (15cm × 18cm)

Untitled Bronze Casting from Piñon Pine with Casting Crack, edition 5 of 5, 2015, 5" × 4" (13cm × 10cm)

AAW | AMERICAN ASSOCIATION OF WOODTURNERS

Dedicated to providing education, information, and organization to those interested in woodturning

American Woodturner (ISSN 0895-9005) is published bimonthly by: American Association of Woodturners, 222 Landmark Center, 75 5th St W, Saint Paul, MN 55102-7704

Periodicals postage paid at Saint Paul, MN, and at additional mailing offices.

POSTMASTER: Send address changes to *American Woodturner*, AAW, 222 Landmark Center, 75 5th St W, Saint Paul, MN 55102-7704

office: 651-484-9094
toll free: 877-595-9094

email: memberservices@woodturner.org
website: woodturner.org
gallery website: galleryofwoodart.org

Yearly General membership in the American Association of Woodturners is $60 and includes a subscription to *American Woodturner*. Dues for international members are equivalent to USA amounts before exchange rates are applied. All electronic-journal memberships are $50 yearly or USA equivalent.

Send dues to:
American Association of Woodturners
222 Landmark Center
75 5th St W
St. Paul, MN 55102-7704 USA

Or join online at woodturner.org

Printed in the USA by Quad/Graphics, West Allis, WI

Inside This Issue

October 2020 vol 35, no 5

FEATURES

AMERICAN WOODTURNER

Journal of the American Association of Woodturners

ASSOCIATION NEWS

WOODTURNERS CHATTER

GALLERY

COVER

Cover – Barely There Twig Pots, Photo: Paul Russell

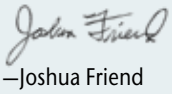
Back Cover – Barry Todd

Editor's Note

As Greg Schramek points out in his president's letter (below), the world has changed. I remain optimistic that at some point we will meet again in person, but until we can do that safely, the way we teach, learn, meet, and communicate with live interaction has largely shifted to the digital, online realm.

I for one was impressed with AAW's Virtual Symposium in July. Tib Shaw gives us a quick recap of the event on page 7 of this issue. Interactive remote demos offer an incredible view of the woodturning action, and audience members can interact live with the demonstrators. Look for more virtual programming from the AAW in the coming weeks and months.

All of this brings into sharp focus the importance of *everyone* having access to true broadband Internet. It is easy for those of us with solid Internet to take this service for granted, while some don't have sufficient access to participate.



—Joshua Friend

From the President

The world is changing

Boy, has the world changed! It used to be AAW thought it was the only provider of woodturning information, education, and services around. Sure, there were videos posted on the Internet and forum groups like World of Woodturners and others that played important roles, especially in social interaction with turners. Schools focusing on art and craft played an important role, especially in the education of woodturners. For years, all these groups did not compete, but in fact worked *with* each other, and woodturners benefitted. AAW was not only a service provider for education and promotion, but acted as an *aggregator*, promoting local chapters, demonstrators, regional symposia, and organizations focused on teaching woodturning.

The AAW is a nonprofit organization, as are most of our previously mentioned service partners. This designation has played a major role in our relationships. Remember, nonprofit doesn't mean "not of value." It means the goal of the organization is to generate revenue in support of our ongoing mission of education and to provide benefits reaped by the members and not by individuals or shareholders. Naturally, we operate as a business and need revenue to pay for the services we provide, but there is no profit factor included in the expenses.

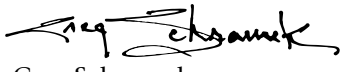
For a number of years, we have increased our Internet-based service offerings, and we've all seen the benefits of those efforts. Just look at our new website, which offers key benefits such as the Woodturning FUNdamentals learning portal, the Explore! archive search tool, Video Source, and AAW Exchange, a new communication tool for sub-communities within our field. These are only the beginning. We should take pride that for nearly thirty-five years we have been known to provide the highest of quality, be it at a live or virtual Symposium, with the best of demonstrators and panelists. We provide *American Woodturner*, an award-winning publication widely considered the best of its kind, as attested by beginning turners and seasoned professionals alike.

So, what has changed? Today's technology has reduced barriers to entry and allowed competitors to provide remote demonstrations, and even virtual symposia, challenging AAW's longstanding central role in the woodturning community. These competitors may be promoters, individual demonstrators, or even some of our partners. They may be nonprofit organizations or getting into the business so they can make money. AAW continues to respond to this competition assertively by introducing new offerings, remaining analytical in its cost/benefit analysis, and being sensitive to protecting its resources and marketing plans.

Don't get me wrong. Competition usually benefits the customer. Competition accelerates new ideas. Competition reduces prices, though sometimes only in the short term. Competition creates more choices. The telecommunications industry is a good example. Thirty years ago, a handful of companies were the only service providers. Then, with cellular service, literally hundreds of companies got into the business. Some focused on quality; all focused on profits. After a few years of consolidation, it seems we again have just a handful of companies in the business.

AAW, the nonprofit association to which you belong, has always focused on quality education, not profit. We have done this for nearly thirty-five years. There may be many new entrants in the woodturning field, but rest assured AAW is adapting to our changing world and will continue to meet the needs of the woodturning community.

Looking forward,



Greg Schramek
President, AAW Board of Directors

SAVE THE DATE

Photo: Courtesy of Visit Omaha

Omaha, Nebraska • July 15-18, 2021

AAW'S 35TH ANNUAL INTERNATIONAL SYMPOSIUM

SYMPOSIUM VENUE

Photo: Brad Williams

CHI Health Center Omaha
455 N 10th St., Omaha, NE 68102

HOST HOTELS

Omaha Marriott Downtown at the Capitol District
222 N 10th St., Omaha, NE 68102

Hilton Omaha
1001 Cass St., Omaha, NE 68102

The convention center, CHI Health Center Omaha, is near the airport, and close to the riverfront and the Old Market Entertainment District. A glass-enclosed skywalk connects CHI Health Center to the Hilton Omaha. Just down the street is the Omaha Marriott Downtown hotel.

REGISTRATION

Information about AAW Symposium registration and reserving a hotel room will be coming later in 2020.

AAW leadership is moving forward with its plans for an in-person 2021 AAW Symposium in Omaha, despite the uncertainties surrounding the COVID-19 pandemic. Leadership is approaching arrangements for a live event cautiously, while monitoring pandemic developments, and will consider contingency plans as needed. AAW membership will be kept informed of developments and changes.

AAW
AMERICAN ASSOCIATION OF WOODTURNERS

AAW Annual Financial Statement for 2019

Dear AAW Member,
Calendar 2019 was another good year for AAW.

Membership and associated revenue dropped slightly below expected levels toward the end of the year. But this revenue deficit was offset by responsive fiscal management and the Raleigh Symposium attendance being higher than planned. Altogether, revenues exceeded expenses for the year, with enough margin for us to bring our unrestricted reserves (i.e., our emergency operating reserve) to nearly the target value. This is good because 2020 is presenting new and serious challenges. You may rest assured that the AAW staff and Board are working overtime to maintain the services to members and the stability of the Association during the pandemic.

Stay tuned, and stay healthy,
—Joe Dickey, AAW Treasurer

Revenues and Expenses

Income

Annual Dues	$897,293
Symposium	627,896
Publications & Products	262,523
Contributions	144,143
Government Grants	–
Other Income	35,370
Investment	74,664
Total Income	**$2,041,889**

Expenses

Symposium	$508,144
Publications & Products	464,779
Gallery & Exhibitions	134,423
Scholarships	16,418
Professional Outreach	32,847
Other Programs	46,964
Administrative	341,812
Fundraising	5,278
Member Development	270,093
Total Expenses	**$1,820,758**
Net Income	**$221,131**
Restricted Portion	**$21,409**
Unrestricted Net Income	**$199,722**

Balance Sheet (as of 12/31/19)

Assets

Checking & Savings	$365,582
Accounts Receivable	4,618
Grants Receivable	–
Inventory	27,793
Prepaid Expenses	63,582
Investment Securities	983,830
Permanent Collection	213,690
Property & Equipment	110,255
Total Assets	**$1,769,350**

Liabilities

Accounts Payable	$62,278
Accrued Expenses	25,872
Deferred Revenue	590,909
Total Liabilities	**$679,059**

Net Assets

Without Donor Restriction	$516,024
With Donor Restriction	$574,267
Total Net Assets	**$1,090,291**
Total Liabilities & Net Assets	**$1,769,350**

2021 POP Exhibition and Auction: *Elements* Call for Entries

Application Period: December 1, 2020, to January 15, 2021

Application details

- Full application/submission details can be found in the August 2020 issue of *American Woodturner* (vol 35, no 4, page 7).
- Apply online at tinyurl.com/POP2021.
- Application period: December 1, 2020, to January 15, 2021, 11:59 p.m. CST. All artists will be notified by January 31, 2021.
- For more, check the woodturner.org Calls for Entry page, tiny.cc/Calls, or contact Tib Shaw at gallery@woodturner.org. To see past exhibition catalogs, visit galleryofwoodart.org.

AAW Board of Directors Election Results

Congratulations to Rick Baker, Linda Britt, and Jay Brown for being elected to the AAW Board of Directors. Each person will serve a three-year term, beginning January 2021. Serving as a volunteer on the Board requires a significant commitment of time, and we appreciate the willingness of all six candidates to put their names forward for the election. Thank you.
—Greg Schramek, AAW Board President

Call for Entries *Finding the Center:* 2021 AAW Member Exhibition

Application period: January 1 to March 15, 2021

Application details

- Full application/submission details can be found in the August 2020 issue of *American Woodturner* (vol 35, no 4, page 6).
- Apply online at tinyurl.com/AAWshow between January 1 and March 15, 2021, 11:59 p.m. CST. All artists will be notified by March 31, 2021.
- For more, check the woodturner.org Calls for Entry page, tiny.cc/Calls, or contact Tib Shaw at gallery@woodturner.org. To see past exhibition catalogs, visit galleryofwoodart.org.

AAW's 2020 Virtual Symposium Recap

What to do when a pandemic interferes with plans for the world's largest woodturning symposium? For the Board and staff of the AAW, the answer was to swing into action and move the event online!

Within a few weeks, the basic structure was set: a list of demonstrators and POP panelists with online or video-production experience was identified; Zoom was chosen as the platform; plans for reaching out to vendors were developed; calls for an online Instant Gallery and Critique were posted; and an appropriate price, $20.20, was set in honor of this very unusual year.

The three-day event, July 10-12, included live demonstrations, panel discussions, artist presentations, a virtual tradeshow, an Instant Gallery, three online auctions, prizes, and more. More than 3,900 people from twenty-four countries, all fifty states, and seven Canadian provinces signed up. Feedback was overwhelmingly positive, with attendees appreciating the "front row seat" view, the ease of attending from the comfort of their own home, and being able to attend an AAW Symposium when ordinarily it was out of reach due to distance, health, or finances.

There can be little doubt that woodturning education is experiencing a sea change; the addition of virtual demonstrations, presentations, classes, and exhibitions makes our field much more accessible for current and potential woodturners. The AAW is actively exploring ways to bring more online events and opportunities to its members and chapters—stay tuned for more developments!

Thank you!

Huge thanks to Virtual Symposium Committee members: Janet Collins (Chair), Rick Baker, Jeff Brockett, Andy Cole, Phil McDonald, Kim Rymer, Greg Schramek, and Tib Shaw, with support from the full AAW Board of Directors; to our demonstrators and panelists: Glenn Lucas, Rob Wallace, Rudolph Lopez, Curt Theobald, J. Paul Fennell, Michael Hosaluk, John Beaver, Michael Peterson, Trent Bosch, Mike Mahoney, Suzanne Kahn, Kip Christensen, Kirsten Muenster, Cindy Drozda, Beth Ireland, Craig Timmerman, Kimberly Winkle, Nick Cook, and Rebecca DeGroot.

Thanks also to Sharon Bierman for the *Planning Guide*, as well as to Josh Friend, Ana Lappegard, Linda Ferber, and Jason Clark for producing the "Best of" Woodturning Tips video, to Tib Shaw for the Instant Gallery slideshow, and to JET/Powermatic, our registration sponsor. Thanks to all who put their faith, energy, and skills into this event. ■

A screenshot of Cindy Drozda demonstrating from her Colorado studio. Virtual Symposium attendees got a front-row seat to every demonstration.

The Symposium included a virtual Instant Gallery, displaying 570 works from attendees.

CALL FOR STUDENT WORK: 2021 Turning to the Future Competition

Application period: March 1 to May 1, 2021

The AAW is pleased to announce the fifth Turning to the Future competition, an opportunity for woodturning students and schools to show off their best work. The exhibition will be held in conjunction with FreshWood, one of North America's largest student furniture-making and woodworking competitions.

The competition encourages students to reach for and attain high levels of skill in the use of the lathe, and is open to all students in North America. There is no entry fee.

With many schools not in session due to the pandemic, the rules are being simplified this year. Students up to age 21 are not required to be in a high school or post-secondary program. Students 22 and older are required to be enrolled either full- or part-time in a degree- or certificate-awarding woodworking, art, or design program. (Students under apprenticeship or in other programs will be considered on a case-by-case basis.)

Prizes include $500 first-place and $100 second-place awards in each division and category. Additional prizes will be announced at a later date. All finalists receive a one-year subscription to *American Woodturner* and a certificate for a complimentary AAW Symposium registration.

There are two divisions, High School and Post-Secondary, with two categories each: Functional and Open. Up to eight finalists in each division category will be chosen to have their work displayed at the 2021 AWFS® Fair in Las Vegas, Nevada, July 20-23, 2021. (In the event that the AWFS® Fair is not held, the exhibition will be shown online; prizes will still be awarded.) Work will be evaluated on craftsmanship, aesthetic appeal, creativity and/or utility, and process documentation. Application period opens March 1, 2021. Deadline for submissions is May 1, 2021.

Submission details can be found at tiny.cc/Calls. ■

CHATTER

I read with interest Betty Scarpino's recent *AW* article, "Woodturners Connecting Virtually" (vol 35, no 4), about interactive remote presentations.

One small, seemingly insignificant piece of the move to interactive demonstrations is of great importance to people like me. My wife and I live in rural Boring, Oregon, and although we technically have "broadband" Internet, it will not support online presentations, let alone interactive demos. I am grateful that various chapters (including mine, Cascade Woodturners) have found creative ways to provide wonderful demonstrations for their members. But Internet with sufficient bandwidth is simply not available in my area.

Luckily, I can drive to the nearest town, park next to the library (closed due to the pandemic), and access free Wi-Fi from my car, so I can make do. But the larger point is important: While most people can benefit from having a presentation via Zoom or another platform, it *only* works for those with adequate connectivity. I know I am not alone in this predicament. I ask everyone to push for true, universal broadband in *all* areas of our country. It was done in the 1930s for the telephone (1934 Communications Act) and for electrical service (1936 Rural Electrification Act)—why can it not be done now for the Internet?

—Len Otto, Oregon

Arizona Club Offers Tool Disposal Assistance

Most woodturners at some point wonder what will happen to their collection of tools and wood after they pass away. Some have made plans with family and friends; others do not want to burden their families at the time of their passing but have no plan. Some members of the Arizona Woodturners Association (and some non-members in the turning community) had inquired about getting help from the club for either disposing of complete shops or downsizing. In the past, the club responded to these requests in an ad hoc manner.

After some discussion, the club created a formal Tool Disposal Assistance Program for our membership and the turning community. The plan was to develop a documented set of rules and guidelines for how the club would respond to requests for assistance in tool and wood disposal. We wanted to learn what other clubs have done in these situations, so we randomly surveyed fifteen AAW chapters. We found only two with a formal program. Those that reported they have no program said they felt it was a good idea and that their club should consider it.

As part of our program, we printed handout cards showing contact information and a summary of services that members could place in family records or share with family and friends. Recently, one of our senior members passed away, and his widow requested help to dispose of his shop. Our team spent three days taking an inventory and pricing all items, from glue to power tools, and then organized a two-day onsite sale. A few items were sold on eBay and Craigslist. The widow was so relieved to have one more burden lifted.

We hope our experience provides the impetus for other chapters to expand the benefits of joining a local AAW chapter. If your chapter decides to create this type of program or other member benefits, be sure to reach out to the AAW to explore their many resources, and to contact other chapters for their input.

—Dale Guilford, Arizona Woodturners Association

For more, visit azwoodturners.org.

I am a member of the Inland Northwest Woodturners (INW) in Spokane, Washington. I recently found out that because of these unusual times, a small woodturning club on the California coast had been thinking of putting things on hold until in-person meetings could start up again. Being a small club, they do not have the resources to pay for outside demonstrators or be able to buy video equipment for members to use. As a disabled veteran, I count on my woodturning to help me manage my PTSD, and when I was a new turner I counted on the club to help me develop my skills. When I heard that the Mendocino Woodturners Guild (MWG) didn't know how to continue, I thought there had to be a way to help them.

So I developed the Adopt a Lathe Program, where the INW has adopted the members of the MWG. These adopted members will be able to attend all of our online club meetings, participate in show and tell, watch outside demonstrators, and join us for our monthly online chat and mentoring sessions until they are able to resume their in-person meetings.

I am sharing this with you because I imagine there are other clubs struggling to get by. It is my wish that other clubs that are able to have online meetings and demonstrations seek out the clubs that cannot.

—Damon, Inland Northwest Woodturners

New York Clubs Jump Into Action for BoC

Two New York chapters, Long Island Woodturners Association and Long Island Woodworkers Guild, have contributed stunning turned boxes to the kids at the Pediatric Cancer Center of Stony Brook University Medical Center in Long Island, and New York-Presbyterian Morgan Stanley Children's Hospital, in New York City, through the Beads of Courage (BoC) program. These facilities are relatively local to us and easy to access. When we learned of a BoC charity in Syracuse requesting boxes for kids at Maureen's Hope Foundation, which services several upstate hospitals some 600 miles away, our club members jumped into action. We talked it over, and one of our members who has an online business volunteered to ship the boxes. We were off and turning.

Members of the Long Island Woodturners Association and Long Island Woodworkers Guild pose with BoC boxes for Maureen's Hope Foundation.

This was in February, and we were going to collect the boxes in April. Then the pandemic hit, and we agreed we would collect the boxes when we could meet in person again. The pandemic is lasting longer than any of us expected, but when New York City reached Phase 3 of its reopening plan, which loosened restrictions, we decided to meet (wearing masks) to collect the boxes.

Our two clubs are enthusiastically invested in BoC. The boxes we make are a morale booster for the children who receive them, and we are glad to be able to help them the only way we can. ■

—Barry Saltsberg, New York

Magnolia Woodturners Donates BoC Boxes

The Magnolia Woodturners of Jackson, Mississippi, makes and donates boxes annually to the Cystic Fibrosis Unit of the Blair Batson Children's Hospital through the Beads of Courage (BoC) program. The children receive a bead for each treatment they undergo, and some have beads that would fill many boxes. This club project was inspired by the near diagnosis of my son with cystic fibrosis and the need for all clubs to give back to community.

Some of this year's boxes were inspired by a design by Johnny Tolly, who makes BoC boxes using PVC for the box body. Using this much faster technique, we doubled our box donations this year, which marks our fifth year participating in the program. One touching story I heard from the Cystic Fibrosis Unit was of a small boy who was going for treatment. When the children go, they must leave their beads and boxes behind. Well, it seems this little boy would not leave his box behind, and eventually the caretakers relented and let him carry it with him. ■

—Gerald Lawrence, Magnolia Woodturners

Beads of Courage Update

Beads of Courage has recently updated its process and guidelines for turned box donations. It is important that woodturners review the guidelines and donation options prior to beginning the donation process. Learn how AAW members can best work with BoC by visiting tiny.cc/BOCAAW (case sensitive URL) or by scanning the QR code with your mobile device.

Gerald Lawrence (left) and Phillip Brown of the Magnolia Woodturners pose with their club's BoC donation to a local children's hospital.

Tips

Cut precise disks and rings at the lathe

I often need to make thin veneer disks or rings for various purposes from other materials. As a recent example, I needed to make a spacer ring for a project using ⅛"- (3mm-) thick neoprene. I have found the best way to do this is on the lathe.

First, I attach a plywood disk to a faceplate. Next, I attach a piece of the thin material I want to cut to the plywood, using double-faced tape (*Photo 1*). I have good results using cloth-backed carpet tape. With the lathe turning *slowly* and the toolrest at center height, I use a sharp craft or box knife with the blade held vertically. Ease the blade through the material at the desired radius (*Photo 2*). Using the lathe, I was able to make a custom spacer ring the exact size and shape I wanted.

—Bill Wells, Washington State


1


2

Makeshift scale measures drilling depth

I find that when drilling on the lathe, a measurement scale on the tailstock quill is useful for monitoring hole depth. If you own a lathe that has no measurement scale on the quill, here is an inexpensive solution that uses a metal ruler.

First, position the end of the drill bit so that it just makes contact with the workpiece. Now fix a metal ruler with two strong magnets to the tailstock. The measurement for the desired drill depth needs to line up with the end of the quill (*Photo 1*). Drill into the workpiece by winding the tailstock handwheel until the end of the quill lines up with the end of the ruler (*Photo 2*). Of course, you should back the drill bit out at intervals to remove the shavings, as you normally would.

—Kai Koethe, Germany


1


2

Shopmade thin parting tool

Woodturners use parting tools on a regular basis and, for the most part, standard ⅛" (3mm) and 1/16" (1.5mm) parting tools do the job admirably. However, there are times when we are faced with having to part (or turn a tiny detail) in really tight spaces. When that happens, I call upon my do-it-yourself "micro" parting tool. Simple to make and virtually without cost, it is made from a worn-out hacksaw blade. I ground off the teeth and shaped it into a narrow parting tool.

To make the tool, I cut the blade off at 5" (13cm), roughed up the rear 2" (5cm) with sandpaper, and glued it into a slot cut in a crude handle. For safety sake, I drilled a ⅛" hole just behind the slot and drove a wood screw through the handle. This should prevent the wood handle from splitting along the grain behind the slot.

Sharpen the tool as you would any parting tool, but because hacksaw blades are not made of high-speed steel (HSS), **do not sharpen it on a CBN wheel**.

—Gary Miller, Ontario, Canada

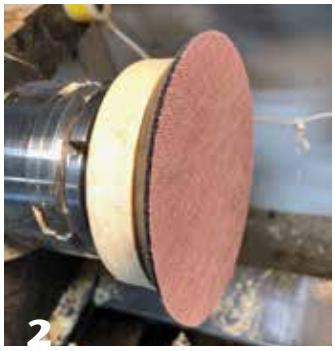
Lathe-mounted sanding disk

I made a sanding disk that I can mount on my lathe. I use it most often for sanding the bottom of a bowl or spindle when I have a nub to remove after turning. I find this method works much better than using a handheld sander. Hold the work to the sanding disk carefully, so it doesn't get pulled from your hands.

To make the sanding disk, I turned a ¾"- (19mm-) thick disk from scrap wood, 5" (13cm) in diameter to match the rubber backing of a sander pad I had purchased. I glued the pad to the wood, then added three small screws as well (*Photo 1*). The backing pad exactly fits the fine mesh sanding disks I use on my random orbit sander (*Photo 2*). It's very easy to change grits, and to shake out the dust that accumulates in the mesh sanding disks, which can last much longer than ordinary sandpaper disks.

—George Martin, Minnesota


1

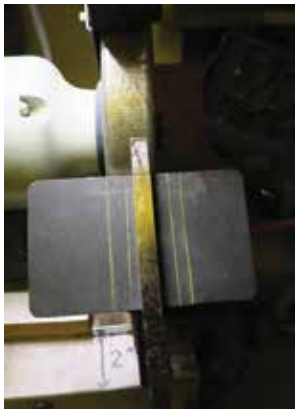

2

Repurposing tenon scraps

Before removing the spigot from a project, I turn the scrap wood's face flat to create a good gluing surface. This way, I can glue several wasteblocks with tenons together to make new turning blanks. Most of these scraps are already 2" or 1½" (5cm or 38mm) in diameter, as they were sized to fit my chuck. This gives me a lot of choices for using various left-over woods. Most of the small boxes and trinkets I turn are rarely over 2" diameter anyway.

—Gib Oswald, Wyoming

Sharpening guidelines keep you square



When I'm sharpening a tool that needs to be square to the grinding wheel—like a square scraper, bedan, or parting tool—I'm concerned about whether I'm presenting the tool 90 degrees to the wheel. I especially want to avoid twisting the tool as I lay it across the grinding wheel toolrest. So I came up with a simple solution: I drew lines on the toolrest to act as a visual guide.

Using a square, I drew a series of random parallel lines on the grinder toolrest. Now, when I go to sharpen a 90-degree-angle tool, all I have to do is line up the tool with one of the parallel lines and sharpen away.

I used a colored pencil to draw the lines, so I can easily remove them if I ever need a different visual guide for sharpening other tools.

—Rich Sabreen, Connecticut

Quick and consistent V-arm positioning

During a Tips & Tricks discussion at a recent meeting of the Chesapeake Woodturners, past President Doug Bartos suggested cutting a length of 1"- (25mm-) diameter PVC pipe to slip over the V-arm of the Wolverine sharpening system. This ensures a quick, consistent, and reliably accurate method of recovering repeat settings for sharpening various tools. Cut the PVC pipe on your miter saw or table saw to ensure square cuts. Cut and label pipes for each tool type you use. When changing from one sleeve to another, simply slide the V-arm firmly against the pipe sleeve and tighten the system clamp. ▸

—John Kerr, Maryland

Meat smoker as wood-drying box

I had cut and rough-turned several trivets and bowls out of ironwood. Being a desert wood, ironwood retains water very well, and I was going to have to wait a long time for the turnings to air-dry. Then I thought of my smoker and realized it would be a great wood-drying box, especially since I was working with thin endgrain pieces. With my smoker, I can control the temperature. The only drawback is that the timer goes up to only twenty-four hours. But in less than that much time, I found that these thin pieces had dried significantly.

—Jim Meizelis, Illinois

Square-face setup fixture

This simple shop-made fixture reduces fiddling when mounting rough bowl blanks between centers on the lathe. Use it when you've sawn a flat surface you want to keep square with the lathe axis, so you can turn a chucking tenon relative to that face.

The fixture is just a flat plate with a slot for the drive center, on a base sized to sit on the lathe bed and index against the headstock housing (*Photo 1*). It establishes a vertical and square-to-the-axis reference, replacing eyeball acrobatics with try-squares and blocks. With the tailstock lightly engaged, rotate the blank to confirm your cut surface is parallel to the fixture, and adjust as needed (*Photo 2*). When it's right, tighten the tailstock in preparation for turning the outside of the bowl with chucking tenon. This is purely a set-up fixture; remove it before you turn.

The fixture also helps mount burls and other awkward lumps when you want to protect the natural edge of the bowl-to-be by squaring it to the axis, then planting the tail center wherever it happens to land (*Photo 3*).

—John Kelsey, Pennsylvania


1


2


3

"Anti-gravity" finishing machine

One way to build up a finish on a turned item is to paint on a wiping varnish or wipe-on polyurethane and let the lathe spin slowly, less than 100 rpm. The constant slow rotation allows the finish to flow out evenly. Brush strokes disappear and there is little chance of having any sags, drips, or runs.

One issue is that this technique ties up the lathe while the finish is drying. Or you may not have a lathe that will slow to less than 100 rpm. My solution was to make a dedicated machine that is inexpensive, takes up little space, can rotate slowly, and can accommodate a chuck or faceplate.


1

A small DC motor (upper left) is powered by a DC accessory cord, wired through a rocker switch. A small faceplate is mounted on the motor shaft by way of an adapter.


2

The low-rpm motor is held in a vise during use. The piece rotates slowly so the finish can dry without the issues of gravity.

With some creative use of thread adapters, set screws, etc., you can adapt the motor shaft to any work-holding device that can be mounted on your lathe.

The heart of the setup is a low-rpm, low-voltage, direct current (DC) motor, powered by a common DC accessory cord matched to the voltage of the motor. The motor I purchased is very low amperage and inexpensive to run. Small DC motors can be sourced online by searching for a "reduction motor" with whatever DC voltage and rpm you want. Many cost less than $10. An accessory cord can also be purchased inexpensively. I wired in a rocker-type switch for my motor (*Photo 1*).

The setup can be mounted in a vise during use and put away when not in use to save space (*Photo 2*). ■

—David Staeheli, Alaska

Calendar of Events

Send event info to editor@woodturner.org. December issue deadline: October 15.
See AAW's online Calendar at tiny.cc/AAWCalendar.

Canada

July 16–19, 2021, Saskatchewan Woodturners Symposium, Regina Trades and Skills Centre, Regina. Sponsored by the South Saskatchewan Woodturning Guild, this event features an instant gallery, wine and cheese gathering, banquet, lunches, auction, and demonstrations. Demonstrators to include Jean-François Escoulen, Nick Agar, Jason Breach, Michael Hosaluk, and others. Early registration cutoff is March 31, 2021. For the latest information, visit southsaskwoodturners.ca.

Colorado

September 17–19, 2021, Rocky Mountain Woodturning Symposium, The Ranch Larimer County Fairgrounds, Loveland. For more, visit rmwoodturningsymposium.com.

Illinois

September 23–26, 2021, 7th Segmenting Symposium, Crowne Plaza Hotel, Northbrook. Event to include world-class segmenting demonstrations, instant gallery, tradeshow, and spouse activities. For more, visit segmentedwoodturners.org.

Minnesota

Multiple exhibitions, AAW's Gallery of Wood Art, Landmark Center, Saint Paul:

- September 8–December 29, 2020: *Step up to the Plate—Second Inning* (annual AAW-member exhibition).
- Ongoing displays: *Touch This!* family-friendly education room; *Art from the Lathe—Selections from the Permanent Collection*; gallery gift shop; and vintage and reproduction lathes.

For more, visit galleryofwoodart.org or email Tib Shaw at tib@woodturner.org.

New Jersey

October 4, 2020–January 10, 2021, *From the Ground Up: Peters Valley School of Craft*, an exhibition highlighting the impact and history of the 50-year-old school, Hunterdon Art Museum, Clinton. The show includes works in various media and multiple artists-in-residence. Woodworker Janine Wang, current visiting instructor at Peters Valley, will focus on woven and turned baskets during her residency in December. Other artists include Karl Seemuller, John Sheridan, Carolyn Grew-Sheridan, Joyce Anderson, Emil Milan, and Andrew Willner. Curated by Elizabeth Essner. For more, visit hunterdonartmuseum.org.

Pennsylvania

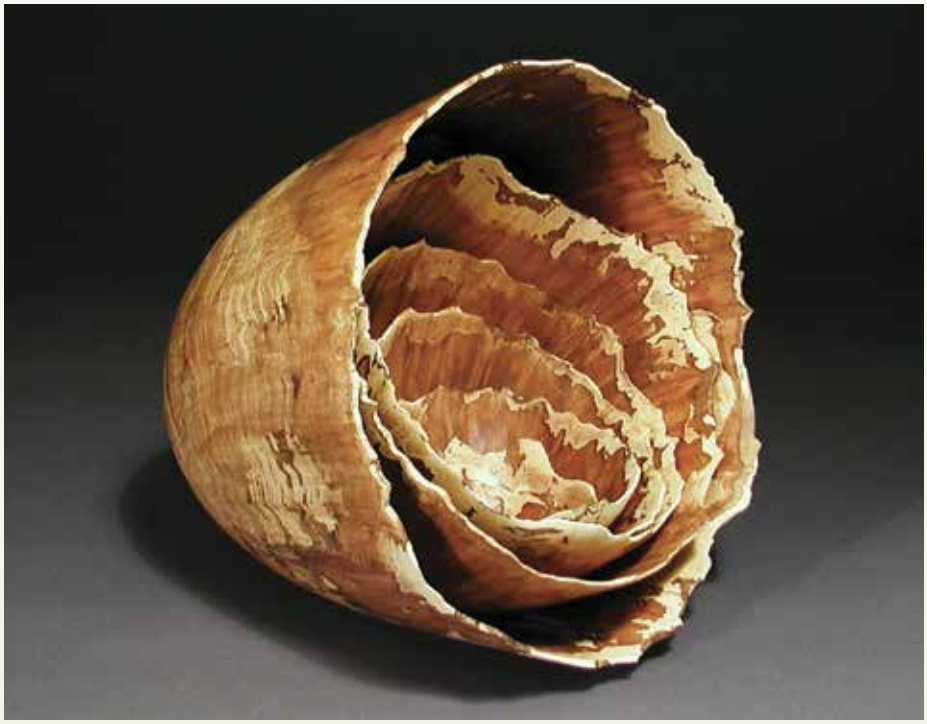
September 24–26, 2021, Mid Atlantic Woodturning Symposium, Lancaster Marriott Hotel and Convention Center, Lancaster. For more, visit mawts.com.

Tennessee

CANCELLATION NOTICE: Out of an abundance of caution for the health and safety of attendees, demonstrators, vendors, and symposium volunteers related to COVID-19, the Tennessee Association of Woodturners 33rd Annual Woodturning Symposium, originally scheduled for January 29 and 30, 2021, has been cancelled. Please visit tnwoodturners.org, symposium tab, for information and updates about the 2022 symposium, January 28 and 29, 2022.

Virginia

2020 CANCELLATION NOTICE: Due to the health risks associated with COVID-19, the Virginia Woodturners Symposium, originally scheduled for November 7, 8, 2020, at Expoland in Fishersville, has been cancelled. Organizers are planning the next event for November 2022. For more, visit virginiawoodturners.com.



Mike Mahoney, Untitled, 2004, Spalted madrone burl, largest: 10" × 8" (25cm × 20cm)

AAW Permanent Collection

Photo: Tib Shaw/AAW

Basic Stave Construction for the Lathe

Bill Wells

A basic staved turning blank consists of vertical beveled-edge staves glued together to form a hollow cylindrical blank. You could find easier, less time-consuming ways to make a turning blank. So why go to such lengths to cut, join, and turn these multisided creations? First, stave construction allows you to create relatively large-diameter blanks using less material. Second, the finished blank will display only facegrain, so stave bowls cut smoothly, without the intermittent grain tearout common in one-piece bowls. Staved projects are similar to and have many of the advantages of segmented designs, but use only a dozen or so pieces, compared to hundreds. Design flexibility is another advantage.

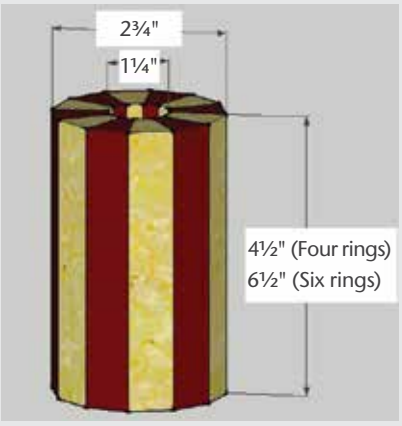
Here, I'll describe two woodturning projects that illustrate basic stave principles: a set of napkin rings and a simple bowl.

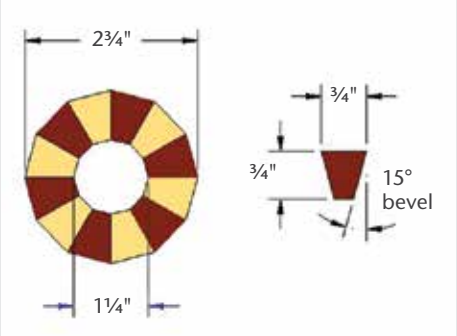
Staved napkin rings

Design and material

Instead of making a blank for each napkin ring, it is simpler to start with a long staved blank and cut it into rings. The blank consists of twelve staves glued into a hollow-log shape (*Figure 1*). This design will make a set of four or six napkin rings, depending on stave length. I chose to use two species, bubinga and maple, for an appealing color contrast. The stock came as nominal 1" × 6" (25mm × 15cm) boards, with a net thickness of ¾". Use dry lumber and species of similar hardness.

Staved napkin ring turning blank





Figures 1, 2. Side and end views of a "hollow log" stave blank for napkin rings.

Set bevel angle

The staves' bevel angle is set by the table saw's blade tilt. I used a magnetic digital angle gauge to set the bevel. The required angle is calculated by the following equation:

Bevel = (360°) / (2 × number of segments)

So for a blank with twelve staves, the bevel angle would be 15°. With the blade angle set, cut into the sled's base all the way up to, but not into, the 2" × 6" fence.

Set stave width and length

For this project, I used the stave width shown in *Figure 2*, ¾". Use the top cutting guide on the sled as a "stop" to cut each stave to exactly this width. Holding the cutting guide tightly to the fence, slide it ¾" from the beveled edge you just cut, and attach it to the base with screws and washers. To make four napkin rings, the stave length is 4½" (11cm); for six rings, the length is 6½" (17cm). Note that for this project, you will be ripping the staves along the grain, not crosscutting. Staves made in this way will be glued facegrain to facegrain, making strong glue joints.

Cut the staves

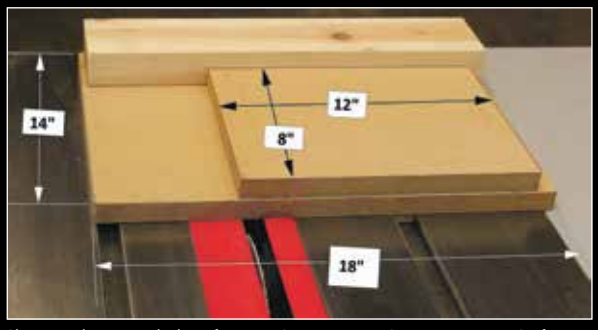
For each cut, the workpiece must be snug against the cutting guide and held in place with a lever clamp attached to the fence. This clamp

Table Saw Stave Sled

The key to a successful stave project begins at the table saw. The staves must be cut precisely and identically—each must have the same bevel, width, and length. I use a sled designed specifically for this purpose.

The sled comprises a base made from ¾" (19mm-) -thick medium-density fiberboard (MDF), a nominal 2" × 6" (5cm × 15cm) laid flat for a fence, and a hardwood runner fit in the saw's miter slot.

Rip the front of the 2" × 6" to produce a straight, smooth face, and glue it to the base at 90° to the saw blade. Then cut another piece of MDF, 8" × 12" (20cm × 30cm), which will sit on top of the sled and serve as a cutting guide.



Shopmade stave sled. Before cutting staves, trim a narrow strip from the 8" × 12" cutting guide, making it exactly parallel with the saw blade. Use this parallel edge to align boards when ripping staves.

Cut napkin ring staves

With the saw blade set at 15° and the parallel guide screwed onto the sled, the author rips ¾"-wide bubinga staves. The fence-mounted lever clamp holds both the cut stave and the board; a stop in the saw's miter slot, not pictured, limits sled travel as a safety measure.

holds both the board and the cut stave, as shown in *Photo 1*. The first cut establishes the initial 15° bevel, and the offcut must be discarded, since only one side is beveled. Flip the board over, with the long side of the bevel down and aligned against the cutting guide, clamp the work in place, and cut the first stave. After each stave is cut, flip the board front to back, ensuring the bevels are oriented correctly on each stave.

Cut a trial set of staves to test your blade angle. I used pine boards for this test. Using rubber bands, bundle the staves together to form a cylinder. The staves should nest together tightly, with no visible gaps. If there is a gap on the outside, increase the blade angle very slightly and cut new test staves. And with a gap on the inside, decrease the blade angle. When you are happy with the trial fit-up, cut twelve staves, six of each wood species.

Glue and turn

Arrange your staves over a strip of wide masking tape, alternating species, wide side down, and apply wood glue (*Photo 2*). Now bundle the segments, holding them together loosely with a couple of rubber bands. Here is your chance to align everything evenly, before the glue sets. Use three hose clamps to add more, but not too much, clamping force (*Photo 3*). Allow ample time for the glue to set before turning.

Mount the hollow blank on the lathe. I was able to use my scroll chuck on the drive end and a cone center in the tailstock. I used this arrangement only long enough to form a tenon (*Photo 4*), which I used to remount the blank in the chuck. I then trued up the end and turned the blank to a uniform outside diameter of 2¼" (6cm).

Use a 1⅜" (35mm) Forstner bit mounted in a drill chuck in the tailstock to form a consistent inside diameter (*Photo 5*). For any drilling with a Forstner bit, set the lathe speed low, around 500 rpm. Now, the procedure is to drill into the blank, measure and mark a cutoff line, and part off a napkin ring ▸

Glue staves together

Apply glue to the staves; wide masking tape keeps them in position. Hose clamps provide gluing pressure.

Turn a tenon

The blank is first mounted in a chuck and supported by a cone center in the tailstock. The author turns a tenon using a bedan.

Turn, drill, measure, part—repeat!

With the workpiece remounted in the chuck using the tenon, a 1⅜" Forstner bit is used to drill a straight-walled center hole.

Measure napkin ring width and part off. Repeat the process for each additional ring.

Jam chuck for final work

Six rings turned, drilled, and parted off.

A softwood dowel turned to the right size serves as a jam chuck for remounting the rings for final trimming and sanding.

(*Photos 6, 7*). Repeat this process until you have all of your rings cut. I made the rings 13/16" (21mm) wide to allow for final trimming and sanding (*Photo 8*).

Sand and finish

A jam chuck made from a 2"-diameter softwood dowel is an easy way to hold the rings for final trimming and sanding (*Photo 9*). The jam chuck should fit into the napkin ring snugly. Trim off the rough edges and sand. I applied wipe-on polyurethane and strung the completed rings on a thin metal rod to dry.

A staved bowl

Blank design and material

The design and construction of this staved bowl follows the same concept as the staved napkin rings, but with a few significant differences: the blank will be larger, about 7" (18cm) diameter and 4" (10cm) tall; we will need a calculation to find the required stave width; staves will be crosscut, not ripped; and the wood for the staves and bowl base will be nominal 2" × 4" lumber (net thickness about 1¾"). This thicker material provides more design flexibility, allowing for a more curved bowl shape.

This bowl design uses twelve staves, as before. I chose two species, wenge for the staved blank and mahogany for the base.

Stave bevel angle, width, length

Use the same bevel angle calculation as before. Since there are twelve staves, the angle will be same as in the napkin ring project, 15°. If you choose a different number of staves, recalculate the bevel angle.

Now we need to determine the required stave width. For a polygon with twelve sides, we can come very close by dividing the circumference of a 7"-diameter circle (πd) by 12: (3.14 × 7) / 12 = 1.83", giving a stave width of about 1⅞" (48mm).

I chose a stave length of 4", the width of the board I purchased. The staved bowl blank details are shown in *Figures 3, 4*.

I used the same cutting sled as in the napkin ring project, now used for crosscutting. Crosscut bowl staves will show horizontal grain, and when turning the blank, you will be cutting entirely with the grain. You will not use the MDF cutting guide, so remove it from the sled. You will use the sled's fence to position the stock.

With the saw's blade set to 15°, place your stock against the fence, and make a cut to establish the initial bevel (*Photo 10*). Next, attach a "stop" for repetitive cutting of the staves. With

the saw blade retracted, slide the stock slightly so that the saw kerf in the fence is just covered. Now measure 1⅞" and attach a stop block to the fence, using wood screws (*Photo 11*).

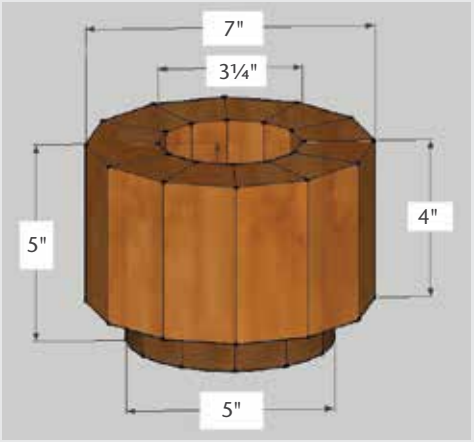
Cut the bowl staves

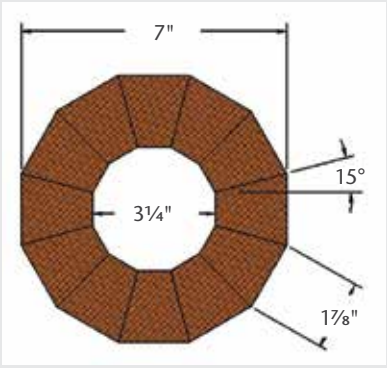
Clamp the workpiece in place before cutting staves (*Photo 12*). After each stave is cut, flip the board over, front to back, so the wide side of the stave is facing up for each cut. Slide the wood against the stop, clamp it, and cut the next stave. First cut a trial set of staves to test your blade angle, as previously described. When you are satisfied with the trial fit-up, cut twelve staves in your chosen wood for this project.

Glue and complete blank

Bundle the staves, holding them together with rubber bands, and re-check the fit. *Photo 13* shows that I have a gap. Yes, it happens and it can be fixed. Start by dividing the staves into two sets, each held by wide masking tape. Apply wood glue between the staves, but none on the outer face of the end staves. Now assemble the halves together, separating them by wood dowels, and clamp together as shown in *Photo 14*. Note that here I used a belt clamp. ▶

Staved bowl turning blank





Figures 3, 4. Side and end views of a staved bowl blank.

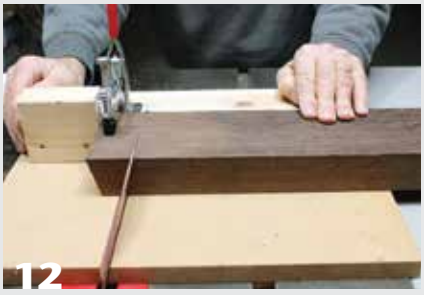
Cut bowl staves


10

The author cuts the end off the wenge stock, establishing the initial 15° bevel.


11

Set the position of the stop block indicating stave width.

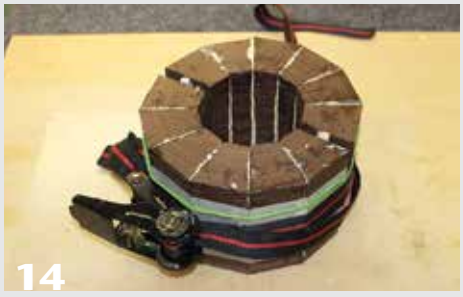

12

Crosscut the bowl staves, flipping the board between each cut.

Correcting for a gap


13

Dry-fitting the bowl staves reveals a gap!


14


15

To correct for the gap, glue up the two halves but keep them apart using dowels opposite one another. After the glue dries, sand the remaining joints on a flat board, then glue the two halves together.

Affix auxiliary faceplate

Smooth one end of the glued-up blank, and affix an auxiliary wood faceplate using double-sided turner's tape or glue.

After the glue dries, sand each half face down on a sanding board (*Photo 15*). When the two halves fit together with no visible gap, glue and clamp them together. When the glue dries, sand one end of the blank smooth, using either the sanding board or belt sander.

Next, cut an auxiliary faceplate the same diameter as the stave blank. Center and attach the smoothed end of the blank to the auxiliary faceplate. I used double-sided turner's tape so the faceplate could be pried loose later, but you could also glue the auxiliary faceplate to the blank (*Photo 16*). Carefully center and screw a metal faceplate to the auxiliary faceplate for mounting on the lathe.

Turn the bowl

With the workpiece mounted on a metal faceplate, turn the blank round and begin to shape the bowl, its foot at the tailstock end. True the bottom and turn inside the lower part of the bowl near the base.

Affix base, finish turning

Attach the bowl base material to a faceplate, and form a rabbet that will fit snugly into the bottom of the bowl. Glue and clamp the base to the bowl.

Finish-turn the bowl, outside and in. When the turning and sanding are completed, part the bowl at its base, taking care not to cut into the faceplate screws.

Turn the bowl

Turn the outside of the blank round with a spindle-roughing gouge, then rough-turn the shape. By "rough-turning," I mean start to develop the outer shape, but leave plenty of wood for later refinement (*Photo 17*). Now prepare the bottom of the blank to accept the bowl base. True the bottom edge, and turn the inside round (*Photo 18*). Measure the outside diameter of the base, and remove the blank from the lathe.

Use nominal 2"-thick lumber for the base (net 1¾"). Mark out a disk about 1" wider than the bottom diameter of the bowl, cut on a band saw, then mount on a faceplate. Use wood screws that extend no more than ½" (13mm) into the base; this will allow you enough material to part off the bottom later. Form a rabbet in the base, ½"-wide and to a diameter that fits snugly into the bowl bottom (*Photo 19*). Glue and clamp the base to the bowl.

After the glue has dried sufficiently, begin turning the inside, using a bowl gouge as you would with a solid blank (*Photo 20*). Make sure you have turned the outside profile to your satisfaction before removing too much of the inside wood. I continued using a spindle gouge on the outside, then used a carbide tool for finishing cuts on the inside. Sand both the interior and exterior.

Before parting the bowl from the lathe, mark a line indicting the length of the screws and cut above that line. I reverse-mounted the bowl on a jam chuck to trim the base flush.

I used Danish oil to finish the bowl, followed by carnauba wax and light buffing. ■

Bill Wells is a retired engineer living in Olympia, Washington. He has worked with wood most of his life and is a member of Woodturners of Olympia. Bill welcomes comments at bill98502@msn.com.

Barely There Twig Pots

Paul Russell

My interest in twig pots started twenty-five years ago, when I bought my first lathe following a Utah Woodturning Symposium. Anticipating this purchase, I cut up an apple tree that had been removed from a neighbor's yard and stored the wood in my garage. By the time I purchased the lathe, the wood had dried and cracked so badly I thought it was no longer useful for much more than firewood. Having seen some works by Rudy Osolnik, I was inspired and wanted to give twig pots a try. So I practiced on one of the old dry pieces of apple wood. I mounted the piece and turned a vase top. My wife and I fell in love with it, and I've been turning twig pots from "defective" wood ever since.

As I experimented with twig pot forms, I discovered I like rustic-looking pieces. And there was something about rescuing a piece of wood from the firewood pile and creating something beautiful with it. Some pieces offer unusual textures and colors from age, bugs, heat, rain, and earth. I experimented with traditional shapes and found that there are many different styles that could be developed using "defective" features of the wood. As I made more twig pots, I found that folks loved them as much as I did, and there was always more interest in pieces with more branches, knots, dips, voids, and cracks. ▸

Inspiration

The author's first "rustic" twig pot made from lilac burl. This piece inspired a new generation of *Barely There* forms.

Lovely "defects"

From left: Plum with cracks in an area of bark die-back, cancered ash, and lilac burl.

A turning point in my experimentation came when I was offered a truckload of lilac burl. At first, I was skeptical because I'd never seen lilac, but boy, was I surprised. The wood was in all sizes, burled over, and irregularly shaped. I thought I'd never be able to do anything with it, but my love of twig pots overruled that notion. When I turned some pieces, they were exceptional and I vowed to use all of it. That vow turned into an adventure that started with a lilac elbow. The shape was wonky, but it was too good to throw out. It had good ends, burl figure in the middle, but not much on one side. So on the lathe it went, and that piece (*Photo 1*) inspired my new generation of *Barely There* twig pots.

Sourcing wood and twigs

Wood selection is one of the fun aspects of twig pots. It is a challenge to put on an imaginative hat and learn how to identify wood with extreme shapes and surfaces. You have to be a wood hound and always on the lookout for the good stuff. Likely sources of wood are arborists, fruit growers, construction sites, and often the family next door. A willingness to extend yourself and inquire about wood is necessary. You might need to be willing to pay a few dollars if you want a consistent source. A friend was taking down some fruit trees and asked if I wanted some wood. My response, "I need elbows," got a smirk until I showed him why.

Wood with cancers, dry standing, bug holes, voids, shallow or dead spots, and other sorts of damage work well (*Photos 2-4*). Other times, look for wood that is already in a shape similar to the form you are after (*Photos 5-7*).

What you put in a twig pot can make a huge difference in its final appearance. By now, I have trained my eye to look for interesting items such as sticks, twigs, dry flowers, reeds, and wild rose as I drive and walk around town. The selection is endless, with some fillings being as dramatic as the twig pot itself. Some of my favorites are dried artichokes, Indian tobacco, wild snapdragons, reeds, and bunch grass. Stems with tufts and dried flower buds without the petals also look nice. It is best to tie bunches of

Using natural shapes

From left: Manzanita root burl, ash elbow, and cherry elbow.

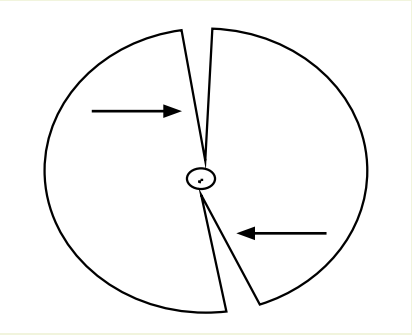
Safety First!

Turning *Barely There* twig pots requires wood that is misshapen, out of balance, and possibly unsound. Therefore, safety considerations are especially important. Bear in mind the following:

- Excessive lathe speeds and inadequate work mounting could be real hazards.
- Stay out of the "line of fire" (the likely flight path of a piece ejected from the lathe).
- Wear a faceshield.
- Stop the lathe before moving the toolrest, and spin the workpiece by hand before starting the lathe to ensure it clears the toolrest.
- Use the tailstock whenever possible. The only time I turn without the tailstock is when I am drilling the twig pot opening.

Keep in mind you will be turning wood with defects at a fast speed. Loose bark or chunks of wood, if not the whole piece, can fly off the lathe. Start at the slowest speed possible and increase it to a fast but safe level. Even though I incorporate defects and cracks, I still ensure the wood that will be part of the final piece is sound, without *extensive* cracking. Make sure your workpiece does not have cracks to the center from both sides that could separate with the centrifugal force of turning. Because of the nature of these turnings, stop the lathe often to check the status of the wood. If you uncover any threatening defects, it's time to find a better piece of wood.

Dangerous deep cracks



Log or branch sections with cracks all the way to the center on both sides will not remain stable and should be avoided.

the same twigs together and hang them upside down to let them dry so they'll be available when you need them. Always cut stems extra long when green, so they can be trimmed to final length later.

In this article, I'll illustrate two examples of twig pots, one featuring natural "defects" (bark die-back) and one whose shape is based on the natural shape of the branch (an elbow).

Example 1: Emphasizing "defects"

When selecting a piece of wood, try to visualize the end result. Before mounting it on the lathe, consider its orientation and the desired shape. Defects become features, so consider what you want to keep and accentuate and what you want to cut away. Since this twig pot will be vase shaped with a smaller diameter opening and foot, I took care to ensure the best features are in locations that will be the most visible.

I selected a piece of plum with die-back on both sides, leaving bare weathered wood. This creates a dramatic look for this style of twig pot because the shape is irregular and will result in a flat-to-round contrast when turned. The fresh sapwood (white) on the outer edges may need to be turned away to expose the color beneath.

I attached a faceplate in the center of the log to maximize the edges and balance the die-back surfaces (*Photo 8*). In other instances, I might position the faceplate in a different location (not always centered) to accentuate a flat or hollow side of the log. For larger twig pots, I always use a faceplate and support the other end with the tailstock (*Photos 9, 10*). A revolving center with a point or cup works well. The benefit of a point, or cone center, is that it does not require ▸

Faceplate location

Plum branch with weathered bark die-back on each side and sapwood on the wide sides. Since this piece is balanced front to back and side to side, the best location for the faceplate is in the center.

Tailstock support

For added safety, I always use the tailstock to support the work. Use a cone or cup center.

Rough-shape the pot


11


12

Cut away edges to rough the basic shape. Determine the size of the base in relation to the top. Note that the natural wood features are retained.

Shape the neck


13


14

Refine the neck shape, carefully blending cove cuts from the top and bottom. Cut a slight relief in the spout before boring the opening.

Drill the opening


15

The author uses a Forstner bit to bore the opening. Retract the bit often to clear the shavings as you go.

The completed piece


16

The completed twig pot, bark die-back retained.

a flat wood surface. The benefit of a cup is that it is more secure and will typically prevent wandering that sometimes happens with a point.

Start by defining the edges and roughing the form to the desired shape. Then taper the bottom to create the base (*Photos 11, 12*). When forming the base, be sure to leave enough diameter that the twig pot will be stable, but not unduly thick. Consider whether you will part the piece off the lathe. If you have left enough waste wood at the bottom, you can part off the base above the faceplate screws. Otherwise, the screw holes can be filled using dowels or wood filler.

I leave the top of the vase for last and retain enough wood so I can consider multiple options when I reach that point. At the top of the vase, the neck and opening should be balanced with the vase body (*Photos 13, 14*). A large vase with a small opening may not allow for enough filling to balance out the piece. An opening too large is also cumbersome. There is no secret recipe for sizing the opening, but I usually try to leave ¼" to ½" (6mm to 13mm) thickness in the sidewall in the spout, depending on the overall size of the twig pot.

I use Forstner bits for drilling all my twig pot openings. Forstner bits stay centered during boring. Spade bits and twist bits tend to wander off center and follow the path of least resistance. Mount the Forstner bit in a drill chuck. The lathe speed should be drastically reduced. Drilling at high speeds will create heat and could pull the drill chuck out of the tailstock or seize the bit in the wood. Make sure you seat the drill chuck well before starting. With the lathe on and with the tailstock quill retracted, carefully slide the tailstock up to the top of the vase spout until it just makes contact with the wood, lock the tailstock, and advance the bit and tailstock quill (*Photo 15*).

I will typically drill to the depth of the exposed Forstner bit shank, about 2" (5cm). Larger openings require more depth than smaller openings. *Photo 16* shows the completed vase.

Example 2: Elbow twig pot

If you get a kick out of trying something new, try turning an elbow. Turners are so focused on the "good" parts of the tree that they ignore some really interesting natural shapes that can be emphasized. You can find many good elbows on any tree but especially on fruit trees due to pruning, which introduces stress in the wood and can accentuate its figure and character. This type of turning also exposes areas of heartwood, which can create nice stripes through your piece. Color and figure are great, but the shape is spectacular.

It is a paradox that the most important aspect of turning elbows is *balance*. What you turn has to stand up when completed. The bulk of the twig pot weight must be over the center of the base (*Figure 1*), which must have enough weight and width to support and stabilize the piece. For elbows whose curvature extends far beyond the base, balance can be achieved by adding more weight to the base. A good portion of the elbow weight will be turned away and will lighten the piece considerably. The top of the twig pot also provides a counterbalance point. Once you place twigs in the drilled opening, the weight of the twigs will also provide ballast over the center.

The first step is to find a good candidate (*Photo 17*). Branches with a slight bend to more extremely rounded elbows will make great pieces. Make sure the ends of your piece are solid. When harvesting elbows, be sure to cut pieces longer than needed because if your elbow has a lot of end checking, you should trim it back to get to better wood.

Planning the piece is important because the first steps involve using a bandsaw to create a flat on both ends. These flats will be used for mounting the work between centers (*Photos 18-20*) to turn a tenon on the bottom, at the tailstock end.

Be sure to preserve as much wood as possible. The tenon should not be turned at the very end of the elbow, but back from the end a couple of inches to ensure the tenon is located in strong supported wood (*Photos 21, 22*). The tenon will eventually be cut off with a bandsaw or the base parted off at a later stage. Once the tenon is formed, remove the drive center, and secure the tenon in the chuck ▸

Balancing elbow pots

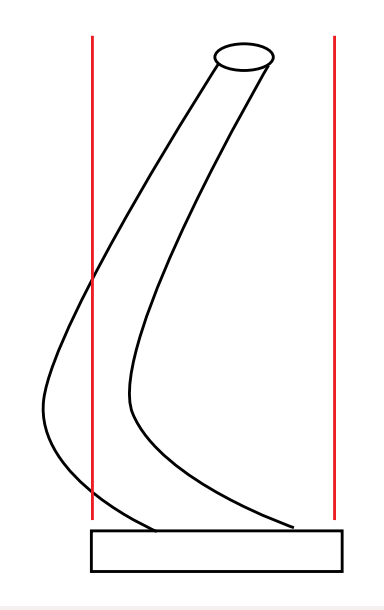


Figure 1. Stability and balance are determined by the weight over the base. Pieces with a more extreme curve must have a wider base and/or more weight in the base to compensate for off-center material.

Select an elbow

This cherry elbow is perfect for a *Barely There* twig pot. There is not a lot of weight at the ends, so the base must be wider to support the piece.

Cut flats, mount between centers

Flats are cut at the top and bottom ends to provide surfaces for a drive and live center. The bottom of the pot should be mounted at the tailstock end to provide better access for forming a tenon.

Form a chucking tenon


21


22

Form a square tenon, taking flat cuts across the base. This flat area will later become the final foot of the piece, as the tenon will be cut off after turning.

Remount elbow in a chuck


23

The tenon now secured in a chuck.

Turn the top


24

For illustration purposes, a marker is used to show the first wood that is removed. Leave enough wood around the spout to refine the shape later.


25

Turn the middle


26


27

Turn away wood from the middle section, blending the curve with the upper section.

(*Photo 23*). Support the piece with the tailstock for added safety.

Photo 24 illustrates the area of wood that will be removed first. Elbow twig pots are turned in several stages. First, focus on removing wood at the top of the piece (*Photo 25*). This is done at a lower lathe speed until bulk is removed. Rough the beginning of the top, removing bulk wood from the elbow, but without reaching final thickness. Removing bulk dramatically reduces the weight and vibration of the piece. Leave a ball of wood around the live center. This is where you will later form the opening.

Next, remove wood from the midsection of the elbow and blend it with the top (*Photos 26, 27*). Too much tool pressure could lift the fibers and splinter the wood since you will be cutting into endgrain (*Photo 28*). As you continue to rough past the pith of the branch, you may begin to cut downhill (from a grain perspective). Sharp tools are important to avoid splitting the wood along the edges. Splitting happens because there is no support for the wood as you cut to final thickness. The rule is, take lighter cuts with sharp tools. In this stage, the lathe speed can be increased.

Watch for splintering

When blending areas, lighter cuts help prevent splintering from cutting into the endgrain. Once you pass the pith, this is generally not a problem.

Shape spout

Return to the top and finish shaping the spout, blending it into the upper bend.

Turn the base

Turn away wood toward the base, establishing the final overall curvature. Sanding, at this point, would be performed with an orbital sander with the lathe off.

Move back to the top of the vase and remove more bulk (*Photo 29*). Develop the spout's rim, cutting through the bark or other irregularities if you want a solid, flat, round rim. Leave the final shaping (and blending) to the last step before boring the twig pot opening.

Now form the base, blending from the middle as you go. Since mass may be needed, the base will usually be thicker than the rest of the bend of the elbow. The trick is to work top-down and blend as you go (*Photo 30*). I have found that most pieces retain their rigidity and I can still take light cuts across the entire arc without a problem. Make the base as large as possible while maintaining an elegant curve.

With the arc complete and the base shaped as desired, take some finishing cuts at the top of the twig pot. Most often, the shapes I use for the top are simple and easily blended to the arc, but with a definite rim. Be sure to leave enough wood to support the size and depth of the opening.

I use an orbital sander on the flat surfaces along the arc, with the lathe off. I use sandpaper with the lathe running at a low speed to sand the vase spout.

With the final shaping and sanding completed, bore the hole in the top (*Photo 31*). While I don't show it here, bore the hole using the same drilling principles as in Example 1.

Remove the piece from the lathe and cut the tenon off using a bandsaw or handsaw. For safety, be sure the piece is well supported on the bandsaw table. A drill-mounted sanding disk is used to sand the bottom of the base. *Photo 32* shows the completed elbow twig pot. ■

Drill opening in spout

Hole bored in the top. This spout is stabilized with cyanoacrylate (CA) glue since there are several checks that weren't seen at the outset. Solid wood in this section would be preferred.

Completed elbow twig pot

The completed piece takes its shape from the original curve of the branch.

Paul Russell, a transplant from San Diego to Utah, has been turning for thirty-five years. In addition to being an AAW member, Paul is a member and past president of the Timpanogos Woodturners in Provo, Utah. He is a wood hound and serious turner whose work is available online and at craft fairs in Utah (aka Paul Russell Designs).

Elegant **Two-Piece** URN

Kurt Hertzog

Cremation Urn, 2020, Cherry, paint, 11" × 5¾" (28cm × 15cm)

A turned cremation urn is essentially a hollow container with a sealable opening—a straightforward project *if* you have hollow-turning skills. A typical urn, often shaped like a vase, is hollowed through the neck, resulting in a single-piece body. Depending on the urn's size, this may require hand-held tools or a deep hollowing rig. Absent these tools or deep-hollowing experience, many turners are hesitant to turn an urn. Following is an alternative process that doesn't require "through-the-neck" hollowing. It involves rough-shaping the form, cutting it in half, hollowing the two halves separately, and then rejoining the halves. Requiring simple tools, the process can be scaled up or down as desired and can even be used to create a deep hollow vessel.

Rough-turn, cut apart

After roughing the cylinder, the author forms the separation point by "stair-stepping" the cutter paths for safety, using a wide parting tool.

Without a V-block large enough to hold the blank safely at the bandsaw, Bessey K clamps, with their flat surfaces, provide a safe alternative. Never cut unsupported round stock at the bandsaw, as it is a safety hazard.

Urn considerations

Whether you are making an urn for a human or a pet, plan ahead for the necessary size. Will it be a full-size, companion, or keepsake urn? A simple capacity calculation is helpful: Figure one cubic inch of interior volume for each pound of pre-cremation body weight. The beauty of a keepsake urn is that it is purely a remembrance container whose volume is discretionary. Companion urns, which contain the ashes of more than one individual, should be planned for the increased capacity needed.

Another question: Are there any final-resting-place constraints? The final location of the urn often dictates size and shape, along with the amount and type of ornamentation.

An urn, being only a container, does not need to be airtight, watertight, or weatherproof. The only essential requirement is that it be able to receive the ashes and then be closed. Many turned urns are delivered with a plastic bag and twist-tie closure. The ashes are deposited into the bag, which is closed prior to the urn lid being affixed. The urn lid, with or without a decorative finial, can attach to the body by way of wood threads, friction-fit, or any other method used for turned containers. The closure method is a wide-open design choice, even including a glued-in-place lid if future access is not necessary.

Blank prep

To make a simple-shaped urn in two pieces, it is helpful to think of two bowls

being joined together at their rims, resulting in a hollow form. The shape and size of the form is up to you, and the grain orientation can be either facegrain (like a bowl) or endgrain (like a lidded box). Since both parts will come from a single piece—shaped, split in half for hollowing, and then rejoined—either orientation will work. To illustrate this article, I chose a block of cherry, 6" (15cm) square and 11" (28cm) long. I mounted the wood in spindle orientation, meaning I would be hollowing into endgrain.

I mounted the blank between centers, turned it round, and formed tenons on both ends to fit my chuck. At this stage, I could visualize the overall size and shape enough to identify the maximum-diameter location. This is where the body pieces are separated and, after hollowing, glued back together. I made a wide parting-tool cut at this location, stair-stepping as I progressed to create tool clearance (*Photo 1*).

Rather than making a very deep part and then hand-sawing the blank into two pieces, I completed the cut at the bandsaw (*Photo 2*). The wider parting-tool cut, made to only partial depth, allowed me to locate my bandsaw blade in the middle of the opening, with a small lip of wood on either side. This extra material will be helpful later, as it will indicate my target inner diameter during hollowing so the two interface diameters (gluing surfaces) will mate up.

Hollow the halves

I mounted each blank into its own chuck, but you can get by easily with only one chuck. Having two chucks saves time and eliminates potential alignment errors when re-mounting. I started with the base half, but you can begin with either end.

As you would when excavating a bowl, hollowing in stages allows the remaining wood to provide support for the outer edges. Work on both the inside and outside alternately, hollowing and shaping as you go (*Photo 3*). As you hollow deeper and the wall support decreases, you can employ a padded faceplate to support the tailstock end (*Photo 4*). This support allows for continued outside shaping without chatter.

With the lower half hollowed and roughly shaped, ensure the base hollowing will accept the gluing interface of the top properly. It is also possible to hollow both halves before checking/adjusting the glue interface.

Then mount, hollow, and shape the upper portion in the same manner as the lower half—in stages (*Photo 5*). Note that the inside, upper section must be hollowed farther to allow for the neck opening (*Photo 6*). A bowl depth gauge works well to measure and mark the inside depth of both the upper and lower blanks. Any markings on the outside of the turnings will disappear with further cutting or sanding, so it is OK to mark it with pencil. I find that making measurement cards is helpful as the outside shape refinement continues (*Photos 7, 8*). Something as simple as a couple of 3×5 cards marked with key inside dimensions will do; it takes only a few moments and can help you avoid turning too far—allowing the inside to meet the outside.

Join and refine shape

The two halves could be dry-fitted together and, with tailstock support, turned to refine the outside shape. But since I don't have any need to work on ▸

Hollow the base section

This hollowing is into endgrain, so the author cuts from center outward to the left. Avoid vibration by hollowing and shaping the outside wall incrementally, rather than hollowing all at once.

A padded platter mounted to a faceplate on the tailstock provides great support at the open end of the hollowed base section. A simple piece of plywood with a craft foam pad would work well, too.

Hollow the top section

The top part of the urn is hollowed in the same progressive manner as the base. The neck hollowing is deepened beyond the planned opening point.

Gauge progress, note key interior features

Even with the wide parting cut, the grain match will be reasonable, unimportant in this case since this vessel is to be painted a dark color. Assess the glue joint and make adjustments as needed.

7

Prior to gluing and final shaping, the author makes a set of "guides" from 3x5 cards. These are taped to the work and indicate key inside features, such as the bottom, shoulder, and neck hollowing limit. Knowing the exact location of these features will help prevent surprises.

8

Glue body sections together

The glue-up can be done at any point after the two sections are hollowed. The lathe makes for a good clamp; use the tailstock handwheel to apply gluing pressure.

9

Sand the urn

After outside shaping is completed, a bit of power sanding smooths out tool marks and preps the surface for paint.

10

the inside again, I opted to glue the two halves together at this point (*Photo 9*). Because the gluing surfaces are facegrain to facegrain—essentially the outside surface of a tenon and the inner wall of the lower section—and are longer than ¼" (6mm), standard wood glue will provide a very strong, permanent bond.

Since my plan was to paint this urn, I knew the glue line would eventually be obscured. If you plan to leave the wood grain showing, you can take more care to match up the grain, add a feature ring, or accent the join in an artistic manner. With the glue applied and grain aligned, I clamped the parts together on the lathe.

After the glue has dried, finalize the urn's shape. To make any heavier stock removal safe, I periodically pencil mark the critical inside locations on the outside of the form, using the 3×5 card documentation. I also sometimes remove the turning from the lathe and stand it upright to assess its shape.

When you are content with the final shape, sand the work (*Photo 10*) to the grit necessary for the application of your finish of choice. Since the chuck mount on the upper part of the turning wasn't needed any longer, I removed that chuck at this time. I left the base chuck in place so I could mount and remove the work from the lathe with great repeatability.

Prior to forming the final neck opening and removing the extra base material, I took the turning from the shop and placed it upright to view it for a while. "A while" can be defined as a few moments or a few days, depending on your reaction to the shape you have made. I like to let it sit for a day, so I can glance at it several times as I pass by it during the day. If you decide the shape needs further refinement, additional sanding, or any other work under power on the lathe, the base is still in the chuck mounting. The turning can be easily remounted on the lathe.

Open the neck

Next, part off the top of the turning to "open up" the neck. Because the shape

of the upper section was formed in conjunction with the depth of the hollowing, I knew that by removing the waste wood at the top, I would be cutting into the already hollowed portion of the neck (*Photo 11*). If you haven't hollowed deep enough into the top, the end can be opened up as needed, but I'd rather break into an open area and avoid having to turn in from the top. Now, with the tailstock out of the way, shape and clean up the opening of the urn.

I decided to top this urn with a threaded lid and a finial. I cut a small recess to define the location of the lid and clean up the area to be threaded. I own threading jigs but find it is much easier and faster just to hand-chase the threads. I chase the internal threads using a coarse pitch: 16 tpi (threads per inch) works nicely for this application, as it is a good balance between coarse enough to be fast-acting and fine enough to provide some rotary resolution.

It is beyond the scope of this article to cover hand-chasing threads, but one practice that helps is to cut the internal threads first (*Photo 12*). If you mess up, just turn those away and open the diameter a small amount. Once the internal threads are completed satisfactorily, I then cut the mating external threads at the appropriate diameter. Getting things perfect in the first pass is beyond my skills, so I typically begin with the diameter for the external threads a bit oversized. This allows me to take minor trim cuts and zero in on the right fit.

Paint

With the outside shape refined and sanded, the neck opening shaped and sanded, and the neck internally threaded, it was time for paint. I left the urn still attached to the waste wood mounted in the chuck and moved it to a safe painting area, in this case outside.

For this application, I used gloss black spray paint in a rattle can (*Photos 13, 14*). I sprayed directly onto the bare wood with no primer. One handy item is a plastic trigger handle, available in the paint section of home stores, which turns a rattle can into a trigger-actuated spray gun—very maneuverable and well worth the minor expense.

Lid and finial

Since I planned to also paint the lid and finial, I chose to use scraps of cherry for these parts. I turned the lid, creating the diameter to be threaded, as shown in *Photo 14*. I usually make the threaded length longer than needed, so excess can be cut off to obtain the desired amount of thread engagement.

In this case, I completed and painted the lid prior to turning a finial. I wanted to have it painted and installed in the urn so I could gauge the look of various finial options as I turned them (*Photo 15*). I prefer to make a lid-and-finial assembly, rather than combining the two elements in one piece. This allows me to turn several finials and "try them on" until I'm content with one of them. Any unused finials can be saved for other projects. It also allows for errors; if I make a mistake on the finial, the lid remains unaffected. The finial can also be left as friction-fitted, so with any subsequent breakage, it can be replaced easily.

Final steps

The last step is to separate the urn from the base and tenon wood. Using a pressure pad in the tailstock secures the urn, so you can turn away the excess material left at the base (*Photo 16*). Rather than ▸

Open and refine neck

11 With the urn remounted on the lathe, the top end is parted off within the pre-hollowed depth.

12 After cleaning up the top of the urn and filling any exposed cracks, the inner diameter of the neck is formed, a recess cut, and threads chased.

Apply paint

13 The author uses a rattle can spray paint on the urn body.

14 The lid is turned, threaded, and painted. Notice the ⅜" (10mm) hole to accept the finial later. Part of the length of threads will be cut away to provide a reasonable thread engagement.

parting the urn off and risking dropping or marring it, I used plastic wrap to stretch-wrap it to the faceplate mounted in the tailstock (*Photo 17*). I even put some padding on the bed of the lathe, just in case. Far too much work has been completed to ding the finish now. The urn is cut away and is safely held to the padded faceplate by the plastic wrap.

To reverse-mount the piece and complete the bottom of the foot, simply move the plastic-wrapped faceplate to the headstock (*Photo 18*). Complete the base turning at a slow speed.

Turn a finial


15

Since the urn and threaded lid are painted cherry, the author turns a simple finial in cherry, too. With a ⅜" tenon, any number of finials can be turned and visually checked for aesthetics prior to committing to glue.

Part body from tenon


16


17

The urn is remounted on the lathe and separated from the waste wood at the base. The author uses a padded faceplate at the tailstock end for added stability. Before making the final parting cuts, plastic stretch wrap is used to hold the work to the padded faceplate. This is far safer than working one-handed and trying to catch the urn upon separation.

Reverse-mount, complete foot


18

The tailstock faceplate with stretch-wrapped urn is now mounted to the headstock, allowing access to the bottom of the foot. This mounting is secure enough for only light cutting and sanding.

The reason I chose a black paint finish was so I could "over-paint" with some accent colors using an airbrush. This could have been done prior to separating the urn from the base, but I found it useful to separate the urn and take some photos of it in black, which helped me think about additional color enhancements before committing to them.

Options

The goal of this project was to create a cremation urn with tools and equipment common to most turning shops. The second chuck is optional and the padded faceplate isn't critical. You can even turn this project with no chucks: The halves could be mounted on a faceplate with sufficient scrap to accommodate the screws. Threading isn't necessary, as the lid can be made with a plain friction fit. Painting a base color and accents could be replaced with wipe-on polyurethane or a penetrating finish. A faceplate, standard lathe centers, and turning tools (including a tool you favor for hollowing) are all that is required.

Depending on the shape and aspect ratio you desire, two bowls can be hollowed with a traditional bowl gouge and fastened together. Nothing expensive or exotic required. Also, note that this "two-piece" approach will work well for hollow vessels of nearly any shape or size. If you get really ambitious, you can create more than one join (and more than two sections) to create a deeper vessel.

I hope this method inspires you and opens up new possibilities for making hollow vessels. ■

Kurt Hertzog is a past president of the AAW, past chairman of the Rochester Woodworkers Society, and a council member of the Pen Makers Guild. He has written about woodturning and woodworking extensively for various publications. For more, visit kurthertzog.com.

Weaving *Basketry* into Woodturning

Janine Wang

My dad used to tell me: "People are smart, and humanity has been around a long time. You'll never be the best at A, and there's a very slim chance you'll become so good at B that you'll discover anything new in that direction, either. But A+B=C. That's the main way people are going to find and make new things. Go find C."

With so many artists crossing boundaries between craft media and disciplines, "C" is everywhere you look. In a lot of ways, basketry and woodturning go hand in hand. Neither is new, and both begin with raw material worked by hand. Combining basketry with wooden objects isn't new; basketmakers have long incorporated wooden handles, accents, ribs, and bases. But I haven't seen much of the opposite—woodturners and woodworkers using basketry.

Incorporating basketry into woodturning is an easy, natural transition for those used to working in the round and working with their hands. With just the basics and some reed, a woodturner can expand the possibilities of wood vessels.

Buying reed

You will need to buy two different sizes, or kinds, of reed—one for the *spokes*, which are mounted into your bowl rim and form the structural ribs of your basket, and one for the *weavers*, which will be woven back and forth between the spokes to fill it out.

Rattan reed, made from the pith of the rattan palm, is commercially available, requires very little preparation, and is a great option for a no-fuss basket.

Though basketry suppliers aren't quite as common as woodturning suppliers, you can find independent supply stores that will ship reed to you. Here in Pennsylvania, my local store is The Country Seat (countryseat.com), which ships nationally. You may also find it convenient to reach out to the local weaving equivalent of woodturning chapters—basketmaker's guilds. If you're lucky, there may be one near you with weavers who can offer guidance and may even collaborate with you.

You will need round reed for your spokes, and a smaller gauge of round reed for your weavers. Round weavers are commonly sold in gauges of #00 to #10, with diameters of 1mm-7.5mm. They are sold by the pound, and total length of reed varies by size. Here, I am using #5 round reed spokes and #3 round reed weavers. I will use much less than half a pound of the spokes, and less than a pound of weavers.

Turn a bowl

For your first attempt, I suggest staying away from an endgrain bowl, as you'd be drilling many small holes into endgrain (in the bowl rim), and will want to avoid drill bit drifting. Any species of wood that is easy to cleanly hand-drill into is a good option. I personally think all wood looks beautiful paired with reed. For this example, I am using cherry burl, whose marbling and color play up the contrast with the reed.

Two key factors to keep in mind when shaping your bowl:

1. The rim should be thick enough to drill holes directly into for your spokes. The top surface of the rim, turned flat or slightly concave, should have enough width for your weavers to sit on. This will also make drilling easier. My rim thickness here is just over ⅜" (10mm). I also like to leave a little round-over on the inside edge of the rim so my basket blends more seamlessly with the bowl (*Photos 1, 2*).
2. The bowl's contour should reflect an intentional curve with a natural ▸

Bowl rim considerations


1


2

Form a bowl rim wide enough to accommodate the basket spokes and weavers. A gentle round-over on the inside of the rim makes for a nice transition.

Envision the whole form

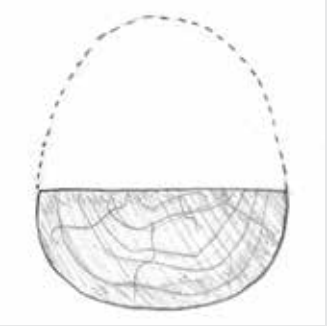


Figure 1. The author's sketch of her intended vessel shape. Strive for a natural flow from turned bowl to woven basket.

transition to the basketry. Strive for a bowl shape that will be carried on *by* the basketry. It helps to remove your bowl from the lathe at intervals to consider its shape in an upright position. In this example, I'm going for the shape of an egg. I want it to be heavy enough on the bottom so the bowl-turned and basket-woven portions have equal visual weight. Imagine the curve continuing all the way up and down, with a small concave foot, so my egg will look like it's sitting roundly, with just a bit of lift. The top won't be fully round, as I do want an opening (*Figure 1*).

Mark rim holes

When you have finalized the bowl, mark holes on the rim for your spokes. You'll want to space these holes out evenly, using spacing of no less than ¾" (19mm) and no more than 1¼" (32mm). Here, it's nice to have a lathe with an indexing wheel, but if you don't have one, there is a simple, low-tech method. Wrap a long piece of masking tape around your bowl rim once, tearing off the tape exactly so it doesn't overlap and is the length of the circumference of your rim. Remove the tape from the bowl and lay it out on a flat surface. Divide the length of the tape into even intervals as close to your ideal spacing as you can get it. I ended up with a rim circumference of 27" (69cm), with 1" (25mm) between each point. Stick the tape back on the bowl rim and mark your drill holes using an awl to create an indent for the drill bit to start (*Photo 3*).

Finish bowl

Finish your bowl with a water-resistant finish. You will be working with a lot of water, so it's important that your bowl is sealed prior to weaving. For good measure, consider raising the grain by wetting the wood, then lightly re-sanding by hand before finishing. I used two coats of Danish oil. It is important to finish the wood prior to drilling, since you do not want finish clogging the holes or making them un-absorbent on the inside.

Drill holes, insert spokes

Test your drill bit sizing and depth on a piece of scrap wood. The reed should slide in snugly, with no wiggle, and sit deep enough to stay securely. A piece of tape on the drill bit indicates a consistent drilling depth. Later, when the spokes are soaked in water, the reed and wood will swell, holding the spokes tightly in place. It is important to get the drill sizing right, so you can

Mark rim holes


3

Mark out evenly spaced hole locations.


4


5

Use a hand-held drill to bore holes in the rim, angled slightly to facilitate a natural flow from bowl to basket.

brag to your basketmaker friends that you did not use any of that of which they do not speak (g-l-u-e).

Drill into the bowl rim, carefully angling the bit so your spokes will stick out of the wood in a direction consistent with the natural flow of the bowl (*Photos 4, 5*). Here, I am angling the bit slightly inward. I drill the holes with the bowl off the lathe for a better feel and because I've already turned off the foot and finished the bowl. If your bowl can still be remounted after finishing, you might find it easier to do the drilling on the lathe, especially if your lathe has an indexing wheel.

Cut lengths of spoke much longer than the intended height of your finished basket. You will need this extra length to braid your rim later. After you have slipped all your spokes into the holes, fill a bucket with room-temperature water. Upturn your bowl, and soak the reed until it is just pliable enough to bend without being brittle, keeping the bowl itself out of the water if you can help it (*Photos 6, 7*). The soaked reed will swell, locking the spokes into their holes. This should take only a few minutes, depending on the gauge of reed.

Insert and soak spokes

Insert spokes into the holes, then submerge them in water. The spokes will swell in the holes and should remain there securely.

Begin twining

Now it is time to add the weavers. The process of *twining* uses two or more round weavers to encircle each spoke. When only two weavers are used, you are *pairing*. With three or more, you are *waling*. In this example, using three weavers, I am making a three-rod wale.

Soak three rods until they are pliable, then lay them out between your spokes with the ends facing inward. Starting on the left, cross in front of two spokes, then go behind one, and end up back in front, crossing over the two other weavers along the way. Do the same with your second weaver—cross in front of two spokes, behind one, and back out front (*Photos 8-10*).

To make a strong basket, the weavers must be pushed down, packed as tightly as possible toward the bottom. This is called *packing* and should be done all around periodically to ensure there are no gaps. Be mindful not to pull upward on the spokes.

As you progress around the basket, think of the overall shape you are creating. You can gently shape the spokes inward or outward as you weave. Using round weavers makes it possible to form dramatic shapes, and you'll have a high level of control.

Eventually, you will come to the end of a reed and will need to do some *joining*. Tuck the weaver end inside the basket, cutting it short if necessary, and insert a new weaver so it will emerge where the ended weaver would have emerged (*Photos 11, 12*). Hold the new piece in place and continue weaving as before. The other two weavers will twist around and help hold it in place. The new weaver will not pull out once it is set in and packed.

Basket weavers are like some turners when it comes to hollowing—if you ▸

Begin twining

Adding weavers in a three-rod wale. Begin with the leftmost rod, running it in front of two spokes, then behind one. Do the same with the middle rod, then the rightmost rod. Repeat.

can't see it, it doesn't matter! Hide all of your ends on the inside, or consistently keep your ends on the side of your basket that will get viewed the least. As I work, I like to trim and keep the weaver ends neat so there is less to prune later, when the inside of the basket will be less accessible. And be sure to keep packing as you go. Push all of your weavers down as far as they will go, keeping them even and tight.

If you get to a point in your weaving where it is difficult to maintain your intended shape by hand, bind your wet spokes into the desired shape. Re-wet the spokes whenever you need to move them.

You might also reach a point where the spacing between your spokes is too tight to weave through. Here, you can *reduce* your spokes easily, by treating two spokes as one. Just make sure you do so evenly around the whole basket. I use tape as a reminder of which spokes to treat as "one" (*Photo 13*). For this piece, I eventually combine three spokes into one, as the opening I want is quite narrow.

You can also cut spokes out as they are effectively combined. It is good to shape the ends to a point to make them less visible.

Stepping up

Stepping up helps to visually taper out your last few weaves and secure them in place. As you approach the end of your weaving, cut the last few weavers to even, workable lengths. Starting from your right rod instead of your usual left, simply skip two spokes and tuck the end in. Do the same with your middle rod, then your left rod. Your ends are now hidden, and your last row is even and seamless (*Photos 14-16*).

Braid the rim

The rim is formed by folding over your spokes. It is important to first pack down the weavers as far as possible, so you can use the maximum spoke length with no gaps or regrets. Fuss over the shape of your basket, too. Everything will be getting locked in now.

I am making a clean-and-simple, single-braided rim. I begin by cutting one of every three in my bundles of reduced spokes. Then tuck each spoke behind the one beside it, going all around, until you weave in the last spoke under the first and they lock into place (*Photos 17-19*).

Join weavers


11


12

When you come to the end of a weaver, tuck it inside and insert a new rod where the ended one would have emerged.

Tie and combine spokes


13

It might be helpful to tie the spokes temporarily in your desired vessel shape. If the spokes become too close to one another, treat two as one as you continue twining. Taping two spokes together serves as a reminder of where to weave in and out.

Stepping up


14


15


16

At the top of your vessel, tuck the weavers inside, starting with the rightmost rod, then middle, then left.

Then, take a rod and weave it under its neighbor one spoke over, from the outside toward the inside. You may choose to weave one spoke over, or three spokes over, instead of two, as I am doing. Try it out. These choices will result in different braided patterns (*Photos 20-22*).

When all the spokes are tucked inside, snip their ends as close to the rim as you dare, but not so close that they might slip back out. Cutting at an angle helps them be less noticeable and preserves length, which prevents slippage. Make any final tweaks while your reed is still damp, and able to be re-wetted. When all is dry, use a pair of sharp scissors to trim off any errant hairs.

Seal the reed

Do not leave your reed unsealed, as it will develop mold. When the reed is bone dry, apply an oil-based finish. Baskets remain flexible when they're completed, so choose a finish that is flexible when cured, not one that is brittle. Basketmakers often use a spray-on polyurethane or stain. I use Danish oil.

The dry reed is very absorbent and will take the finish hungrily, so it's often best to use a chip brush or other generous method of application. A thick finish should be thinned down to prevent it from collecting in the grooves and spaces.

This sample vessel is just one permutation of a million. There are endless ways to reformulate these two fluid parts, wood and basketry. These fundamentals are all you need to step off and give it a try. ■

Philadelphia-based woodworker Janine Wang teaches basketry and woodturning (and the two together) at Peter's Valley School of Craft (Layton, New Jersey) and at Snow Farm New England Craft (Williamsburg, Massachusetts). View her work at janinewang.com. The sample piece shown here will be on view in From the Ground Up: Peter's Valley School of Craft, *an exhibition at the Hunterdon Art Museum (Clinton, New Jersey) through January 10, 2021. Janine will be the artist-in-residence at Hunterdon Art Museum during the month of December.*

You read the article—now see the video!

Janine Wang has created an instructional video to accompany this article. See her in action as she demonstrates how to incorporate basketry into woodturning. View the video at tiny.cc/weavetowood, or scan the QR code on your mobile device.

Braid rim


17


18


19

Re-wet the spokes if necessary before braiding them into a rim, bending each one behind its neighbor to the right. Note that some spokes have been cut off for easier braiding.

Complete braiding


20


21


22

To hide the ends of the braided spokes, tuck them into the vessel, skipping one, two, or three neighboring spokes, depending on the pattern you prefer. Do this from left to right around the rim, then trim the ends inside as close to the rim as you can without them slipping back through.

Shoulder Issues

Rich Foa

Illustrations by Studio Kayama.

The shoulder is the most versatile joint in our entire body. It permits the arm to move 180 degrees vertically, 180 degrees horizontally, and in a full circle from front to back. The joint also allows for movement at virtually any angle between these planes. While woodturning requires the shoulder to move through only a fraction of its full range in any direction, movement in all directions is needed to turn effectively. In fact, I can think of no movement in turning that does not involve the shoulder—whether to stabilize the arm to allow for smooth cuts controlled by whole-body motion, or to reach out to begin a sweeping cut across the bottom of a bowl. Similarly, lifting and mounting blanks, adjusting the headstock and tailstock, retrieving tools, sharpening, sanding, and just about everything else we do in our shops requires action of the shoulder.

Anatomy of the shoulder

Only three bones make up the shoulder: the humerus (or long bone of the upper arm), the scapula (or shoulder blade), and the clavicle (or collar bone). The joint itself consists of a ball (the head of the humerus) that sits in a shallow socket in the scapula. The socket is called the glenoid concavity, and the ball and socket together are called the glenohumeral joint. The shallowness of the socket allows for our arm's extraordinary range of movement but also makes the shoulder more vulnerable to injury. The tendons of muscles that move the arm also form a fibrous sleeve that secures the ball in the socket and keep it precisely centered. This tendinous sleeve is called the rotator cuff. And these muscles, by contracting in concert, stabilize the shoulder while the elbow, wrist, and/or hand are in motion.

Muscles that originate on the various parts of the scapula control internal and external rotation, flexion, extension, and elevation of the arm. Muscles that produce upward or forward motion of the shoulder itself originate in the neck or on the upper chest wall. And muscles that flex and extend the elbow (biceps and triceps) also have important shoulder attachments. Dense fibrous ligaments linking the clavicle, scapula, and humeral head also protect the structural integrity of the joint, while muscles and their tendons move the upper arm in various directions.

What can go wrong

Due to constant use throughout our lifetime, the shoulder is subject to a lot of gradual wear and tear. It is also vulnerable to repeated traumatic injuries from bumps, falls, and some patterns of repetitive motion. A multitude of minor traumas, often experienced only as episodes of soreness, lead to degenerative changes in the bones and ligaments, and to strains and tears in the rotator cuff as well as to other tendons.

Sudden shoulder injuries, as from a fall or from the spontaneous rupture of a critical tendon, can happen. But generally, problems develop gradually. By the time someone develops sufficient pain and weakness to prompt treatment, distinguishing among frequently

Bones of the shoulder joint

Front view of the three bones that form the shoulder joint, with the rib cage removed so the front surface of the scapula can be seen.

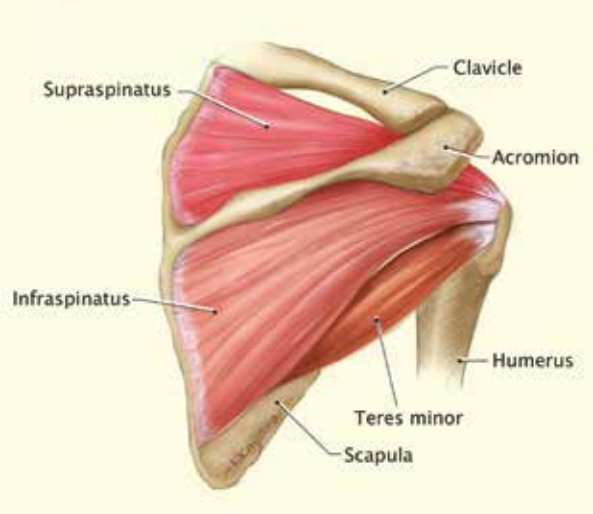
occurring types of underlying joint injury may be difficult. Different joint problems can also coexist. The most common of these are arthritis/inflammation of the glenohumeral joint and failure of the rotator cuff. Traumatic fractures of the clavicle and the upper humerus can result in chronic difficulties.

Anonymous Case Study #1

DD is currently 72 and has been turning for two years. As a young adult, he experienced episodes of shoulder soreness in the context of athletics and carpentry, but he never had a discrete shoulder injury. At 49, he fell from a ladder, fracturing both bones of his right forearm. He was put in a plaster cast that came up over the elbow to prevent forearm rotation. He elected not to undergo surgery for the broken bones, and his cast was replaced by an external fixation device. After the device was removed, he noticed shoulder pain and a limited ability to elevate his arm. Rotator cuff injury was then diagnosed.

DD was instructed in exercises and used oral anti-inflammatory medication for pain relief. Gradually, with time, continuing exercises, and massage, his pain subsided. A recent x-ray revealed degenerative changes of the glenohumeral joint (ball and socket) and "bone on bone" at the junction of the humerus and the scapula—changes indicating a "prior full-thickness tear" of the rotator cuff. Despite the degeneration in his shoulder, he now has discomfort only when he leans forward with weight on his arms. At the lathe, with his arm out away from his body for interior cuts on a bowl, he experiences shoulder fatigue, but he has no trouble turning when he keeps his right arm tucked against his side. DD is also able to handle a chainsaw without shoulder pain or weakness.

Rotator cuff muscles, back view



Posterior shoulder muscles. The tendons (shown in white) constitute most of the rotator cuff. Wear of cuff tendons results in pain, stiffness, instability, and eventual arthritic degeneration of the joint.

Torn rotator cuff

Failure of the rotator cuff is one of the most common shoulder problems. It occurs in a multitude of settings, especially in athletics or with physical labor. Tears of the rotator cuff can occur suddenly. While often due to a fall or other trauma, they can also occur spontaneously. A tear can be "full-thickness" (meaning through an entire tendon or tendons) or partial. They produce sudden pain and, with tendon rupture, marked weakness. Failure of the cuff may also present with the onset of weakness because of gradual deterioration in one or more of the tendons. In this situation, tendons weaken and thin, with the accompanying weakness first becoming evident upon elevation or external rotation (rolling the arm outward).

An acute trauma, such as DD's fall from a ladder, can cause either a shoulder fracture or an acute full-thickness rotator cuff tear. In his case, the broken bones were in the forearm and might have masked recognition of an accompanying acute rotator cuff injury. X-ray changes seen many years later reveal extensive arthritic degeneration of the joint, but they do not tell whether rotator cuff failure preceded or followed the appearance of the arthritis. A tear of the cuff could have developed in piecemeal fashion over years following his fall, so it is a kind of chicken-or-egg issue.

Anonymous Case #2

JK is 73. A professional bowl turner, he has injured both of his shoulders in separate falls. A decade ago, he slipped on ice while getting out of his truck. He landed on his right elbow and the force of his fall transmitted to his right shoulder. He was unable to lift his arm. An MRI scan of his shoulder showed a torn rotator cuff. JK underwent surgery and recalls it was a year before he was pain-free with full movement.

A year ago, JK slipped on wet pavement while again getting out of his truck. This time he landed on his left elbow with resulting injury to his left rotator cuff. He was told his MRI revealed a "train wreck" of tears to ▸

tendons and muscles as well as pre-existing arthritis. Surgery was postponed for extraneous reasons. Because he is right-handed and stubborn and his new injury affected the left shoulder, he continued to turn but limited his work to finishing previously rough-turned bowls. JK found that he was pain-free at the lathe when he kept his left arm tucked against his side. However, he was unable to lift wet logs, rough-turn large blanks, or use his chainsaw.

After delayed surgery, JK's arm was immobilized in a sling with a foam pad to hold it away from his body for six weeks. When the sling came off, he reported that he resumed turning but still limited himself to finish-turning. Full recovery followed several months of frequent physical therapy sessions and daily home exercise. He avoided heavy lifting for six to seven months and is now "100%"—but more cautious.

Acute rotator cuff tears, commonly following trauma, call for early surgical repair in physically active people. By contrast, partial tears of the cuff and chronic degenerative changes in the joint that produce lesser amounts of weakness and immobility are best approached with exercises to improve flexibility and rebuild strength. In fact, with degenerative failure of the rotator cuff, surgery may not even be possible because the tendons may not be healthy enough for a durable repair. Shoulder replacement surgery is now available to people with a combination of severe rotator cuff defects and degeneration of the humeral head (or ball).

JK resumed turning after surgery sooner than his surgeon had recommended. A couple of months of therapy to recover range of motion and strength before resuming turning or other activities that may strain the shoulder is advisable. Delayed surgery generally translates to delayed recovery.

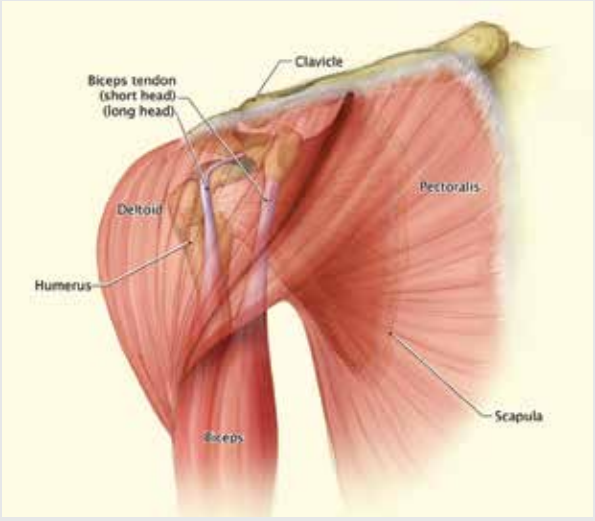
Biceps tendonitis

The biceps muscle, which flexes the arm at the elbow, has two tendons that insert into the shoulder joint. One of these tendons, the "long head" of the biceps, wraps around the glenoid concavity (socket) and forms a soft edge or lip (labrum) that also helps to hold the ball in the socket. The proximity of this tendon to the moving parts of the joint makes it vulnerable to wear, even with movements that do not involve the biceps muscle itself. The long head is vulnerable when rotator cuff injuries result in instability of the joint.

Biceps tendon injury also occurs with repetitive motion, particularly an overhead motion such as chopping with an axe. The pain of biceps tendonitis is typically aggravated by reaching with the lower arm extended which puts maximum stretch on the muscle. Rupture of the tendon can occur with an abrupt pop, resulting in an abnormal bulge (a "Popeye muscle") in the upper arm. Because the other tendon of the biceps (the short head) is unaffected, the elbow can still be flexed, albeit with less power.

Treatment often is limited to rest, ice, and anti-inflammatories, rather than surgery. The impact of biceps tendonitis or biceps tendon rupture depends on the arm affected. Usually, this will be on the dominant side, so control of a woodturning tool handle can become compromised. An ability to switch hands and the direction of a cut may be a valuable compensatory skill.

Muscles of the shoulder and arm, front view



Anterior muscles overlying the shoulder joint. The tendons of the biceps muscle are shown. The long head is in intimate contact with the ball and socket and can be inflamed by repetitive movement, particularly reaching overhead with the arm straight.

Anonymous Case #3

JM is 68. In his thirties, he injured his right shoulder playing volleyball. He used a topical cream, rested his arm, and ultimately had a full recovery. In his fifties, he experienced recurrent right shoulder pain while clearing a two-acre woodlot. By the time he completed the job, he was unable to reach behind his back to thread his work belt. Imaging studies

showed "micro tears" in his rotator cuff and joint space narrowing. Surgery was scheduled but then delayed for a few months. During this time he started a program of intensive icing. On the eve of his delayed surgery, JM noticed he could drape his arm over the back of a chair, a previously impossible movement. However, he still could not fully elevate his arm and had pain with movement in multiple directions. His surgery was cancelled. With stretching exercises and intensive yoga, JM recovered a full range of movement and resumed turning. Now he rigorously stretches before every session at the lathe and has noticed that if he skips this preparatory step, his discomfort recurs.

Volleyball involves highly repetitive upward reaching movements and JM's experience is likely an example of a repetitive-motion injury, producing biceps tendonitis and leading to early, unnoticed degenerative changes in the shoulder joint. These, in turn, likely made him vulnerable to further injury from the work of clearing his woodlot.

Bursitis

To reduce friction in the shoulder joint, there is a complexly shaped fluid sac, or bursa, that sits below a bony ridge of the scapula and wraps around the ball and socket. This sac gets its name, the subacromial bursa, from the name of that bony ridge, the acromion. Bursitis of the shoulder is a frequent cause of shoulder discomfort stemming from increased friction within the narrow confines of the joint. Associated with prolonged and excessive movement, bursitis is characterized by swelling, tenderness, and warmth. Treatment consists of rest, ice, oral anti-inflammatories or joint injections, physical therapy, and modification of activity.

Frozen shoulder

Shoulder pain, regardless of the cause, can prompt people to reflexively protect the joint from movement. The natural position of greatest comfort is to hold the arm motionless against the trunk, or in "adduction," with the arm rolled inward and the lower arm held across the waist. This is the position into which the arm is often placed with a sling or strap following acute injury. Coincidentally, it is also the position providing the greatest tool control when turning.

While presenting no risk to the uninjured shoulder while turning, prolonged immobilization of the shoulder in adduction can result in tightening of the ligaments and tendons and the development of a condition called adhesive capsulitis, or frozen shoulder. Frozen shoulder can be a final outcome of any shoulder injury, whether degenerative, traumatic, or surgical.

Because it can lead to permanent loss of shoulder motion and long-term disability, early signs of loss of mobility should prompt immediate attention. Heat, modifications in arm use, and carefully graduated exercises to recover range of motion are necessary. The key is prevention; early attention to maintenance of mobility is a critical element of the recovery process from any kind of shoulder injury.

Awareness of vulnerability

It is noteworthy that both DD and JM recovered from their injuries with extensive programs of stretching and exercise, rather than surgery. JK, following more acute injuries, recovered after surgery and a rigorous regimen of postoperative exercise. Now, all of them report that their ability to turn and their pleasure at the lathe is restored.

Studies have shown that about 30% of asymptomatic people older than sixty have evidence on imaging of degeneration of the rotator cuff. This number rises to about 65% of asymptomatic people over the age of seventy. Consequently, large numbers of turners with no known shoulder difficulties are vulnerable based on age alone. It is unclear why some individuals remain asymptomatic, while others with seemingly identical amounts of shoulder degeneration, experience pain or weakness. So whether we're hurting or not, we all need to think of our shoulders as vulnerable. And with this awareness, we can understand why maintaining the strength, flexibility, and stamina of our upper body muscles is critically important to our ability to turn. ■

Rich Foa is a retired neurologist with a previous career in private and academic practice. He began turning about a decade ago and devotes his shop time to turning, carving, and sculpture. He is a past president of the Chesapeake Woodturners.

For practical advice and a deeper dive into how woodturners can mitigate shoulder issues at the lathe, see Robin McIntyre's sidebar article, "The Woodturner and Shoulder Pain: Strategies for Relief," on page 40.

The Woodturner and Shoulder Pain

Strategies for Relief

Robin McIntyre

Photos by Robin McIntyre unless otherwise noted.

There are a number of ways you can enhance the comfort of your shoulder(s) during your turning sessions. Warming up properly and paying attention to workshop strategies that will ease your shoulder use can help extend your time and enjoyment at the lathe.

Generally, breaking the cycle of pain is critical—your shoulder hurts, so you don't use it. Your shoulder gets weaker, leading to less muscular support in the joint, so it hurts—and the cycle continues. If you are experiencing one of the shoulder conditions noted in Rich Foa's preceding article and are not feeling significant relief with home management and the strategies noted here, consider seeking more individualized evaluation from a physical therapist. Stretching and strengthening exercises specific to *your* shoulder—in the right proportions for the various shoulder muscles—may be needed to help balance your strength so muscles can act more efficiently as a group.

Pre-turning shoulder care

Try some or all of the following steps before you turn to help prepare your shoulder for the stresses of lathe work.

- *Ice or heat?* If your shoulder condition is recent, try icing before you turn to reduce inflammation, swelling, and pain. With a chronic shoulder condition, use heat from a heating pad or microwave pad instead to increase blood flow, bringing nutrients to the area and reducing stiffness. Ensure that either the ice or heat source is flexible enough to wrap around and make contact with the entire shoulder. Use an elastic bandage to hold the ice or heat in place if necessary. Repeat this application after you turn, too.
- *Warm up.* Warming up with gentle joint motion and stretching before you turn is important. You use only a small amount of the potential motion of the shoulder while turning, so a pre-turning mobility exercise session is not the time to push the limits of your available motion. Rather, use this time to simply "loosen up." Begin with some gentle shoulder circles (*Photos 1-4*), hitchhiker stretches (*Photos 5, 6*), and shoulder rolls (not pictured).
- *Shoulder rolls.* For shoulder rolls, slowly your shrug your shoulders up toward your ears, then pinch your shoulder blades together in the back, then push your shoulders downward, and finally pinch your shoulders together in front of you. Then reverse direction. Try for five repetitions in each direction.

Shoulder circles

Hold on to a stable object with one hand and bend forward at the waist. Let your other arm relax and hang, then slowly make a gentle, large circle in one direction (backwards, outwards, and forward). Try for five repetitions before reversing direction.

Note: Shoulder rolls are illustrated in Robin McIntyre's February 2020 AW article, "The Woodturner and Neck Pain: Strategies for Relief" (vol 35, no 1, page 34).

Shop and lathe setup

Consider these shop setup and maintenance ideas to ease the strain on your shoulders.

- *Shop layout.* Consider placing your more frequently used tools and accessories at chest height or below to minimize the amount of reaching above shoulder height, which can be difficult and painful (*Photo 7*).
- *Adjust locking levers.* Pushing down on levers to lock or release the banjo and tailstock can stress your shoulder. Keep the lock nut optimally adjusted, so the levers are below the bed ways, and keep the mechanisms free of dust and shavings. Back off the quill before releasing the tailstock to minimize the strength needed to operate the lever. Use a lubricant on your lathe bed to ease the sliding of both the banjo and tailstock.
- *Tailstock management.* Another potential source of shoulder strain is removing and remounting the tailstock, which is both heavy and awkward. To minimize the need to lift and carry the tailstock, slide it directly onto a small table the height of the lathe bed positioned at the end of the bed ways. When remounting the tailstock, align it with the ways while its weight is still on the table (*Photo 8*). Alternatively, some manufacturers offer "swing-away" or other tailstock supports (*Photo 9*). Such options might be an important investment if you have chronic shoulder pain or weakness.

Hitchhiker stretch


5


6

Begin in the same position as the shoulder circles. From a relaxed hanging position, roll your arm outward with the thumb out as if "hitchhiking." Gently and slowly move the arm in a line across your trunk and then outward to shoulder height. Try for five repetitions.

- *Easy speed control.* Lathes with electronic variable speed control are a better option than models that use a Reeves drive, which can require some strain to adjust.
- *Lathe height.* Having the lathe spindle at elbow height or slightly higher is important so you are neither elevating your shoulder nor reaching down while turning. Correct lathe height helps you distribute your strength and endurance more efficiently.

Turning technique

Attention to turning form and technique is important for your body, your shoulders, and the comfort and endurance of your turning session.

- *Whole-body movement.* Adopt a balanced body position, with feet shoulder-width apart and pointing slightly outward. Using total body motion—shifting weight from side to side and rotating your trunk with the tool stabilized against your body—will minimize stress on ▸

Ergonomic tool height


7

Storing tools at or below chest level prevents having to raise your arm above shoulder height, which can be difficult and painful if you are dealing with shoulder issues.

your shoulders. Strive to achieve mobility and support from your larger trunk muscles, and use leg and foot position to help facilitate body rotation.

- *Minimize shoulder motion.* When spindle turning, "choke up" on the tool handle to minimize the amount of backwards upper arm movement needed. When hollowing the interior of a bowl or hollow form, rather than choking up and sacrificing leverage, consider a lathe setup that allows you to be better positioned for whole-body movement, such as a short-bed lathe, a lathe with a rotating headstock, or one that allows you to move the headstock to the end of the ways (*Photos 10, 11*).
- *Smooth it out.* Minimize the jarring effect of the roughing process, as the impact is translated directly to the shoulder. Maintain firm downward pressure on the toolrest, reduce the tool's overhang over the toolrest, opt for less aggressive cuts, and keep the lathe speed just below the point of vibration. Faster lathe speed reduces the "air time" between revolutions, which can help decrease the jolting effect of tool against wood.
- *Use a mallet.* If you are using your palm as a mallet on anything, don't do it; use a mallet to decrease the impact on all of your joints, especially the shoulder.
- *Pace yourself.* Take periodic breaks when turning to let your shoulders and upper body relax. Do a few gentle stretches before resuming turning.

Tailstock assist

(*8*) A table at the correct height at the end of your lathe shortens the carry distance of a heavy tailstock, lessening the strain on your shoulders and arms.

(*9*) Some lathes come with a swing-away tailstock option, eliminating the need to hoist the weight of the tailstock.

Better body position

(*10*) With a typical lathe setup, bowl hollowing requires the right arm to reach out across the bed ways to begin the cut, a potentially painful endeavor if your shoulder is painful or weakened.

(*11*) Lathes with a sliding or rotating headstock (and short-bed lathes) better position the turner for whole-body motion, right arm held more comfortably close to the trunk.

Given that the likelihood of shoulder vulnerability and injury increases with age, it is likely many turners will have some difficulties with pain, immobility, and weakness of the shoulder. Understanding shoulder function and taking steps to protect this important joint can help you continue enjoying your time at the lathe. ■

Robin McIntyre is a retired physical therapist with both bachelor's and master's degrees in physical therapy. After working for thirty-eight years in clinical practice and teaching, Robin is now a hobbyist woodturner currently serving as the secretary, newsletter editor, and WIT liaison for the Cape Cod Woodturners.

From left: Terry, Mark, and Zina discuss possible collaborative projects.

INTERSECTING TALENTS

The Making of *Paradox*

Terry Martin *Photos by Mark and Kathy Lindquist, Zina Burloiu, and Terry Martin.*

As I write this, I have a wooden vessel sitting on my desk. Although it isn't large, the life of this one bowl embraces many skills, unique experiences, and dreams. It has traveled around the world to arrive at my home, and some day it will probably travel again to find its final home. It is with me now so I can tell its story.

Diverse talents converge

For several years, Zina Burloiu and I have been creating exhibitions while we live on opposite sides of the world, but every now and then we have the chance to do things differently, as Zina describes: "Usually we collaborate over long distances because we each have to work hard to maintain our own individual practices, myself in Romania and Terry in Australia. But in 2017, when we were working together in the U.S., Terry's friend Mark Lindquist invited us to his home to 'have some fun.' Collaborating is an intriguing challenge that Terry and I have become very good at, but I wondered if we could successfully do a three-way collaboration."

It was too good a chance to miss, so we set off for Lindquist Studios in Quincy, Florida. As we drove the rambling back roads that we prefer, we talked about what might happen. I was sure that Zina, who is an engineer as well as a creative woodworker, would love to see Mark's astonishing workspace. I had worked there in 2009 on a project with Mark (see blakelyburltree.com) and tried to explain what it was like, but the word "workshop" doesn't do it justice, any more than "studio" does. It is, in fact, a re-purposed factory with more space and machinery than most woodworkers could dream of, much of it uniquely created by Mark. Eventually I gave up trying to explain and left it at "wait and see."

Zina was feeling very positive about what might develop: "I was intrigued by everything Terry told me about Mark—how he was a pioneer in sculptural woodturning and very technical. He also told me Mark had been inspired by Brancusi, one of my Romanian heroes, so I was delighted with the chance to meet him and see his work. I also hoped we might do some challenging collaborations, as I think it is a very good way to learn." ▸

Terry undercuts the rim using a Stewart tool.

Mark shows Zina his stock of wood, and she test-cuts samples to find just the right piece.

Zina enjoys being an engineer again, appreciating the machinery suddenly at her disposal.

For myself, I had high hopes that we could make something together.

We arrived after dark to find Mark and Kathy waiting for us on the porch. Mark's wife Kathy is his perennial supporter in all his artistic endeavors. We spent a quiet evening enjoying each other's company, but the next morning we were all business as we toured the studios for Zina's benefit, watching her amazement as we went from one cavernous room to another, all filled with machinery. The best part was rattling upstairs in the old factory elevator and emerging into the wonderland of wood that Mark has collected over the years. It isn't just the variety and quantity of wood that is astonishing, it is the *scale* of it all. Mark has always thought big and the size of his material shows why he needs such large machinery to handle it.

It was soon clear that Mark wanted to collaborate as much as we did, so we sat down to talk about possibilities. Mark sums up what we had to take into consideration: "Working collaboratively is challenging, but amazingly rewarding. Since we all work in such different ways—Zina slow, methodical, and extremely accurate; Terry working quickly and efficiently; and me working in my own hi-tech manner—we knew we would have to defer to one another at different times. In some cases, we might feel resistance; in others, relief at knowing a more accomplished artisan will take over part of the process." One unanticipated advantage was that all four of us, including Kathy, are experienced photographers, so we were confident we would capture every meaningful moment.

A plan is hatched

We soon agreed on what kind of piece we would try. It was to be a simple vessel with a surface that Zina could carve, and there would be an "inner vessel" that Mark could work on with his captive chainsaw system. The vessel would contain strong elements of work by each of us. Before we could begin, it was necessary to choose the best wood. With a knife in her hand, Zina explored the dark recesses of the wood store with Mark, going from burl to burl and trying a cut on each to see if it would work for her. Eventually, they chose a modestly sized black ash burl. The wood was harder than Zina

JOURNAL ARCHIVE CONNECTION

EXPLORE!

For further reading on Terry and Zina's prior collaborations and on Mark Lindquist, see these *AW* articles and more, online at woodturner.org. Log on and use the Explore! search tool.

- "Spheres of Influence: Inside an Enduring Collaboration," by Zina Burloiu and Terry Martin (vol 32, no 2, page 43)
- "Mark Lindquist: Pioneer of the Unexpected," by Terry Martin (vol 25, no 3, page 42)
- Zina Burloiu and Terry Martin, back cover (vol 34, no 3)

Captive chainsaw carving

Mark's captive chainsaw system. The work is rotated in small increments and is stationary when each plunge cut is taken.

The piece is ready for Zina's carving.

Zina's chip carving

Zina marks out the design she will carve, then with a sharp knife releases delicate slivers of wood from the ash burl.

is used to, but she was confident she could work with it—a decision she later admitted tested her skills.

I started the project by turning a spigot on the bottom of the burl and then shaping the base into a simple rounded form. The lathe I was using had belonged to Mark's father Mel, the famous turning pioneer. When I had worked there in 2009, Mark had allowed me to use it and told me I was the first to do so since Mel had passed away in November 2000. Mark also allowed me to use his father's tools, the same tools that he had watched his father use when he was a boy. As I picked up each tool, I pictured Mel's hands doing the same thing before I ▸

was born seventy years ago. It is very moving to be given such an opportunity, so even before we started, this piece was deeply imbedded in turning history. We had discussed what form would be best for Zina to carve on and agreed that a flattish shoulder would present a better face for the viewer to appreciate her carving, so Mark took over to shape the upper half.

Once we had finalized the outer shape, it was time to create the inner vessel. I used my trusty Stewart tool to start the process of separating the outer wall from the beginnings of a vessel inside. I don't see the Stewart tool mentioned much these days, but it remains one of the best tools ever designed for undercutting a rim. The geometry of the shaft requires the turner to work with the whole curved portion overhanging the toolrest, and it works perfectly. When the rim of the inner bowl was defined, we took the piece to Mark's captive chainsaw carving system. In his early days, Mark did demonstrate this system, but he soon stopped doing that because some people had imitated it and tried to take credit for the idea. So this was a rare chance to watch Mark using it at close proximity. The machinery all made perfect sense to Zina, so she helped set up the cutting parameters.

Mark has a chainsaw locked into a partly automated control mechanism that allows him to rotate the piece by a measured amount with a simple click of a button, then plunge-cut to a predetermined depth. He controls the speed of the cut by hand so the saw doesn't chatter or kick back. When the interior bowl had been incised with radial cuts, I took the piece back to the lathe to further undercut the inner vessel so it would seem to "float" inside. I reversed the lathe rotation and cut on the right side of the inner bowl to allow the curve of the Stewart tool to fit underneath the inner bowl. I stopped when there was only about a half-inch of wood left holding it. The finished turning was ready for Zina to start work.

It would be wrong to give the impression that all this happened quickly. We spent a lot of time talking about it, sitting on the porch with cold drinks in hand, standing beside the lathe with our feet in shavings, or looking down the barrel of Mark's captive chainsaw. There was so much *What if?* and *Why not?* that we almost couldn't keep up with ourselves. We three are all dreamers who have radically broken with convention at every stage of our careers, but dreaming by itself is not enough. To be a successful adventurist, you also need a lot of experience to bring fantasies to fruition, and with around a hundred years of experience between us, there are not many technical problems that can defeat us.

Mark seizes the opportunity to record Zina at work.

Zina's hand-carving

Zina found a quiet place on the porch with good light and started laying out a pattern on the wood. Her designs are so precise that it might seem she uses mechanical aids to transfer them to the wood, but in fact she often does it by eye. Her thought is this: "I am not a machine. This is hand work." For example, she prefers the time-honored carpenter's method of using a finger as a guide when scribing lines, in this case anchoring on the vessel's rim to draw concentric circles.

Once Zina had laid out a spiraling pattern on the shoulder of the vessel, she began the painstaking task of cutting into the wood. Because it was so hard and one slip could destroy the whole effect, she had to proceed in delicately thin slices. It was amazing to watch it all slowly emerge—create a stop cut, slice up to that cut to remove a thin wedge, repeat, repeat, repeat, go back and refine the line. After ten minutes, about an inch of surface area is completed and then left to revisit later for further refinement. Most impressive is Zina's ability to combine strength with gentleness. Her grip is powerful and she can guide the knife

Paradox, 2017, Black ash burl, 3" × 6½" (8cm × 17cm)

through the most cantankerous wood with precision, but it is necessary to maintain delicate control at all times.

It isn't easy to describe, but Mark took careful videos of Zina's amazing chip-carving process, and he invited me to add commentary while she worked. These clips became part of a larger video about our collaborative experience (*see Video sidebar*).

Paradox

It took Zina about three days to complete the carving, and while she worked, Mark and I went off to do other things, but we regularly came back to sit and watch Zina work. As we watched, all three of us kicked around ideas for naming the piece. We talked at length about how unlikely this piece was, combining the ideas and skills of three friends from cultures that literally encircle the globe: Romania, Australia, and the United States. How could we reflect the personality of such a paradoxical piece in a name? And there we had it! *Paradox*.

After the piece was signed and oiled, Mark took it to another wing of his studios, where he photographs, processes, and prints top-end imagery on a grand scale. We can't all keep the piece we made, but Mark's image is a tangible memory of the time we spent together.

Now, I pick up *Paradox* and feel its rounded form as it nestles in my hands. I can trace the soft inner grooves that Mark created and touch where I undercut the inner vessel—with my heart in my mouth for fear of it breaking away. Then I run my fingertip along the sharp edge of every fine, final cut that Zina made. This piece shows that creative collaboration can embrace so much. We were there together and chose a piece of precious wood, we worked as a team, we laughed a lot, and we created beautiful memories. *Paradox* contains all of that and more. ■

Terry Martin is a woodturner and writer working in Brisbane, Australia. He can be reached at tmartin111@bigpond.com.

You read the article—now see the video!

To see a video about the making of *Paradox*, visit tiny.cc/ParadoxCollab or scan the QR code with your mobile device.

HOWARD LEWIN

A Pioneer in Profile

Mike Mahoney

Fellow woodturners, if you aren't already familiar with California-based Howard Lewin, let me introduce you to him. Howard was an important figure when the American woodturning scene was first developing. He brought a great sense of exploration and entrepreneurship, as well as an intuitive knowledge of engineering. Over the years, he made his mark in our field as an inventor, woodturner, author, and teacher. I recently had a chance to catch up with Howard after not seeing him for many years, and I found that my appreciation for his efforts was as strong as ever.

Early encounter

In 1984, I was a young college student majoring in industrial arts at San Diego State University. Howard Lewin came to give my class a woodturning demonstration, and I was blown away by the samples of his turned artwork and his compact bowl lathe.

Howard had brought natural-edge bowls turned from green wood, as well as donut-shaped hollow forms turned from burl. He called these latter forms *Space Warps*. Until that time, I had never been exposed to artistic works turned on the lathe, nor anything made from green, unseasoned, wood. We had always glued up dry wood to make turning blanks.

Howard also brought along bowl gouges that he was designing with Jerry Glaser, an influential tool maker. One of those gouges was a bottom gouge, used for reaching inside the bottoms of bowls while maintaining bevel contact. This gouge was useful not only for making cleaner cuts in the bottom of bowls, but for any difficult-to-cut grain. Howard notes, "I met Jerry in 1981 at the Cutting Edge, a tool store in Culver City that offered woodworking classes. He was teaching woodturning, as was I. We began to talk about lathes and tools and soon discovered we had a lot to talk about. I was designing my prototype lathe, and he was working on tools. It all worked out for both of us because, I believe, it was the first time two engineers who were also woodturners were able to put into practice the engineering required for a good lathe design and excellent tool design."

That early encounter with Howard at San Diego State changed the course of my career and led me to become a production bowl maker. Over the years, I often wondered what Howard was up to. Then in 2019, some thirty-five years later, I was demonstrating for a woodturning club in southern California and Howard was in the audience. I was thrilled to see him and glad to hear he was still involved in woodturning and keeping busy in his workshop.

Background

Howard earned both a bachelor's and master's degree from the University of California, Santa Barbara (UCSB) but concedes that this education was not ultimately applied to his woodworking career (although it did have a significant impact on his ability to research, write, and publish). He explains, "All I ever wanted to be was an engineer. I was on my way to Cal Poly San Luis

Obispo to check out their campus. I had to pass by UCSB, so I decided to take a peek. That peek proved fatal. I never got past that campus and decided to enroll, not realizing that at the time, they did not have an engineering school. I decided to enroll as a history major at UCSB, spend one semester there, and then transfer to Cal Poly. I ended up spending five years at UCSB."

After earning his master's degree, in 1963, Howard joined the International Voluntary Services to reconstruct Laos, which was then ravaged by war. He lived and worked in Laos for twelve years and learned to speak, read, and write the Lao language. Howard constructed schools, dispensaries, water wells, and water seal privies. In 1965, he was hired by the United States Agency for International Development, Department of State, as an engineer. He says, "Our office was responsible for all U.S.-funded construction in the country. This included roads, bridges, airports, hospitals, water diversion dams, and irrigation systems." He would later publish a book about his experiences there, *Sunsets, Bulldozers, and Elephants: Twelve Years in Laos*.

Howard's time in Laos took an emotional toll. In his book, he explains, "It is difficult for anyone who was not present in Laos to understand the significance of the events that took place, both on a personal level and as a part of the whole picture of the Vietnam War.... The whole program in Laos was a kind of sideshow to the war effort, and often policies were determined and carried out in Laos on the basis of what was happening and thought to be needed in support of Vietnam."

Howard explains that upon returning home in 1975, he wanted "to forget, bury what I had seen and done, and begin a new life." He decided to open his own cabinet shop and called his new business Custom Wood Designs. The operation had a reputation for being on time. Howard chuckles as he ▶

An example of Howard's *Space Warp* forms (left) and a natural-edge vase, 1987, Carob.

"I brought them with me to the AAW meet in Lexington [1987]. While on display, the *Space Warp* was destroyed by a visitor who tried to pick it up and dropped it."

Carved and dyed works in ash, by Howard Lewin, 1992.

"All of the carving and dyeing were to demonstrate their effects on nondescript pieces of wood."

The *Lewin Scope*, a challenging but fun sculptural piece in pear, 1990.

A working prototype of the Lewin Bowl Lathe, a short-bed, variable-speed innovation later manufactured by Woodfast under the name Woodfast BL300.

A 1989 promotion of Howard's Divide and Rule.

"It was so useful that I manufactured several hundred for sale."

notes that "being on time as a cabinet shop was a very rare commodity in those days." During this time, he built custom cabinets and furniture and also became serious about woodturning.

Woodturning innovations

In 1985, Howard demonstrated turning at the prestigious Brigham Young University (BYU) Utah Symposium, where he met Richard Raffan and Dale Nish, who inspired in him even more enthusiasm for woodturning. He had also demonstrated at many other national and regional woodturning symposia, where he rubbed shoulders with Garry Knox Bennett, Brian Boggs, Rudy Osolnik, Art Carpenter, Bob Stocksdale, Sam Maloof, Michael Dunbar, Todd Hoyer, and many others.

His enthusiasm for lathe work and its related tools and machines led Howard to write articles and make videos for *Fine Woodworking*, including a series on turning green wood and making hollow vessels. In 2003, he wrote a key article for *FW*, "A Revolution in Woodturning Technology," in which he discusses the green wood revolution in woodturning, along with the impact of modern gouges made of better steels and modern lathe designs.

If you have ever used a short-bed lathe with variable speed control, you might have Howard Lewin to thank for it. He was one of the first to bring these innovations to our modern lathes. In 1983, he designed a bench-top lathe specifically for making bowls. Its short bed allowed the turner to stand at the end of the lathe, rather than next to it, offering better access to the bowl's interior.

In those days, most commercially available lathes were made for spindle work and, upon startup, went instantly from 0 to 700 rpm. This made turning green or unbalanced wood terribly dangerous. Howard's bench-top lathe was set up with a pulley system that would start the work at only 250 rpm. Later, in 1984, Howard added a DC drive controller to his lathe that could vary the speeds, starting at 0 and incrementally increasing to 750 rpm. This made turning unbalanced work much safer. The Union Graduate lathe, which like Howard's design could accommodate better access for bowl turning, was already commercially available at the time, but its footprint made it difficult to turn large, unbalanced work. So Howard's lathe was poised to be well received.

Howard sent his design to Woodfast, an Australian manufacturer, to have his new lathe fabricated. In 1985, Howard sent one of his new lathes to Rude Osolnik in Berea, Kentucky, to get the impressions of this well-known woodturner. At the first AAW Symposium—in Lexington, Kentucky, 1987—Howard publicly introduced his Lewin Bowl Lathe. Woodfast named it the Woodfast BL300.

This new lathe contributed to an explosion of creativity in our field. It offered sturdy cast-iron construction with a user-friendly banjo and tailstock, plus a 16" (41cm) swing that could turn at varied speeds. These innovations helped change our craft into what it is

Another of Howard's designs: a bolt-on toolrest for outboard turning on lathes with a moveable headstock.

The Lewin Center Finder, used for accurately marking the center of faceplate-mounted turnings, an innovation used in various iterations today.

today, and many lathes available now are similar in design and function.

Howard also designed other tools that woodworkers use today. One is the Divide and Rule measuring device, which instantly finds the center of any opening or circle up to 24" (61cm). It will also divide an expanse evenly into as many units as you need, useful for accurately placing knobs on drawer fronts and similar tasks. It can also be used to accurately measure angles.

> "CREATE THE NECESSARY TECHNOLOGY AND TOOLS, AND DEVELOP A NEW WISDOM TO REACH YOUR GOALS."
>
> — HOWARD LEWIN

The Lewin outboard turning platform was designed to be a much safer way to cut wood on the outboard side of a lathe. The fact that it was attached to the lathe gave it more stability than a standalone toolrest, and it had the added ability to swing to almost any position.

The Lewin center finder is a threaded point used to locate the center of a turning blank by threading it through the back of a faceplate. This is useful for re-centering work when it is reverse-mounted.

Final thoughts

After reuniting with Howard more than thirty-five years after our first meeting, my perception of him is this: Howard is not one to miss an opportunity. He once wrote, "I have always worked better exploring the 'how to' part of doing something. Do it, make mistakes, and learn from them." This helps to explain the mentality behind Howard's many inventions. In his artist statement on his website, Howard notes, "If there is one given, it is this: you can't wait for technology. You must create it if you want to accomplish your goals. You cannot allow your imagination or your creativity to become stifled by present-day knowledge or conventional wisdom. Create the necessary technology and tools, and develop a new wisdom to reach your goals."

I enjoyed catching up with Howard and learning more about his history, especially because he had inspired me so much at the start of my woodturning career. I was happy to learn that today Howard is still very active in his workshop. Lately, he has been busy casting many of his early works in plastic resin and generally exploring whatever interests him. ■

For more on Howard Lewin, visit customwooddesign.com.

Mike Mahoney is a production woodturner specializing in salad bowls, utility items, and burial urns. He lives in rural Northern California on a farm with his wife, Jenni. For more, visit bowlmakerinc.com.

Members' Gallery

Rising Petals, 2018, Sycamore, pyrography, 9½" × 4½" (24cm × 11cm)

Helen Bailey, Newcastle upon Tyne, England

Photos by Pat Carroll.

I began woodturning in 2016, having attended a pen-making demonstration and being surprised how much I enjoyed the event. The seed was sown, and after attending another event shortly thereafter, I purchased my first lathe and joined a local club.

As my skills developed, I focused my passion on creating thin-walled pieces. Adding further enhancement by piercing and pyrography, I developed a series of *Wave Bowls*. My aim is to create pieces that invoke curiosity and interest. I now demonstrate my techniques and enjoy teaching people who share my passion for woodturning. Like many novice woodturners, I made lots of mistakes at the start. My advice to any newcomer is to get lessons from a reputable woodturner who can guide you through the techniques and safety issues involved with this wonderful art/craft.

Trio of Vases, 2019, Sycamore, ebonizing lacquer, verdigris wax, gilding cream, largest: 5¼" × 5½" (13cm × 14cm)

Blossom on the Wave, 2019, Sycamore, pyrography, 2¾" × 6" (7cm × 15cm)

Jerry Johnson, Washington State

I have been turning wood actively for twenty-five years and recently began studying forms found in nature and those of various geometric configurations. Work by Michael Foster and Malcolm Tibbetts has also inspired me.

For *Triad*, I made three doughnut shapes from cherry wood, each about 10" in diameter, and textured each one. Two of the doughnuts were cut in half to facilitate assembly, after which I added more texturing to hide the glue joints. I painted the assembled pieces black, then, at the suggestion of Jim Christiansen, applied colors in interference acrylic paint.

Triad, 2020, Cherry, interference acrylic paint, 7" × 14" × 10" (18cm × 36cm × 25cm)

Richard Wilk, Indiana

I believe woodturning kept me sane and grounded during my forty-year teaching career. Now, in retirement, I have learned to use a computer numerical control, or CNC, router. I have also been experimenting with epoxy inlays. Feeling like a mad scientist working in my tiny basement lab, I eventually figured out how to combine my longtime love of computers with the chemistry of polymers and the natural beauty of wood. There is really no limit to the possibilities when you can add almost any design to the things you are turning.

Finished plates—CNC cut, epoxy filled, and turned. Richard uses automotive rubbing compound with a foam pad to bring the epoxy to a shine, followed by waxing and buffing.

The author's CNC router cuts a design in a turning blank. Almost any image can be turned into a vector graphic for CNC software.

A CNC-cut design is filled with colored epoxy resin, then turned on the lathe.

Bob Schmitz, Arkansas

While visiting my daughter, I spied a hollow donut form in clay on her kitchen counter, containing dry flowers. I liked what I saw and decided to make one using segments of various woods from here in Arkansas. Through trial and error, I figured out the steps to turn this challenging piece.

To make the donut hollow, I began by turning a segmented cylinder, then drilled a hole through its entire length. I then cut this "tube" into twelve segments with 15-degree sides. I glued these segments together two at a time so that when the glue set, I could hand-carve the inside of each joint. When the entire donut was glued up, I mounted it on the lathe for trimming and sanding. Finally, I added three "portholes," which can hold dried flowers. ■

Hollow Donut, 2020, Walnut, redbud, Osage orange, white oak, cherry, sassafras, 7" × 6½" × 2½" (18cm × 17cm × 6cm)

ProEdge
Sharpening refined

The Robert Sorby ProEdge offers effortlessly repeatable sharpening every time.

Features and benefits:

Sharpens with belts rather than abrasive wheels

- Cuts steel rather than rubbing it off
- Change belts in seconds
- Flat bevel rather than hollow grind
- Wide range of grits and abrasives
- Sharpens all exotic alloys and carbide*
- Belt sharpening lowers risk of overheating

Patented angle setter guarantees repeatability

- Sharpen at exactly the same angle every time
- Nine factory indexed settings provide a guide for all types of tool
- Can be locked between indexes for custom settings

Exceptional Robert Sorby construction

- Built from solid steel
- Pivots for operator comfort
- Inexpensive to run
- Small workbench footprint
- Backed by Robert Sorby Warranty**

Wide range of accessories to suit all sharpening needs

> "I really liked the system and recommend it. It was quick and simple to set up and very easy to use. I really believe that my tools were sharper than when sharpened on a wheel."
>
> Joseph M. Herrmann, Editor, Woodturning Design

Woodturning Design

Robert Sorby

The Robert Sorby ProEdge: Sharpening made simple

Proudly Made in Sheffield, England

Patent Number: 2438962

www.robert-sorby.co.uk

*Carbide tools require use of diamond belt

** Robert Sorby warranty is for 5 years if machine is not used commercially. Guarantees all non electrical parts except wear plate which needs replacing occasionally and with heavy use. Motor warranty is 2 years

---

ONEWAY MANUFACTURING

www.oneway.ca

postbox@oneway.ca

1-800-565-7288

Woodturning Lathes

Powerful Precise Smooth

Unique mechanical features seldom found on competitive lathes:

Bed - steel torque tube design
Legs - adjustable for height
Headstock
-welded steel, torque resistant
Spindle
-chrome alloy, hardened and ground
-duplex preloaded ball bearings, both ends
-locking groove for reverse turning
Patented Banjo clamping
48 position indexing is standard
Acme screw tailstock
Much much more!

Electronic Features:
1-1/2 to 3 hp available
Electronic AC drive accepts 220 single or 3 phase
Full power reverse turning
Drive programmable for ramp up / down
Fully moveable pendant
Dust proof enclosure

ALL ONEWAY PRODUCTS ARE MADE RIGHT HERE IN NORTH AMERICA.

The Best Woodworking Chucks In The World.
Often Copied, Never Equalled.

Stronghold Oneway Talon

Superior Design. Legendary Quality.

Features you'll love about **Robust Lathes**

Pre-hardened spindles with heavy duty bearings.

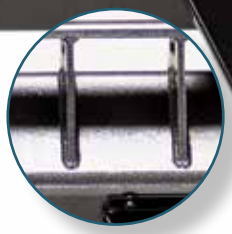
Heavy duty banjos that slide freely and lock securely

Stainless steel ways and a rugged bed that lets the chips fall away

Industrial grade motors, drives and switches.

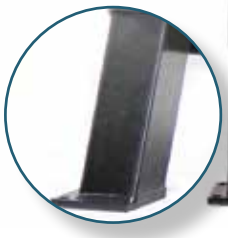
Add a Tilt-Away for the American Beauty and Sweet 16

Magnetic backed controls (Scout is fixed with stop-bar)



Durable Powder Coating 'Silvervein'' and Black

Adjustable Height



*The **American Beauty**, a premium bowl and vessel lathe setting a new standard for woodturners around the world. Available with a standard bed (as shown) or long bed. Either way it's hard to outgrow.*

*With a 14" swing, 26"spindle capacity and available 1.5 HP, it's no mini lathe. Get the **Scout** with or without the Universal Stand, adaptable to standing and seated position turning.*

*With its removeable gap bed, the **Sweet 16** punches above its weight. Turn bowls and platters up to 32" and turn extra long spindles too. Choose from three bed lengths.*

We are committed to quality. All Robust lathes are backed by a complete seven year warranty.

ROBUST®

Better by design. Enjoyed for a lifetime!

Made in the USA

Email: info@turnrobust.com • Phone: 608.924.1133 • **www.turnrobust.com**

advertisingindex

To advertise in *American Woodturner*, contact Erica Nelson, 763-497-1778, erica@pierreproductions.com.

Sharpest, Longest Lasting Carbide Inserts

WOODTURNING TOOLS

U.S. Patent No. 10,493,651

Love turning, but hate sharpening? You're among thousands of turners, many of whom have changed to carbide insert tools. The learning curve is much shorter and you don't have to buy *(and learn to use)* complicated sharpening equipment. When Woodpeckers® introduced our line of carbide insert turning tools, we didn't want them to just be easier to use, we wanted them to deliver the kind of flawless finish professional turners get from a traditional tool.

It all starts at the cutting edge. Our inserts use a special nano-grain carbide, polished to a mirror-finish on the face and precision ground on the bevel. They are the sharpest, longest lasting inserts on the market and rival high speed steel for keenness.

The key to delivering a finish-ready surface is a technique called "shear-scraping" and we've changed it from an advanced technique to something anyone can do the first time they pick up an Ultra·Shear Woodturning Tool. After initial shaping, just roll the tool right or left and you'll feel it land on a second bearing plane. Now your insert is at a 45° angle to the stock and will slice the wood fibers cleanly.

Ultra·Shear Woodturning Tools Come in 3 profiles *(Square, Round & Detail)* and 3 sizes *(Full, Mid & Pen)* for a total of 9 unique tools. Pick the size that matches your work and start completing more projects in less time with less sanding and no sharpening.

Crisp, Clean, Narrow Parting Cuts

PARTING TOOL-Ci

Patent Pending

Once you've turned your masterpiece, you need to get it off the lathe with a clean cut and as little waste as possible. Ultra-Shear has now put the advantages of carbide insert turning into a thin-kerf parting tool. The Ultra·Shear Parting Tool Ci uses a small fluted carbide insert to deliver razor-sharp parting lines with no heat build-up and minimal cutting resistance.

Ultra·Shear's re-designed geometry takes the wedge-theory used on other insert parting tools and improves it with a profiled feature that grips the insert securely, even at odd approach angles.

We patterned the handle and blade after thin-kerf parting tools first made popular in England in the 1980s. The tall blade resists twisting and bending. The short blade length and knife-style handle give you comfortable, confident control over the cut. If you need a flat bottomed groove, there's an optional square insert *(the same width as the fluted insert)*.

If you're looking for a parting tool that cuts clean each and every time you pick it up, and never needs sharpening, Ultra·Shear's Parting Tool-Ci is for you.

ULTRA·SHEAR™ by Woodpeckers®

Ultra·Shear Woodturning Tools
Designed & Manufactured by
Woodpeckers, LLC
Strongsville, Ohio
800.752.0725
woodpeck.com

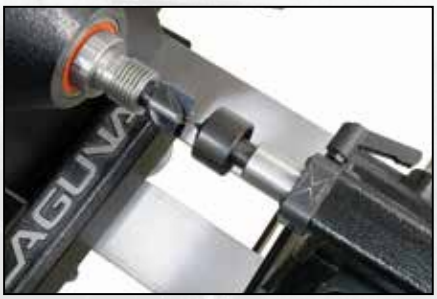
THE ALL NEW REVO|15|24

Closing the Gap Between Revo 12|16 and 18|36

Extraordinary torque even at low speeds!

$1999

Shown with options



Patent pending precise point alignment

Electronic variable speed 50 – 4200 RPM

LAGUNATOOLS.COM | LAGUNALATHE.COM

LAGUNA

BARRY TODD
OHIO

After I learned to pierce wood, I developed a preference for incorporating pierced elements into larger assemblies. I like the balance of an ethereal, fragile component juxtaposed with solid parts. I also enjoy experimenting and incorporating carving, color, texture, bleach, and whatever comes to mind.

Fragile Planet...Tipping Point was born from a moment of reflection upon the fragility of our home planet. This piece gave me the opportunity to try turning, carving, bleaching, and assembling an articulated piece. It may not fall into the pretty, warm, and fuzzy category, but it is what it is.

Fragile Planet...Tipping Point, 2019,
Bleached maple, poplar, black walnut,
wire, acrylic paint, 21" × 8" × 5"
(53cm × 20cm × 13cm)
Photo: Stephen A. Wolfe