FUN AND EASY WHISTLE • OFF-KILTER ORNAMENT STAND • ROUGHING BETWEEN CENTERS

# AMERICAN WOODJURNER

Journal of the American Association of Woodturners

December 2015 vol 30, no 6 • woodturner.org

**DEREK WEIDMAN IN CONTEXT** 

**TURN A SUNCATCHER ORNAMENT** 

ELLIPTICAL TURNING

**ON A SHOPMADE CHUCK** 





# JasonSchneider New Jersey

My work as a studio furniture maker typically involves traditional woodworking with non-traditional materials. Most recently, I have been exploring the potential uses of corrugated cardboard. I am interested in creating form and texture with this low-status and commonly overlooked material.

My excitement in working with corrugated cardboard comes from the lines and textures that are revealed when cutting through the material. This texture begins in the laminating process. I can control the patterning by orienting the corrugations in various arrangements and understanding how they will appear in the finished piece.

I use spindle gouges to turn cardboard; the tip of a fingernail grind cuts the paper best. The gouges dull within a few minutes due to the abrasive quality of the material, so I often sharpen as many as six gouges at a time in order to turn in longer stretches. I get the shape with the turning tools and finish with abrasives, very rarely sanding finer than 120 grit.

For more, visit jasonschneiderfurniture.com.



Lamp (Blue), 2015, Corrugated cardboard, LED lights, wood, paint, 731/2" × 12" (187cm × 30cm)



## AAW OF WOODTURNERS

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

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Journal of the American Association of Woodturners

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#### woodturner.org

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The AAW does not endorse any product featured or advertised in this journal.

#### A NOTE ABOUT SAFETY

An accident at the lathe can happen with blinding suddenness; respiratory and other problems can build over years.

Take appropriate precautions when you turn. Safety guidelines are published online at tiny.cc/turnsafe\*. Following them will help you continue to enjoy woodturning.

<sup>\*</sup>Web address is case sensitive



#### Editor's Note



I continue to strive to offer something for everyone in each issue of *American Woodturner*. Beth Ireland offers a simple whistle project (page 15) that would make a fun gift for a child this holiday season (no batteries required). Even better, make the whistle with a child of sufficient age to share your love of woodturning and inspire others to take up the gouge.

Higher on the complexity scale is David Springett's shopmade chuck for elliptical turning (page 28). David has also created an excellent video that further explains the concepts presented in his article (see page 35 for the URL and QR code).

I hope you enjoy this issue of the journal and welcome your ideas for future content.

John Friend

-Joshua Friend

#### From the President



#### Volunteers for Atlanta

As we continue planning for AAW's 30<sup>th</sup>-anniversary symposium in Atlanta, I'd like to continue our call for volunteers. Having been Symposium Chair

for three AAW symposia, I can tell you our event can never have too many volunteers. We always are in need of additional members to join the local team. Their work in planning, staging, and execution of the event will span more than a year. The number of volunteers locally will help spread the load. There is plenty to do now and through the end of the actual event. If you are local to Atlanta, I encourage you to contact Steve Pritchard, the Atlanta liaison, to join the team.

In addition to the local team, we have volunteers who arrive from afar. They work with our national volunteer team to staff the event, assisting with everything from merchandise sales to videography. While some volunteer positions require specific skills, most do not. If you are planning to attend the event and are willing to assist during the symposium, please contact John Ellis, our national volunteer coordinator. We'll have contact information on the Atlanta symposium webpage shortly (see woodturner.org). Don't forget we welcome spouses/significant others to volunteer if they will be traveling to Atlanta with you. Time commitment is flexible, so please consider giving a bit of your time to help make our 30th-anniversary event the best yet.

#### Services, Publications, and Positioning Project

You may have heard about this AAW research initiative or perhaps been involved

with it as it has moved forward. We have undertaken an extensive effort to understand our membership's changing needs and how the AAW can best fulfill those needs. For many years, we've delivered the *American Woodturner* journal, annual symposium, insurance umbrella, and organizational structure for member chapters. This model worked well for many years. As we've grown and the world of woodturning has changed, we've recognized that the original model needs to be revisited. The research we have conducted will help us understand how best to deliver maximum value to our chapters and their members.

Part of our mission to educate and expand woodturning is dependent on our publications. As the technology of information consumption has changed, we've tried to stay current with our delivery methods. It is a never-ending task, as we have a very technically diverse demographic, ranging from those who collect and store the printed journal to those who live exclusively via their phone or tablet.

The positioning project is ambitious in its scope and will be rolled out to the membership shortly. It is part of our ongoing effort to deliver the most value we can to each of our members, regardless of location, expertise, or ambitions.

#### **Year-end giving**

Donations to the AAW support the organization and allow us to serve you, the membership. Many donate, restricted use or general, throughout the year. There are also many who have given or have planned for end-of-life gifting. As we approach the end of the year, don't forget that your donations to the AAW may have tax benefits. Please consult your tax advisor to understand more about the specific impact. You can donate cash in any amount or securities, if you wish. Please

consider making a donation to the AAW to help us continue our mission. We are very conscious of putting our resources to the maximum benefit of the entire membership and welcome your assistance.

#### A goodbye

As I finish up my last president's letter, I want to thank all the folks in the AAW who have helped me throughout my six years of serving on the board of directors: the other directors (both past and present), the entire AAW staff, the many committee leaders and teams, the volunteers, and especially the membership at large. I think I've had the chance to chair or be a member of just about every committee of the AAW over these years. At every step, I was helped by anyone I have ever reached out to—and often by those simply stepping forward to offer assistance. The selflessness of the woodturning community is amazing. Your willingness to give of your time, expertise, and money for the good of the AAW and woodturning in general is incredible.

To say my years on the board have been an experience would be an understatement. There have been many changes planned and implemented in the organization over these years as we position it for continued growth and expanded service to our customers, you the membership. As I look back, I wouldn't trade this time and experience for anything. Now as I transition to sitting in the audience, I look forward to enjoying the experience from that perspective once again. Thank you all for the opportunity.

Best,

Hut Hatyg

# EARN. CREATE. CONNECT.

10 REASONS YOU'LL WANT TO ATTEND AAW'S 30<sup>TH</sup> ANNUAL SYMPOSIUM, ATLANTA, GEORGIA, JUNE 9-12, 2016.

AAW's 30<sup>th</sup> annual international symposium will be held at the Atlanta Convention Center at AmericasMart, Atlanta, Georgia, June 9–12, 2016. The connected Atlanta Westin Peachtree Plaza Hotel will be our host hotel. Known for "Gone with the Wind," Martin Luther King, Jr., The Carter Center, Ted Turner, Hank Aaron, and Coca-Cola, Atlanta is overflowing with southern charm. AAW's symposium offers you an opportunity to enjoy the beauty and intrigue of Atlanta, while enhancing your woodturning experience and enjoying the company of others who share your enthusiasm.

1 AAW IS TURNING 30

You like to celebrate. The AAW has played a crucial role in the development of contemporary woodturning and wood art since 1986. We've led a dramatic transformation of the craft over the past three decades. Together at the AAW symposium, we'll be able to celebrate this milestone and the dedicated people who got us started.

WORLD-CLASS DEMONSTRATORS

You appreciate an exceptional woodturning demonstration. The symposium offers three-and-a-half days of classroom-type demonstrations and panel discussions led by internationally known woodturners, veteran instructors, and top woodturning talent. No other event offers as many opportunities to learn from the world's best. Featured demonstrators: Sally Ault, Benoît Averly, Jason Breach, Seamus Cassidy, Robin Costelle, Jean-François Escoulen, Richard Findley, Liam Flynn, Cynthia Carden Gibson, Michael Hosaluk, Beth Ireland, John Jordan, Dale Larson, David Marks, Yann Marot, Jason Schneider, Mark Sfirri, Curt Theobald, and many more.

ALL SKILL LEVELS WELCOME

You're a beginning woodturner—or a veteran. Whatever your skill level, the AAW symposium offers something for you. You'll be able to select from the broad range of demonstrations and panel discussions to focus on sessions that will enhance your experience wherever you are on your woodturning journey. You'll take away knowledge, tips, and techniques that will last a lifetime.

BROAD TOPIC AREA APPEAL

You are interested in special topic areas and in connecting with affinity groups. AAW's wide assortment of learning areas covers classic bowl turning, surface carving and embellishment, segmented turning, hollow vessels—and more! Plus, our growing number of affinity groups includes segmented turners, ornamental turners, pen turners, multiaxis turners, women turners, disabled turners, and youth turners.

**EXCELLENT VALUE** 

You know a good value when you see one. AAW's symposium packs in more high-quality learning opportunities for woodturners than any other event in the world. Sign up early for discounted registration and special hotel group rates. Receive a full-color handout book loaded with information, techniques, and insights from demonstrators. Our symposium Guidebook app for mobile devices will help you keep the rotations, demonstrators, floor plans, and messaging at your fingertips.

HUGE WOODTURNING TRADESHOW

You like to see the latest and greatest woodturning products up close and in action. AAW's enormous tradeshow will be jam-packed with the newest woodturning products, tool and lathe manufacturers, and supplies. You'll be able to observe a range of ongoing demonstrations, hold tools in your own hands, see tricks and techniques, and kick some tires.

LIFELONG CONNECTIONS

You enjoy interacting with others who share your passion for woodturning. AAW's symposium is an opportunity to step out of your shop and tap into the greater woodturning community. With a culture of cooperation, camaraderie, and sharing, you'll be able to gain knowledge and relationships that will last a lifetime, socialize with friends, establish and renew connections, and schmooze.

WORLD'S LARGEST DISPLAY OF TURNED-WOOD OBJECTS

You're inspired by the turnings of others and value the opportunity to display your own work. Whatever your skill level, you can bring up to three pieces of your work to display in our huge instant gallery and participate in the largest show of turned-wood objects under one roof. Our themed exhibits, Turning 30 and Patterns, will draw collectors and galleries from around the country. You'll be inspired by the broad selection of exhibition work and have an opportunity for your own work to get noticed.

GIVE BACK TO OTHERS

You are passionate about woodturning and like to "pay it forward." AAW's symposium offers you opportunities to support charitable causes, including Empty Bowls, Beads of Courage, AAW's Tool Bank, as well as education and outreach programs. Donate or purchase a turned item to benefit a charitable cause. Bid high in our auctions to support woodturning education and outreach programs. It's good karma.

AFFORDABLE FAMILY ACTIVITIES

**You want to bring family along for the ride.** AAW's Youth Program offers free, instructor-led, hands-on woodturning instruction for kids ages 10 to 18 (with a paid adult, preregistration required). Sow the seeds for a life-lang law of woodturning. In addition to brows

long love of woodturning. In addition to browsing our exhibitions, galleries, and tradeshow, your registered non-turner spouse, partner, or adult guest is invited to participate in a variety of creative activities and tours while you attend woodturning rotations through AAW's Companion Program. What's more, Atlanta offers inexpensive fun for families, older adults, and everyone in between.



LEARN MORE ABOUT AAW'S 30TH ANNUAL SYMPOSIUM AT tiny.cc/AAW2016Atlanta



#### Plug in with the AAW App

As the world's leading resource for woodturning information, inspiration, and instruction, the AAW strives to continually enhance your experience accessing AAW resources. Your membership is more than just a subscription to the *American* 



Woodturner journal: AAW members also have access to Woodturning FUNdamentals, Safety for Woodturners, and various mentoring publications, as well as a variety of complementary services, website tools, grant opportunities, and specialty programming.



We'd like to share the exciting update about our newest service to help you stay plugged in to the worldwide woodturning community: The AAW App.

Recently introduced, the AAW App is a down-

loadable tool used to read *American Woodturner (AW)* on mobile devices. This paperless version has been designed especially for iPads and Android tablets and complements the printed *AW* journal. The AAW App presents superb interactive content and offers direct links to a wealth of online content, including videos and woodturning resources.

#### For AAW members...

The AAW App is free for download and installation for members, and issues of *American Woodturner* are FREE for download with applicable AAW App login credentials.\* AAW members will be individually advised by email of their AAW App login credentials, along with instructions for downloading the app. As long as your AAW membership is active, you will have access to new digital issues of *American Woodturner* on your mobile device. You'll enjoy being able to instantly click through to videos and other compelling online content.

Look forward to receiving an email about the AAW App Member Launch with more information, your login credentials, and instructions for downloading the AAW App. We may also offer additional AAW publications using the interactive AAW App in the future.

#### For non-members...

The AAW App is also free for download and installation by non-members. However, non-members must purchase digital issues of *American Woodturner* for download through the App Store (iTunes) or Play Store (Google). No other AAW member publications or services are offered with the purchase of digital issues by non-members.

\*Safeguarding personal information is paramount. Therefore, the AAW App does not directly interface with the AAW website and does not access or utilize AAW members' passwords. This approach reduces the risk of a potential data breach.

#### Call for Videographers— AAW Symposium 2016

The AAW seeks videographers for its 30<sup>th</sup> international symposium in Atlanta, Georgia, June 9–12, 2016. Applicants should have experience with video camera equipment, possess technical competence, and be able to make decisions regarding lighting, shooting angle, placement of microphone, etc. Applications will be accepted until January 15, 2016. Videographers selected for six rotations will receive a free symposium registration. Selected videographers will be notified in February 2016. To apply, visit tiny.cc/CallVideo.

#### **Call for Entries**

2016 Juried Member Exhibit

The theme for AAW's 2016 juried and invitational exhibit is "Turning 30," in celebration of our 30<sup>th</sup> anniversary. For three decades, the AAW annual exhibitions have encouraged members to present their finest work. Sometimes that means new and innovative ideas and techniques, sometimes presenting perfected techniques and classic forms. This is a proud tradition, and we are excited to bring that spirit forward into our fourth decade.

As always, the theme is open to interpretation. Certainly, turning thirty is a milestone in our culture, or one could turn thirty of something, or make a piece with thirty different wood species, but a simple yet excellent piece would also reflect AAW's spirit of sharing, which has been a constant practice these thirty years. It is up to you—and all AAW members are eligible to submit entries.

Complete guidelines can be found at tiny.cc/Turning30 (case sensitive) and in the August 2015 issue of the journal (page 8). Entry dates are November 1, 2015, to February 1, 2016. Questions? Contact Tib Shaw at the AAW Gallery of Wood Art, tib@woodturner.org.

#### **2016 POP Fellowship Grants** Call for Applications

The Professional Outreach Program is accepting applications for its 2016 Fellowship Grants. The purpose of the POP Fellowship Grant is to encourage creative growth through research or to provide inspiration for new directions in turned wood art. For example, applicants might be interested in pushing their work in a new direction, working in collaboration with other artists, or exploring new materials or using

existing materials in a new way. POP Fellowship Grants are funded by proceeds from the annual POP auction at the annual symposium.

Applicants must be AAW members in good standing. The Fellowship Grants are open to turners of all levels and abilities. For more information and to apply online, visit tiny.cc/POPGrant.

Applications will be accepted online through May 1, 2016.

# Apply for an AAW Educational Opportunity Grant

AAW's Educational Opportunity Grant (EOG) fund continues to be strong, thanks to the generosity of donors and buyers at our annual symposium auction. Funds are available for worthy proposals. To be eligible for a 2016 grant, applications must be received by December 31, 2015. All AAW members are eligible to apply (except recipients of grants in 2015). You can complete the application form and review the guidelines at tiny.cc/EOG (case sensitive).

The committee will not consider applications that are incomplete or vague, so please take care when applying. The following tips will help with your application:

- Complete the application online at tiny.cc/EOG. Only online applications will be accepted. Submit well before the deadline!
- Provide sufficient information so EOG committee members can clearly understand what you are requesting and how you intend to use the funds. Be concise.
- Include details of how you will use the funds. Specific needs should be

- itemized. Funds will not be granted for miscellaneous, incidental, or unspecified expenses.
- Explain your educational goal or experience you wish to obtain. Keep in mind these grants are intended for educational purposes. Explain how others will benefit.

Grant amounts are limited: up to \$1,000 for individuals and students and up to \$1,500 for local chapters, schools, and nonprofit organizations. Your total budget may exceed these amounts; however, your grant request should not exceed EOG limits. For special situations, at the discretion of the EOG committee and the AAW board, grants of larger amounts are occasionally available. In addition to EOGs, the committee will award ten certificates for registration to AAW's 2016 international symposium.

If you have questions, contact Rob Wallace, EOG Committee Chair, at rob@woodturner.org, or the AAW office.

Congratulations to John Ellis, Joe Dickey, and Wayne Furr for being elected to the AAW board of directors. Each person will serve a three-year term, beginning in January 2016. 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.

AAW Board of Directors Election Results

-Kurt Hertzog, AAW Board President

# Prize Drawing for AAW Members

One of the many benefits of membership in the AAW is our monthly prize and year-end grand prize drawings. Thank you to the vendors who donated this year's prizes, which include tuition scholarships, \$100 certificates, sanding supplies, DVDs, chucks, grinding jigs, symposium registration, and lathes! Contact Linda Ferber if you would like to contribute a prize, linda@woodturner.org.

When you patronize our vendors, please thank them for their support of the AAW. To see a listing of each month's prizes and winners, as well as hyperlinks to the vendors' websites, visit tiny.cc/AAWDrawings (case sensitive).

At the end of 2015, we will draw another name from our membership roster to give away a Powermatic 3520B lathe. That winner will name a local chapter to win either a JET 1642 or five JET mini-lathes. The Powermatic and JET lathes are donated by Powermatic/JET. Included is free shipping in the continental USA, or up to a \$500 allowance for international winners.

#### 2015 Donors

(Others may be added during the year.)

David Ellsworth

**Easy Wood Tools** 

**Hunter Tool Systems** 

John C. Campbell Folk School

JET/Powermatic

Mike Mahoney

North Woods LLC

Tennessee Assn of Woodturners

Thompson Lathe Tools

**Totally Turning Symposium** 

Trent Bosch





#### Young Craftsmen Program Benefits Incarcerated Teens

Sam B. is in the custody of the South Carolina Department of Juvenile Justice (SCDJJ). The system there uses both punishments for negative behavior and rewards for positive behavior, including a process of earning privileges. Sam earned his way into a program called Young Craftsmen, in which volunteers like me teach woodworking and woodturning.

I bring past AAW journals to inspire the teens in the program—boys 14 to 20 years of age. Sam saw an article on AAW's Youth & Student opportunities, but because DJJ students are "behind the fence," he was not allowed to become a youth AAW member. I suggested Sam write a letter to the AAW and explain his situation, as it is important for DJJ students to develop skills that will serve them well when they return to the outside world. Sam's letter started a chain of events that ultimately led me to write this article.

#### **Positive reinforcement**

We frequently get visitors in the Young Craftsmen shop, as people want to see what positive things the kids are doing. One day, a DJJ teacher stopped by and I gave him a tour. I showed him what we were doing and some of the work the



"We call ourselves the Young Craftsmen and we do a lot of lathe work. Mostly pens and bottle stoppers, but I am our bowl-man. I do many other things on the lathe, but my passion is bowls." —Sam B.



Sam B., a youth in South Carolina's Department of Juvenile Justice (SCDJJ) system, presents a segmented bowl to Governor Nikki Haley as a gesture of appreciation for and to increase awareness of the SCDJJ's Young Craftsmen program.

kids had completed. He thanked me and asked to stay a minute. Well, that "minute" turned into fifteen minutes of walking around and looking.

I asked if there was anything in particular he wanted to see.

He asked, "What are you doing here?" I explained about the woodturning and flat woodworking the kids were doing, and he then asked, "What are you *really* doing here?"

He explained that our Young Craftsmen's "club" had the best discipline record of any in-school or afterschool program on the campus and wanted to know why. When students at DJJ do not behave in an acceptable manner, they encounter a series of disciplinary steps, ending with timeout in solitary confinement. This teacher explained that that process wasn't working very well because the kids had no incentive to avoid the consequences they simply were not impressed. He then told me about a student who asked if he could still go to Young Craftsmen if he got "written up" (the first discipline step). When he was told, "No," he immediately changed his behavior. Since then, when his students are misbehaving, the teacher only has to ask, "Who doesn't want to go to Young Craftsmen today?" and the behavior immediately improves.

When kids are doing something they really want to do, they value that

time very much. I have had only one instance of difficulty in the twelve years I have volunteered at DJJ, and that was handled by having the student clean the shop for two sessions so he could stay in the program.

#### **Anatomy of a program**

Some kids who have never seen a lathe can get quite good at turning, but the first step is safety. For the first few projects, it is necessary for the volunteer to stand next to the student and provide immediate hands-on mentoring. As students progress, we allow them to become mentors for others. Having an experienced adult volunteer is critical because the kids want to grow from pens and bottle stoppers to bowls and platters quickly. Sam, one of the best students we have had over the last six years, has moved on to segmented bowls. His skill level is now at the limit of my expertise, but another Palmetto Woodturning volunteer with more experience has stepped in to work with Sam.

#### **Opportunities abound**

There is a juvenile prison in every state. Think of how many incarcerated youth our AAW chapters could potentially reach. It takes a good club with dedicated volunteers and people to help fund the program because

many states struggle with budgets. It is fun and rewarding to teach young men like Sam, who are so eager to learn woodturning. This is what has kept me at it for twelve years.

For more on SCDJJ, visit state.sc.us/djj or contact David Fellows at dfello@scdjj.net.

-Steven Slater, Palmetto Woodturners



Steven Slater (right), of the Palmetto Woodturners, helped found the Young Craftsmen program at SCDJJ and has been volunteering there for twelve years. Woodworking and woodturning have built students' self-esteem and reduced disciplinary problems at this facility.

# Bay Area Woodturners Participates in Turn for Troops Effort

As part of Woodcraft's Turn for Troops program, members of the Bay Area Woodturners Association (BAWA), an AAW chapter, contributed 137 of the thousands of pens made and donated to express appreciation for members of our armed forces.

Turn for Troops started in 2003 as a way to thank American military personnel for their service. Taking place on Veterans Day and over Veterans Day weekend, turners of all ages and experience come together at Woodcraft stores throughout the U.S. for the event. It has expanded to include local woodturning clubs, Boy Scouts, high school woodshop classes, and even locally stationed servicemen and women. Last year, more than 13,000 pens were hand-crafted by volunteers and sent to members of the armed forces deployed overseas and in rehabilitation centers where they are recovering from injuries sustained while serving their country.

This year, Jim Rodgers donated the use of his woodturning classroom for the BAWA members to turn their pens. Rodgers, one of the club's most experienced members, contributed twenty-six pens in addition to mentoring those who were making pens. In total, twenty-five members came together, including a first-time woodturner who turned five pens. Members signed their names to their creations, and many wrote a short message for the troops. Some of the members included their branch and time in the service. After our club's event, the pens were taken to the local Woodcraft store for distribution.

Though the event is aimed to boost the morale of the troops, it had the same impact on those who participated. "I feel it is fantastic," said John Hile. "It raises my spirits to know the troops' spirits may be raised by our efforts."

-William Tanner





BAWA members turn pens for Woodcraft's Turn for Troops program.

#### Prescott Area Woodturners Donates to Empty Bowls

Earlier this year, North Woods Figured Woods (nwfiguredwoods.com) generously donated two boxes of blanks for our members to turn into bowls to be donated to the Empty Bowls Project in Prescott, Arizona. Members chose blanks at meetings in the spring and returned them in time for collection at our August meeting. Chapter members also donated many more bowls made from their own stock. In all, the Prescott Area Woodturners donated seventy-five bowls, and the donation from North Woods was instrumental in kicking off this effort.

Our club is pleased with the result, but we are not going to rest on our laurels; we plan an even bigger donation next year.

—Marge Hunt, Prescott Area Woodturners

For more on the Empty Bowls Project, visit emptybowls.net.



One chapter's generous donation to Empty Bowls, due in part to a donation of bowl blanks from North Woods Figured Woods of Gaston, Oregon.





#### The Story of Krishnasamy

Turners Without Borders (TWB) began as an AAW

international outreach to countries where we felt we could foster the growth of turning. I want to tell a story that shows how woodturning can transcend all kinds of borders: language, culture, gender, distance, and more. It can create friendships between people who would never otherwise meet and who have little in common other than that fascinating piece of wood spinning on a lathe.

To fully understand this story, we need to picture what it is like for a hopeful turner in many countries: there is often no machinery store nearby, no tool suppliers, no local network to offer support, no dedicated wood suppliers. Even if he or she can access the Internet to buy international goods, prices for many are prohibitive. I have heard many stories like this, but none more moving than the story of Krishnasamy Muthusamy.

#### Correspondence

In late 2014, I received an email from Krishnasamy explaining that he was an amateur turner who had made his own lathe, but he was unable to make a tailstock. He wanted to know if there was some way TWB could help. I was deep in the mountains of China demonstrating on behalf of TWB, so by the time I was able to reply, he wrote to say he had already solved the problem. I was already impressed. A summary of our correspon-

dence since then shows why this gentle and polite man has moved me so much: Hi Terry, Sorry for bothering, now I've access to my

Some of Krishnasamy's early attempts at turning.



nephew's metal lathe, so I am confident I can fabricate the tailstock. Thanks for your genuine involvement. I've a passion for the wood lathe and plan to help those who really love woodturning and create a group.

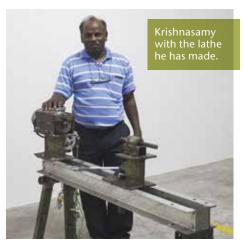
When I asked if there was any other way we could help, he said he had trouble getting a chuck and couldn't make one. I asked what thread size he would need, and he replied: I'll do any modifications to fit the chuck. I don't follow any standards, as I do it myself with improvised materials.

Krishnasamy sent me links to videos of traditional turners in India using ancient techniques to craft musical instruments. This excited me very much, as I am always searching for new details of the history of turning. When I told him how much it meant to me to receive such information, he wrote: I'm really moved by your words. I think we can promote international friendship through woodturning.

Through this email conversation, I learned that Krishnasamy (58) is an Indian living in Malaysia. He started woodturning in 1979 and continued till 1983 with an improvised lathe. After thirty years without turning, he has built a lathe again. He wrote: There are no words to explain how I am obsessed with the lathe and turning. To learn more, I watched many videos on the Internet. I had watched you demonstrate turning to the Chinese and explain what you think about woodturning, but I didn't realise it was you! Friend, nobody could have explained better. Every word you said is perfectly true.

Inspired by his enthusiasm, I asked Phil McDonald, AAW's Executive Director, to send some *American Woodturner* journals to Krishnasamy in the hope that they would inspire him further.

I asked him to tell me his full turning story. He wrote: I have to bring back the sweet memories to tell the full story. I can't explain how happy I was when I first used my lathe. Tears rolled down my face, I was jumping and dancing, and I called my friends to show them.



I learned that Krishnasamy's father came to Malaysia from India to work on a rubber plantation. There he married and had nine children. During his childhood, Krishnasamy lived in plantation quarters and later worked as a palm-oil harvester (a tough, dangerous job with many injuries and encounters with cobras) while getting his high school education. He continued: One day, the Government Information Department showed a film to us in an open field. It was about making tops on a pole lathe. I was amazed and it inspired me to build my first basic pole lathe. Unfortunately, it failed. I was undaunted and built another lathe from bicycle parts and powered it with a sewing-machine motor. I turned my first wood and it came out beautifully—I even drew crowds. It sounds crazy, but I hugged and slept with the turned wood!

The bicycle parts were not strong enough for longer and larger wood, so I planned to build a workable lathe. I didn't have a job but, with help, was able to raise enough money for a used truck chassis for the lathe bed, a single-phase motor, and bearings. I turned three dining table sets and eight table legs for the estate managers. I built dining sets for my friends free of charge. They are still my best friends.

By 2013, I owned power tools like a drill and an angle grinder and had gained enough electrical and mechanical knowledge to build a better lathe. I bought 4" (10cm) galvanised metal for the headstock, and a kind lady gave me 30mmdia. steel for the shaft. Now I have completed the headstock, toolrest, and tailstock, and the lathe is powered by a washing-machine motor.

It's not finished yet, but it works. I can't afford to own turning tools or a chuck, so I use carpentry chisels. I am learning from the AAW magazines you sent, and every day I Google for hours to indulge in woodturning videos.

Thank you for your genuine intentions to help me. I'm nobody to you, yet you still want to help me. I believe I'll be your friend forever.

#### **Outreach opportunity**

AAW has already sent Krishnasamy a set of spindle gouges from the Tool Bank (see Sidebar) and books on basic turning. But I hope you will agree we have even more to offer. The generosity of AAW members always amazes me, so let's reach out to this gentle man and offer support. Even small donations of money will help, and any equipment, such as a chuck, will be welcome. Maybe an AAW chapter would like to adopt Krishnasamy as their special friend and assist him directly? We will follow his story and let everyone know what he has done with this assistance. If you would like to help, please contact Louis Vadeboncoeur, Chair of TWB, at louis.vadeboncoeur@gmail.com.

—Terry Martin

# AAW Tool Bank in Action

The Tool Bank is another AAW success story. Each year, members bring unwanted tools to the annual symposium to be used for local and international outreach. This initiative has been running for three years, and donations have grown every year. This year in Pittsburgh, members donated a remarkable 282 tools. Since the beginning, the Minnesota Woodturners Association, an AAW chapter, has taken care of these tools, rehandling as needed, shaping, and sharpening. Many thanks are owed to them. If you have tools you don't use, please consider bringing them to the Atlanta Symposium in 2016; those unable to attend can send tools to the AAW office in Saint Paul, Minnesota. Once again, thanks to the AAW family for their generosity.

#### **Betty Scarpino Receives CWA Award**

Betty J. Scarpino has received the 2015 Lifetime Achievement Award from the Collectors of Wood Art (CWA). She was chosen as the 15<sup>th</sup> winner of the award by CWA's board of directors in recognition of her more than thirty years of contributions to the wood art field as an artist, teacher, editor, writer, and strong advocate/role model for women in the field.

Scarpino has always had an influential presence among wood artists. Her emphasis on sculptural lines and form over material in the 1990s was often cause for debate. Her work is now represented in the permanent collections of more than twenty museums.

She became a sought-after demonstrator as the field grew. As a woman, she was not always welcomed in a maledominated world but soon gained respect when her vast knowledge and experience became evident. Her familiarity with tool and technique came from a degree in industrial arts from the University of Missouri and a subsequent job as supervisor of the university's craft studio.

Her stature grew during her tenure as editor of *American Woodturner*. Her recent years as editor (2009–2014) were especially challenging, as escalating production costs and pressure to switch to digital format prompted the AAW board of directors to question many aspects of the publication. She was also faced with the ongoing challenge of balancing journal content for an increasingly varied audience.

Jean LeGwin, Chair of AAW's publications committee, said, "Because Betty is both a working artist and an excellent editor, she brought a unique mix of experience and qualities that few can match. Her extensive knowledge of the woodturning community gave her a special perspective in handling pressure coming from different directions and dramatically improved the excellence of the journal."

Since stepping down as editor, Scarpino has returned to working in



**Betty Scarpino,** River of Decisions, 2004, Sycamore, 8' (2.4m) tall

Collection of Rhonda Fox Waltz and Kevin Waltz

her studio and has been in demand once again as a demonstrator.

Albert LeCoff, Executive Director of the Center for Art in Wood, noted, "Betty's work always stood out because she is a sculptor who works with a lathe. Her work is not vessel-based, but more about lines and form with the containment of a thought. There is no singular point of focus, but multiple compositions within one piece."

"We've seen her go from artist to teacher to writer to editor and now back to artist," LeCoff continued. "I can't think of anyone who has had such a profound effect on woodturning and wood art in so many areas. She is truly deserving of this award."

For more on Collectors of Wood Art, visit collectors of wood art. org.

—Dave Long



#### Second French Collaboration Seminar a Success

The second French collaboration seminar, "Art and Material," was held in June 2015 at the Escoulen woodturning school in Aiguines. Collaboration seminars like this started more than twenty years ago. I am not surprised the idea started with woodturners, as they are known for their openness to the world.

The idea is to bring together artists and craftspeople in a beautiful place to exchange and create pieces over a one-week period. Attendees have nothing to do but create, exchange, play, and try new things. The event was coordinated with AFTAB (the French association for the Turning of Art in Wood) and Ateliers d'Art de France (French Organization of Professional Arts and Crafts).

We accepted fifty people from all disciplines of craft and art. This year,

we had two glass blowers, a bronze caster, an archeologist/paleontologist interested in early tool-carving methods, and a man with a 3-D printer making little resin forms to be cast in silver or bronze. There were also many woodturners, of course. Everyone was asked to bring any materials they could gather, so we had a lot of resources such as bones. exotic woods, industrial items, metal pieces, guitars, and other odd items.

The event brought five days of wonder for fifty artists discovering the collective way of creating. They produced 180 pieces, which were sold in a live auction to help finance the event.



Artists from around the world gathered in Aiguines, France, to share ideas, materials, and creative energy.

Photo: F.X. Boisserie

Look for more information about our event in June 2017.

-Alain Mailland

For more, visit aftab-asso.com and escoulen.com.

# DVD Review: Sea Urchin Ornaments and Fine Spindle Turning, by Ashley Harwood

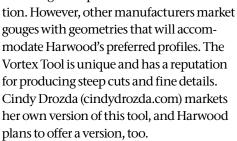
If you are new to the challenges of finely crafted spindles or want to expand your skills, finding a native guide—someone who has mastered the technique—will ease you over the learning curve. Enter Ashley Harwood; one look at her urchin ornaments will assure you that you will be in good hands. Based in Charleston, South Carolina, Harwood received a fine arts degree before adopting the lathe as her primary tool for creative expression. She also apprenticed with and taught for turner and toolmaker Stuart Batty prior to opening her own studio where she now teaches, creates, and turns full time.

Harwood shares her spindle-turning expertise and demonstrates her comfortable teaching style in her first video release. In a little over an hour, she effectively covers a lot of ground. Topics include safety, tool sharpening to replicate the profiles her technique requires,

prepping the urchin shell for the ornament, prepping blanks for chucking, shaping, sanding, finishing, and project assembly. The tool-handling skills and cuts employed to complete the demonstration project are also well explained in one of the stand-alone video chapters. These techniques are shown on a relatively large blank, making the tool presentation easy to see. Each step is enhanced by excellent camera work that captures the nuances of Harwood's tool handling. High production values featuring clear, close video capture and clean sound effectively convey Harwood's message and make the DVD a pleasure to watch.

Harwood employs SB Tools throughout the video, using only three gouges to achieve her remarkable results—a ¼" (6mm) detail spindle gouge, a ½" (13mm) bowl gouge, and a Vortex Tool. Viewers wishing to precisely duplicate her tool

choices will be challenged because SB Tools is no longer in opera-



I can recommend this DVD as an addition to your library without reservation, although I do wish the subject of design was covered in this otherwise thorough offering. Harwood's urchin ornaments are exquisite. Some guidance on aesthetics could point turners down the path to achieving their own designs. We will all have to crowd into Harwood's next demonstration for that piece of insight.

—Don McIvor



# Calendar of Events February issue deadline: December 15

Send information to editor@woodturner.org. For a more complete listing, see the AAW's Woodturning Calendar online at tiny.cc/AAWCalendar.

#### **Australia**

March 18–20, 2016, Turnfest Australia, SeaWorld Resort, Gold Coast, Queensland. An Australian international woodturning symposium, featuring demonstrators Mike Lee, John Jordan, Cynthia Gibson, John Wessels, Tom Wirsing, Chris Pytlik, Guilio Marcolongo, Vaughn Richmond, Richard Raffan, Neil and Liz Scobie, Neil Turner, Marilyn Kunde, and Helen Toms. For more, visit turnfest.com.au.

#### Canada

March 19, 20, 2016, The 11th Annual Matisho Memorial Woodturning for Cancer Research Benefit, Menno Industries, Waldheim, Saskatchewan. Share woodturning skills while raising money to support the Canadian Cancer Society. We encourage other turning clubs to host an event that supports your local or national cancer agency. For more, visit turnersforcancerresearch.org or contact Glen Friesen at glenfriesen@sasktel.net.

July 22–24, 2016, Saskatchewan Woodturning Symposium, Regina Trades and Skills Centre, Regina. Hosted by South Saskatchewan Woodturning Guild, featured demonstrators to include David Ellsworth, J. Paul Fennell, Jacques Vesery, Cam Merkle, Bernie Bober, and other regional turners. Registration includes all workshops, wine and cheese, two lunches, and one dinner. There will also be vendors, an auction on Sunday, and an instant gallery. For more, visit southsaskwoodturners.ca.

#### Arizona

February 26–28, 2016, The 7<sup>th</sup> Biennial Desert Woodturning Roundup, Mesa Convention Center, Mesa. Symposium will have a large vendor area, instant gallery, and banquet with live and silent auctions. Vendor area and instant gallery open to the public. Lead demonstrators to include Glenn Lucas, Curt Theobald, John Beaver, Betty Scarpino, Rex Burningham, Andi Wolfe, Art Liestman, and Jason Clark. For more, visit desertwoodturningroundup.com.

#### **Florida**

February 5–7, 2016, Florida Woodturning Symposium, Lake Yale Baptist Conference Center, Leesburg. Featured demonstrators to include John Beaver, Jimmy Clewes, Ashley Harwood, Joe Ruminski, Andy Cole, Al Hockenbery, Rudolph Lopez, and Walt Wager. For more, visit floridawoodturningsymposium.com.

#### Hawaii

March 12, 13, 2016, Honolulu Woodturners' 7th Annual Symposium, MRC Woodturning Center, Honolulu. Featured demonstrators

will be Cynthia Gibson and Cliff Johns. For more, visit honoluluwoodturners.org.

#### Idaho

February 27, 28, 2016, Idaho Artistry in Wood Show, Wyndham Garden Boise Airport Hotel and Conference Center, Boise. Competitors from all skill levels, novice to expert, can submit their carving, turning, scroll work, fine woodworking, marquetry, intarsia, and gourd art for competition and public display. For more, visit idahoartistryinwood.org.

#### Illinois

July 22–24, 2016, Turn-On! Chicago 2016 Symposium, sponsored by the Chicago Woodturners, The Conference Center at the University of Saint Mary of the Lake, Mundelein. Featured demonstrators will include Nick Agar, Rex Burningham, Robin Costelle, Steven Hatcher, Clay Foster, Frank Kobilsek, Rob Nelson, Graeme Priddle, Mark Sfirri, Mark St. Leger, Rob Wallace, and Molly Winton. Also featuring hands-on pen turning, a tradeshow, meals, a banquet, and an auction. For more, visit turnonchicago.com. Online registration opens January 1, 2016.

#### Massachusetts

March 12–June 12, 2016, Visions from the Lathe: Selections from the Massachusetts South Shore Woodturners (SSW), Fuller Craft Museum, Brockton. Exhibition featuring more than thirty-five works from SSW, an AAW chapter. The Museum will also host workshops, demos, and events in conjunction with the exhibition. For more, visit fullercraft.org.

#### Minnesota

Ongoing exhibit: "Touch This!" featuring fascinating facts about wood and woodturning, as well as pieces you can touch. For more, visit galleryofwoodart.org.

#### **New York**

April 2, 3, 2016, 13<sup>th</sup> Annual Totally Turning Symposium, hosted by the Adirondack Woodturners Association (AWA), Saratoga Springs City Center, Saratoga Springs. Featured demonstrators will be Glenn Lucas, Hans Weissflog, Jimmy Clewes, Binh Pho, Stuart Batty, Steve Sinner, Derek Weidman, Kurt Hertzog, and Linda Ferber. For more, visit totallyturning.com.

Pennsylvania

December 5, 2015–January 30, 2016, Wayne Art Center's 21st annual *Craft Forms*, Davenport Gallery, Wayne. An international, juried exhibition of fine contemporary craft. In the Ethel Sergeant Clark Smith Gallery, a companion exhibition, *Emergence: Craft + Technology*, will explore the intertwining of digital processes with handmade craft. For more, visit craftforms.org.

September 24, 25, 2016, Mid Atlantic Woodturning Symposium, Lancaster Marriott/Convention Center, Lancaster. Demonstrations by Mike Mahoney, Al Stirt, Binh Pho, Cindy Drozda, Eric Lofstrom, Mark Sfirri, Dennis Fuge, and Kurt Hertzog. Vendor tradeshow, banquet, auction, and instant gallery. Visit mawts. com. Vendors contact Lsherman120@ qmail.com or call 717-478-1845.

#### **Tennessee**

January 29, 30, 2016, Tennessee Association of Woodturners' 28th Annual Woodturning Symposium, Marriott Hotel and Convention Center, Franklin. Featured demonstrators to include Clay Foster, Rudolph Lopez, Glenn Lucas, and Bob Rosand. Event includes two days of demonstrations, an instant gallery, a large, well-stocked vendor area, and Saturday night banquet and auction. For more, visit tnwoodturners.org/ symposium. For vendor information, contact Grant Hitt at voldad18@ comcast.net. For symposium questions, contact Jeff Brockett at symposium@ tnwoodturners.org or 615-973-3336.

#### Virginia

November 5, 6, 2016, Virginia Woodturning Symposium, presented by the Virginia Woodturners (a group of ten Virginia clubs), EXPOland, Fishersville. Featuring international and regional demonstrators. For more, visit virginiawoodturners.com.

#### Washington

March 19, 2016, Northwest Washington Woodturners' 7<sup>th</sup> annual All Day Demo, Anacortes First Baptist Church, Anacortes. Featured demonstrator will be Jimmy Clewes. For more, visit nwwwt.org/ ClewesDemo.pdf or email Donna Holmquist at registration@nwwwt.org.

**Moyu Zhang,** Dance No. 4, 2015, American walnut, acrylic, 90" × 19" × 19" (2.3m × 48cm × 48cm)

An example of work on view at the Wayne Art Center's Craft Forms 2015 exhibition, Wayne, Pennsylvania.

Photo: Elizabeth Torgerson-Lamark



# Tips

#### Nail clipper chatter tool

I like the challenge of making my own tools and recently made a chatter tool using a nail clipper handle as the cutter (*Photo a*). I mounted the "blade" in a hacksaw blade holder and used a thumbscrew for easy adjustment. The cutting edge is ground like a scraper.

When you produce chatter on a workpiece, you are actually skip-scraping,

where the tool leaves the wood intermittently and cuts a decorative pattern. Two key variables are the lathe speed (around 1800 rpm usually works for me) and the amount of blade protruding. Also, chatter work is best done on the endgrain of hardwoods like maple (*Photo b*). You will hear a high-pitched squeal when producing chatter.



This is an easy way to decorate tops, and you can use colored markers to highlight the chatter.

—John Kaner,

Alaska

#### Roughing multiple tubes for gluing

I turn a lot of slimline pens. Since you have to lightly sand the brass tubes before gluing them into your pen blanks, I came up with a setup that allows me to rough several tubes at once. Replace the standard shaft of a compression-type pen mandrel with a ¼" (6mm) steel rod. I made mine the length of my lathe bed to accommodate the maximum number of tubes. Slide the 7mm pen tubes onto the rod and secure the end of



the rod with a pen mandrel saver in the tailstock so it doesn't whip around. Now you are ready to sand many tubes in one setup, turning at a very slow lathe speed.

-Steve Drinkut, Indiana

#### Easy center finder



It is often necessary to know the exact centerpoint on the base of a bowl, particularly when the bowl will be held by a vacuum chuck or mounted on a faceplate. To find the center, I just drop a tight-fitting Forstner bit into the hole in the faceplate or chuck and give it a light tap. The indentation left by the bit's point is the centerpoint. This method also works well if I need to locate a faceplate around an existing centerpoint created by a spur drive. I

just put the Forstner bit in the faceplate's hole and move them until the tip of the bit drops into the center indent created by the spur drive.

-Mark Heatwole, Virginia

#### **Tool cabinet topper**



As with many woodturners, space in my shop is limited. When I replaced my midi-lathe with a full-sized model, I had to find a more efficient way to store turning tools and accessories and still have them readily available.

I picked up a steel, four-drawer tool cabinet at a home center for less than \$100 and, using plywood and pine scraps, built a "topper" for it. The topper holds twenty-four tools and has a  $10" \times 26"$  ( $25\text{cm} \times 66\text{cm}$ ) work surface in front of the tool rack. The cabinet is on wheels, so I can easily move it around the shop if necessary.

The flat base is made of ½" (13mm) plywood, cut to fit inside the cabinet top. The tool rack is 14" (36cm) high and 8" (20cm) deep, with two rows of tool holders. The tool holders were formed by drilling 1¾" (4cm) holes on 2" (5cm) centers in 4"- (10cm-) wide boards, which were then ripped down the middle. I made a ramp, slanted at 20 degrees, for the tool handles to rest on. I used biscuits and dowels for the joinery and finished the topper with spray lacquer.

The topper can just sit on the steel cabinet, but for extra stability I secured it with a couple of carriage bolts.

—Gerald Jensen, Wisconsin

#### **Share your turning ideas!**

If we publish your tip, we'll pay you \$35. Email your tips along with relevant photos or illustrations to editor@woodturner.org.

-Joshua Friend, Editor

# FUN AND EASY Whistle



#### Beth Ireland

simple whistle is a great turning project for all skill levels and ages. It is a project that can be accomplished with few tools and in a short time. I chose the whistle as part of my Turning Around America project (turningaroundamerica.com) after I read that making and using objects of music can cause endorphins to be released in the brain, making us happier. I was skeptical at first, but after teaching literally thousands of people, aged eight

to eighty, how to make a whistle and seeing the thrill they get when producing their first *TOOT*, I am convinced.

A whistle can be made from almost any piece of wood and need not be turned, since the elements required for making a sound are the windway (a hole drilled into the end), the airrestricting/directing fipple plug, and the window where the expended air escapes. But it is fun to shape a whistle on the lathe—and we are turners—so I'll show how to do that.

#### **Planning**

With the method shown here, you can customize the pitch of your whistle: the smaller the diameter of the windway, the higher the pitch will sound. I usually drill a windway hole somewhere between ¼" (6mm) and ½" (13mm) diameter. The sound will also be affected by how deep you drill the windway. Experimentation is the name of the game, so be bold.

The end of the windway at the opening will be half-filled with a small, shaped insert, called a fipple, that will restrict and direct airflow to create sound when you blow into the whistle. You can further adjust the sound by varying the shape and placement of the fipple, but more on that later. I

prepare many whistle blanks at once for Turning Around America, so I keep it simple. I usually drill the windway at 3/8" (10mm) diameter, so I can use standard, premade dowels of that size to make the fipple. An easy way to shape the fipple is to sand it, and a 3/8" dowel is easy for kids to hold and not too big a hole for small mouths to blow.

Ultimately, you can customize the sound of your whistle by making the windway any diameter and depth you want, and you can turn a custom fipple from any wood sized to match. For illustrating this article, I started with a piece of wood %" (22mm) square by 6" (15cm) long, decided on a 3%" diameter windway, and used a piece of 3%" dowel for the fipple.

#### Drill the windway, cut the window

Once you select a blank, the first step is to drill a hole in the end of it. This could be done with a hand drill, but to get the hole as centered as possible for turning, I adapted a wooden handscrew by cutting two notches to accept the whistle blank. I did this on the bandsaw, checking that the blade was 90 degrees to the table. This meant that when I laid the clamp on the drill press table, it would hold my piece at  $\triangleright$ 

#### **Drill the windway**

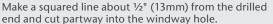


Note the square notches cut into the handscrew—an easy way to secure square blanks for drilling.

#### Cut the window









Draw and cut an angle of about 60 degrees.

#### Turn the whistle



Make a mark slightly beyond the end of your windway hole to avoid turning away too much wood and cutting into the hole.



Turn any profile you like for your whistle. Note the shopmade Morse taper drive (at left) whose stepped tenon fits into the windway hole and drives the workpiece.

#### **Shopmade Morse Taper Drive**

In my woodturning business, I often have to turn things with existing holes such as copper pipe or cabinet parts. I use a shopmade Morse taper jig to mount workpieces with holes on the lathe. It is easy to adapt it to whatever the project requires by turning just the right-sized step, or tenon,



to accept the hole in the workpiece. I often make whistles with different hole sizes, so this Morse taper drive, with stepped diameters from  $\frac{1}{2}$ " down to  $\frac{1}{4}$ ", is perfect for the job.

To make this jig, simply turn a block of dense hardwood scrap between centers and shape a taper to match the Morse taper size in your lathe's headstock. If you have a spur drive or other Morse taper accessory, you can take critical diameters from that and transfer them to your turned Morse taper. Leave a section of cylindrical stock, then form your stepped tenons, sized to various holes in pieces you will be turning.

90 degrees (as long as I started with a square blank). This holding method also works great for drilling pen blanks.

When I make whistles, I start by drilling 2½" (6cm) into the blank. I simply put a piece of tape at the 2½" mark on the drill bit so I know when I am at the right depth (*Photo 1*). I usually drill lots of different lengths, but if you are doing a run of the exact same lengths, you could use the depth stop on your drill press.

After drilling, measure back  $\frac{1}{2}$ " from the drilled end and square a pencil line on the top of your blank. Next, cut that line with a saw (*Photo 2*). When teaching kids, I use a coping saw. It is relatively safe and inexpensive. I saw on the line until I can see the full width of the blade when looking into the hole (*Photo 3*).

Draw an angle of about 60 degrees from the bottom of your cut to the top of the whistle, with the line going away from the drilled end. Cut the angle with a coping saw, backsaw, or bandsaw (*Photo 4*).

When you look into the cut away, the opening, or window, should appear as a fingernail shape. If you see only a little crescent, cut another line next to the one you just cut and go in a little deeper. Next, roll a piece of sandpaper and gently clean out any fuzz without changing the size of the drilled hole.

I like to do all of this drilling and cutting before turning the design at the lathe, as it is easier to mark, measure, and cut from a square blank.

#### Turn the whistle

Mount the whistle blank on the lathe using a shopmade Morse taper drive (see *Sidebar*) and slight tailstock pressure; then turn as you would any spindle. When you have turned the whistle to a cylinder, mark the bottom of the 2½" windway hole, so you know you will not cut into the hole while turning (*Photo 5*). Be sure to round over a comfortable profile at the end where you will blow into the whistle (*Photo 6*).

#### Fit the fipple plug



A fipple made from a short length of 3/8" (10mm) dowel will fit a 3/8" diameter windway. Sand a flat on one side of the fipple.

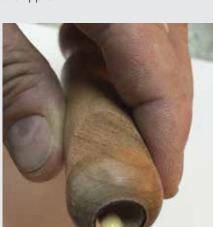


Insert the fipple into the windway, blowing into the whistle to test the pitch. Adjust the sound by varying the depth of the fipple placement. Mark the ideal length.



Glue the fipple into the windway, aligning your mark with the end of the whistle.





A small drop of glue will suffice for securing the fipple.

#### Fit the fipple

The next step is to shape the small fipple plug that will be glued into the windway. I usually start with a 1" (26mm) length of 3/8" dowel (having drilled a 3%" windway hole) so it will be easy to hold while sanding. Sand a flat surface, leaving about two-thirds of the dowel. You can do this by gluing 80-grit abrasive to a scrap of plywood and rub the dowel end to end (Photo 7). If you have a disc sander or belt

sander, it is easy to hold the dowel in a wooden handscrew and touch the workpiece to the sander. The surface you sand must be flat.

The key to the best sound is putting the insert in a little at a time and testing as you go. Notice how the sound changes by varying the placement of the fipple. Blow into the hole until you have achieved the best and loudest sound. If the dowel goes in too far, use a pair of pliers to pull it back

#### **Final cut**



After the glue dries, cut off the excess fipple material and your whistle is completed.

out. Once you find the perfect placement, mark it with a pencil line. Pull out the fipple and put just a drop of wood glue at the edge of the windway opening, then insert the fipple into the windway hole up to your pencil line (Photos 8-10). Note that if you use too much glue, you can clog the hole and it will affect the sound.

When the glue dries, cut off the excess dowel (Photo 11) and you are ready to make some noise!

Beth Ireland is a professional architectural woodturner and sculptor with thirty years of experience. Her company, Beth Ireland WoodTurning, is located in Boston. She teaches the three-month Woodturning Intensive and other workshops at The Center for Furniture Craftsmanship in Maine. For more, visit bethireland.net.

# TURN A SUNCATCHER **ORNAMENT**

Stephen Hatcher

simple turned, lens-shaped the recess, keep the sides and bottom ornament makes a great small roughly square, at least until you gain gift. I make these in the fall a little experience in predicting the for upcoming holiday parties and gift final shape. I use a gouge to remove exchanges. These ornaments are easy most of the material and follow with to make yet quite attractive and fun a square-nose scraper to clean up the both for the maker and recipient. The corners. The final profile will be lensbasic idea is this: turn a simple receptashaped, so the recess corners do not cle in a disc, fill the recess with a sandneed to be exact and the bottom does wich of epoxy and light-catching filler, not need to be truly flat. A little tearout then, after the epoxy cures, turn both on the bottom does not matter, as that sides to shape and expose a window of wood will be turned away later, but try to keep the sides free of large pits.



clear epoxy.

I like to use maple boards with some figure and/or spalting. Any scraps will do, but waxy woods should be avoided, as the epoxy casting may not adhere well to the wood. Mark and cut out the ornament blanks, which should be at least ½" (13mm) thick and 3" (8cm) in diameter (Photo 1).

To start, mount the workpiece and turn a small tenon on one side. I jamchuck the blank between a chuck and the live center of the tailstock. Alternatively, you could mount the blank using a drive spur and live center, a small faceplate with screws or double-sided tape, or a vacuum chuck. Remove the workpiece and use the tenon to remount it in a four-jaw chuck.

Figure 1 shows a cross section of the turning as I make it. When turning



the pieces.

After turning the recess, paint the interior sides. You do not need to paint the bottom, though it won't hurt to get paint on that surface (Photo 2). I use acrylic airbrush paint, applied with a brush because it is what I have and it works fine. On porous woods, the paint may soak in and stain the wood pores, so do a test piece first. If it does stain, seal the wood with diluted epoxy. Other sealers may work, like shellac or sanding sealer, but I have not needed to worry about it as maple has a closed-cell grain structure and the color does not tend to soak in too

Don't worry about any sanding. Do

keep the depth of the recesses on mul-

tiple ornaments the same because you

need to know this depth when shaping



An ornament of turned wood and epoxy with decorative materials embedded lets the sun shine through.

much. Test your woods, paint, and sealers first. The color you choose for the inside walls will be visible when the ornament is finished, so choose a color that will complement your choice of fill material.

Fill the recess about one-half full with epoxy (Photo 3). I use AeroMarine 300/21, as it is thin and clear and creates very few bubbles. West System 105/207 will work, as well as Alumilite, but I prefer AeroMarine because I have a lot of experience with it working well. If the epoxy has bubbles on the top surface, pop them using a butane torch or heat gun. Do not overheat the pieces, as air will bubble out of the wood capillaries into the epoxy and potentially ruin your pour. Heat will also cause the epoxy to cure faster and getting bubbles out will be difficult or impossible. I prefer a quick pass with a butane flame and all the surface bubbles disappear. So practice first. Once you have half-filled the receptacle and the bubbles are eliminated, let the pieces sit in a dust-free area.

After the pieces sit for four to eight hours, the epoxy will stiffen up. At

this time, add a layer of something sparkly or colorful. I have used mica, auto-paint additives, mineral crystals, seashell pieces, and powdered metals. These all work well, but mica is my favorite because it is reflective, translucent, and available in many colors. What does not work well are bits of plants like flowers and cedar boughs, as they float to the top of the epoxy when the second half of the pour is applied. Experiment with different materials. Items that float can be epoxied in with a thin pour that will be allowed to firm up before the next step.

When the decorative materials are placed, pour more epoxy to fill the recess completely. Sometimes the materials will shift during the second pour, but you can straighten them using a toothpick or equivalent (*Photo 4*). If a few pieces float to the top of this second pour, don't worry—they will be sanded off later.

Leave the cast pieces to cure fully, about a week. It will be easier to turn and sand the epoxy when it is fully cured. Epoxy that is partly cured will not take a good finish.

#### Turn the front face

Remount the ornament blank by holding the tenon in a four-jaw chuck. Turn the face of the ornament using a regular gouge on the wood ▶

# Materials and dimensions I prefer to lay out and cut several ornament blanks to have plenty on hand for the holidays.

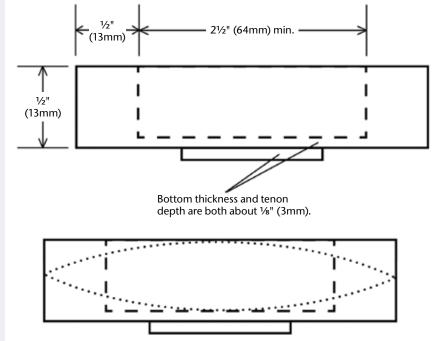


Figure 1. Cross section of ornament blank showing lens-shaped profile (dotted lines).

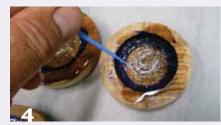
#### Paint, pour, fill



Paint the inside walls of the recess. Any paint on the recess bottom will be turned away later.



Pour epoxy into the recess until it is half-full.



Add decorative elements such as mica, then complete the epoxy pour to the top, trapping the sparkly materials inside what will become a translucent window. Reposition errant pieces with a small pick or brush.



and a small negative-rake scraper on the epoxy. To learn more about using negative-rake scrapers, see Journal Archive Connection (at right). If you try to turn the cured epoxy with a gouge or regular scraper, it will chip.

First, remove wood using a gouge to one-half the depth of the recess (remembering that there is about ½", or 3mm, of wood in the bottom). Follow with the negative-rake scraper on the epoxy section. The completed rough profile is convex in this example but can have other

profiles according to your own design (*Photos 5–7*).

Turning epoxy with a negative-rake scraper can get messy, but it is fun. I turn from the center to the edge with light cuts. Though *Figure 1* shows the ornament having a double-convex, or lens, shape, you can vary the profile greatly. I have made ripples like a stone in water and it looks great, but it is a little harder to sand. For Christmas ornaments, making the epoxy concave will make them lighter and also looks great.

### JOURNAL ARCHIVE CONNECTION

See Stuart Batty's informative article on negative rake scrapers in American Woodturner vol 21 no 1, page 24. The journal archives can be found at woodturner.org.



After turning, sand the face to 1,000-plus grit abrasive. I use a soft, 5" (13cm) sanding pad. (Handy Tip: 5" sanding discs are less expensive than many 3", or 8cm, sanding discs and after wearing out can be cut down to 3" and used at the smaller size.) For more complicated surfaces like the rippled effect I mentioned, I use handheld abrasives. The epoxy sands easily, so power sanding is not essential.

I use a small, diamond-tip parting tool to add detail lines to the face and a chatter tool to add a decorative band on the epoxy (*Photo 8*).

#### Turn the opposite side

Reverse-mount the ornament to complete the opposite side. I use the live center contact mark to align the piece to a vacuum chuck (*Photo 9*). If

#### Turn one face



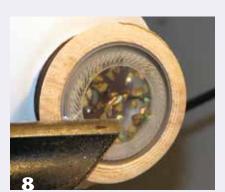
Turn away wood with a gouge, beginning to shape the convex face to half the depth of the recess.



Use a negative-rake scraper to turn the epoxy window. Don't worry, it will be well worth the stringy mess.



The finished convex shape of one side of the ornament.



Sand smooth, then add decorative lines and chatterwork.

you don't have a vacuum chuck, you can reverse the ornament and place it against a pad, using the live center to position it (*Photo 10*). An internal jam chuck will not work because the edge of the ornament must be accessible during turning and sanding. My pad is a piece of rubber floor matting, but foam or a folded rag will also work. It just needs to securely hold the work when lightly compressed by the tailstock.

With the workpiece remounted, turn, sand, and accent the back face, just as you did the first side. On this side, you will be turning away the tenon and through the bottom layer of wood to expose the epoxy. First make a gouge cut on the wood, then scrape the epoxy, sand, and add the chatterwork.

If you have remounted the workpiece using the live center (as shown in Photo 11), a small nub will remain after turning. You can remove this nub using a small, firm sanding attachment chucked in a drill press. This step is a little awkward at first, but it is a technique I use in making my more complicated pieces like teapots—it gets easier with practice. Carefully remove most of the wood with 80-grit abrasive, then jump to 180 grit, and finally 400. The idea is to use the higher grits to remove the last of the wood so the sanding is minimally aggressive. Move the work smoothly under the sanding pad and you can get excellent results (Photo 12). Watch your fingers, as the abrasive edge will give a nasty cut.

#### Add color and finish

To give the wood and chatterwork some color, I airbrush on a TransTint® dye, then wipe off the excess. You can use a rag as well. The dye will not color the epoxy but it will adhere in the chatterwork and gives the piece a nice accent. Then

#### On the flip side



Reverse-mount the ornament so you can turn the opposite side. I like to do this with my vacuum chuck, using the live center for alignment.



An alternative to the vacuum chuck: press the workpiece with the tailstock live center against a soft pad held in a chuck.



Turn away the tenon and bottom layer of wood. With the tailstock in place, a nub will remain that cannot be turned away. Here, I left a large nub, but it can be much smaller if you use a cone on the live center.



Sand away the nub using a sanding attachment chucked in a drill press.

I airbrush brass powder or Pearl Ex powder pigments mixed with wax-free shellac over the color for a bit of sparkle. If you don't have a vacuum chuck, you can complete this step by freestyle spraying the edge. It actually looks really good when the airbrushed accents are uneven and of mixed colors.

For a final finish, I use lacquer, but any number of options will work, including a clear acrylic finish in an aerosol can. With this type of finish, use a light coat and stop there. More coats cause a buildup of orange-peel surface that distracts from the beauty of the

ornament. Experiment with your favorite finish.

Add a ribbon to hang the ornament, and you've got a unique, light-dazzling gift to share with someone special.

Stephen Hatcher has been an avid woodturner since 1998. You can learn more about his artwork and techniques at stephenhatcher.com.



# OFF-KILTER ORNAMENT STAND

Ashley Harwood

am finishing up my seventh year demonstrating

and selling my turned work at the Charleston

Farmer's Market, which runs every Saturday from

April until Christmas. Toward the end of my first year, I began making sea urchin ornaments and found they were very popular not only during the holidays, but all year long. One of the benefits of selling directly to my customers is that I am able to see what is appealing and why. I can see which objects people are attracted to, which they care for less, and how they interact with my work.

One of the most challenging aspects of this business model is educating the general public.

Aside from breaking the assumptions that I buy finials and seashells at my local craft store and glue them together, I get questions

"What is this?" or "What do I do with it?" Usually, when I say it is an ornament, they say, "Oh, like a Christmas ornament?" That's my opening to explain that most people keep them out all year.

Then I have to meet the challenge of providing a vision for my customers of where this decoration might

fit in their home. It was an issue so often that I knew I needed to design a stand that could be purchased with the ornament. However, it had to be inexpen-

sive, quick to make using scrap wood, and hold up against the elegance of the urchin ornaments and my general aesthetic sense. Three years later, I finally came up with the right design.

The idea is to turn a shape similar to a cone, wide end down, but with a sweeping, concave profile. To get the off-kilter effect, simply cut an angle after turning so that when the stand is sitting upon a surface, its top end is no longer pointed straight up. Fishing weights in the bottom keep it stable, and a long, shaped wire provides a loop from which to hang your favorite ornament.

#### **Gather materials**

You will need a piece of dry wood 2" (5cm) thick, 3½" (9cm) wide, and 3½" long. I have used walnut, oak, cherry, maple, and mahogany. You will need wire for the stem—I use galvanized wire from the hardware store. Mine is 12-gauge, but 14-gauge would work fine, too. You will also need wood glue, fishing weights (¼-ounce and ½-ounce), and a drill bit that matches the size of your wire along with a drill chuck or pin vise to hold it.

For the turning, I use a ½" (13mm) bowl gouge, a ½" spindle gouge, and a scroll chuck with dovetail jaws.

#### **Bore two holes**

Mark the centers of both ends of your ornament stand blank, and mount it between centers with the grain running parallel to the lathe bed. Turn a tenon on one end, but leave the rest of the block square. It's really important to have a secure and accurate tenon for this turning. I recommend a slightly undercut shoulder for the tenon, so the edges of the shoulder sit flush on the face of the chuck jaws.

Mount the block in the chuck. You will need to bore a ½"-diameter hole into the end of the workpiece ½" (6cm) inches deep. Following is how I drill a hole with a spindle gouge, but if you are uncomfortable using this method, you can always use a drill bit instead.

You can use a piece of tape on the spindle gouge to mark your depth. You must have the toolrest perpendicular to the lathe, and it must be at a height so that the center of your tool is exactly at the center of your workpiece when you hold the handle level. If your toolrest is too high, this cut won't work.

When boring a hole with a spindle gouge, it is important to "find your cut." If you stick the cutting edge of your tool straight into the endgrain, you will get a catch. Start with the flute facing away from the wood with the back side of the bevel just touching and your left hand holding the tool firmly on the toolrest (*Photo 1*). Slowly swing the handle away from you to find where the gouge barely starts cutting. Now start to push toward

like,

#### Drill weight cavity with spindle gouge







It is easy and to bore holes with a spindle gouge, but don't start by pushing straight into endgrain. Begin with the flute facing away from the wood, not cutting, and swing the tool handle until the cutting edge just engages the wood. Cut toward the center, gradually swinging the handle away from you until it is parallel with the lathe, then push straight in to bore the hole.

the center of the wood while gradually swinging the handle out more and more until your spindle gouge is parallel to the lathe and pointed into the center of your block. Then push straight in to your depth (*Photos 2, 3*).

Turn a second tenon on the end where you just bored the hole, then remount the workpiece using this tenon. Now drill a small hole for your wire. If you have an indentation from the point of your drive center, cut this away first and create a new, clean, and precise indentation for your drill bit. For this, I use a vortex tool (*Photo 4*). Using either a handheld pin vise with your drill bit, as shown in *Photo 5*, or a drill chuck mounted in your tailstock, drill the hole. It will most likely meet up with the hole you previously bored from the other side of the workpiece, and that's okay.

#### **Turn the curve**

The next step is to cut a concave profile that starts just above the bottom corner of your block and continues up to the hole that you created for your wire. The bottom of the block will still be square, so you will need to use good cutting technique to start the cut cleanly. For these shaping cuts, I use a bowl gouge with an elliptical flute and a 40°/40° grind. As shown in the *Sidebar*, both the bevel angle and wing angle relative to the tool's shaft are 40°, and the wing is kept straight. I teach this grind in all ▶

#### Drill for the wire





Before drilling the small hole for the wire (at right, with a handheld pin vise), make an indentation to keep the bit from wandering.

#### Bowl Gouge with 40°/40° Grind

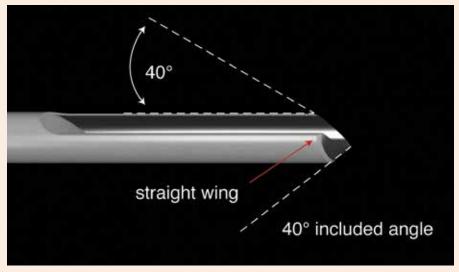


Figure 1. The 40°/40° grind, shown here on a bowl gouge with an elliptical-shaped flute. Both the bevel and the straight wings (cutting edges) are at 40° to the tool's shaft. This grind works well for spindle and bowl turning and is integral to the techniques I teach.

#### Turn the curve







Shape a sweeping curve from bottom to top. A 40°/40° bowl gouge works well for this task.

my demos and classes, as it is integral to the push-cutting style I use.

Starting with the corner at the tailstock end of your blank and working back toward the headstock, turn down the waste wood in steps to create a rough shape (Photo 6). Then make the concave cut (*Photos 7, 8*). This push cut starts with the flute closed and the tool handle level. Your right hand simultaneously pushes the gouge into the wood, swings the handle from right to left (passing in front of your body), and twists the flute open as you make your way toward the small hole at the end. Your left hand should only be holding the tool down on the toolrest and squeezing the tool at the end of the cut so you don't lunge off, which would tear out the unsupported wood fibers.

Body position and motion are important. You should be standing with your right foot forward and your left foot back. This will allow you to shift your weight from right to left without having





Cut a new, angled bottom for your stand, which will make it sit off-kilter. Masking tape minimizes tearout from the cut.

to move your feet during the cut, which could disrupt the smooth curve you are trying to achieve. As you make this curve, cutting from left to right, the tool handle will pass in front of your body. Beginning with the stance I have described will help you get your body out of the way while maintaining balance and control.

Be careful to leave enough material around the hole for your wire so that the wood doesn't split (about 2mm surrounding the hole works for me). Now sand your workpiece and remove it from the lathe.

#### **Cut the bottom**

Visualize the angled line you will cut to make the stand sit off-kilter and apply masking tape around your piece to minimize splintering. Now lay the workpiece on its side on your bandsaw table and find a scrap of wood that fits under the narrow end for support. Push both pieces of wood through together to create a new, angled bottom (*Photo 9*). I choose to use the bandsaw to reduce production time, but you could use a handsaw while the piece is still mounted on the lathe. I usually make a quick job of sanding around the sawn edges with a bit of 150-grit abrasive.

#### Finish and add weight

Next, apply your choice of finish. I use a walnut-oil-based microcrystalline wax—just rub it on with a paper towel and buff it to a nice luster.

Now prop the stand upside down and add fishing weights into the ½"-diameter

hole that you bored earlier. I use as many as I can fit, as long as they don't stick out from the flat base. Then I mix a little sawdust and wood glue and cover the fishing weights. If this hole is connected to the smaller hole at the other end, be careful that your wood glue doesn't drip into the smaller wire hole down below.

#### Bend and insert the wire

To get a nice, smooth curve on the wire, you will need to bend it around something. I use the pulleys on my old Oliver lathe (the perfect range of sizes!). You could use a flowerpot, garbage can, or anything else that is sturdy, round, and the right size for your curve. Once the larger curve is in the wire, I bend the end around a 3/8"- (10mm-) diameter tool shaft for the little loop at the end. Clip off any extra.

Cut the wire to a length that allows your ornament to hang close to and directly over the wooden part of your stand. This creates a better center of gravity. Lastly, insert the wire into your wooden stand. I don't usually have a need for glue here, but it wouldn't hurt.

Now you've got a classy, off-kilter stand for your favorite ornament.

Before pursuing a career as a woodturner, Ashley Harwood studied glassblowing, neon making, and sculpture and installation art, for which she received a BFA from Carnegie Mellon. She teaches woodturning at her studio in Charleston, South Carolina, and has demonstrated in a number of professional venues throughout the U.S. and abroad. For more, visit ashleyharwood.net.

# ROUGHING BETWEEN CENTERS David Ellsworth

im Duxbury's journal article, "Spur Drive Seating Tool" (AW vol 30, no 5), offered an effective way to seat a spur drive in a bowl blank without damaging the Morse taper. His article also prompted questions about the safety of using a spur drive for roughing bowls. Is it better to opt for a screw chuck, faceplate, or glueblock rather than a spur drive? Is a bowl blank more likely to fly off the lathe if a catch occurs when a spur drive is in use? I have used spur drives exclusively for forty years because they offer an important advantage: the ability to fine-tune the position of your workpiece during roughing. They are safe to use if you know and follow the safety precautions.

#### Adjustability

When roughing a bowl blank, every cut exposes more information about the material, specifically grain layout in relation to the orientation of the object as it will appear once completed. When working between centers, you can adjust and re-adjust the object's axis points relative to what you have learned while roughing. Whether it's adjusting the height of the tips of a natural edge bowl or making subtle changes in the position of newly exposed grain lines, these adjustments affect the design and can help you make a great bowl instead of just a pretty bowl. Once you are happy with the position of your blank between centers, you can cut the base of the form to accommodate a chuck, faceplate, or glueblock.

The same benefit holds true for offcenter spindle work using dry wood. You are in constant control of the early stages of the design process. Working between centers allows you to make changes as you develop the form, which is not possible with other holding methods.

#### Safety considerations

There are three main safety concerns when using a spur drive:

1) **Tailstock pressure.** Drive centers work by trapping the wood between the blades of the headstock-mounted drive center and the tailstock live center. But what happens if the operator doesn't keep enough pressure on the wood to engage the blades? Or what happens when you get a catch? With a four-prong spur or safety center, the object will likely stop spinning but remain on the lathe while the spur continues to spin. The teeth of a shallowfluted spur drive will almost always spin in the wood even without a catch.





shallow-fluted, four-prong center (spindles, bowls, dry wood); deep-fluted, four-prong spur drive (spindles, bowls, vessels, green or dry wood); circle drive (spindles, bowls, dry wood); 2", four-prong spur drive w/ removable blades and point (large bowls, vessels, green or dry wood).



You can rough out a moderately large form (either green or dry wood) with just a 1" (25mm) deep-fluted, four-prong spur drive without fear of losing the piece.

"nibbling" with the tip of the gouge or scraper. If you get a catch, the shock to the object will cause the spur to spin and begin drilling a hole in the wood. Also, the flutes of the drive will clog and the blades will no longer engage the wood.

3) The right spur for the job. A fourprong spur is safer than a two-prong drive. Having only two prongs increases the likelihood of the blades slipping sideways with inadequate tailstock pressure and the wood being thrown off the lathe.

When working with extremely large chunks of wood, use a larger, 2"- (5cm-) diameter, four-blade spur drive.

It is likely spur drives have been in use for millennia. Imagine someone spinning a stick in wood to make fire and the stick grabbing and spinning the wood. Add a reliable bite in the wood, and you have a modern spur drive. Bottom line, don't miss out on this useful, timehonored process of roughing between centers, but always know and follow the safety considerations.

David Ellsworth is a full-time studio woodturner and teacher living in Buck's County, Pennsylvania. He can be reached at david.ellsworth3@gmail.com.

# Small-Lathe TRANSPORTER

Walt Thies

hen I upgraded my traveling lathe to a midi-sized machine, the increased length and weight made it hard to lift onto a work surface or carry across a parking lot. So I created a kind of double-ended wheelbarrow that can make any small wood lathe portable. I also use the transporter for other heavy tools, such as my bench grinder.

My lathe is bolted to a tray that catches chips and holds an optional safety shield. The tray also provides handholds for positioning and stability while the lathe is in use. The transporter is a frame with wheels on one end and a roller on the other. The tray is bolted to and hangs under the transporter. This system allows one person to move the tray and lathe into or out of a vehicle and onto or off of a work surface. You never need to lift the entire weight of the lathe.



#### **Construction notes**

You can buy the materials for the transporter at a hardware store or home center. Adjust the dimensions given here to fit your lathe, vehicle, and work surface. Construct the transporter to be free of rough edges and exposed metal that can scratch a person, work surface, or vehicle interior.

#### Tray and rails

My lathe tray, as shown in *Photo 1*, measures 39"  $\times$  18½" (1m  $\times$  0.5m). The transporter is sized so that its rails rest on the long edges of the tray. All trays used with this transporter are the same width. The transporter's rails are 1½" (38mm) aluminum angle, ½" (3mm) thick, bolted to two wood crosspieces, each held by four bolts; this is important for providing rigidity and keeping the rails parallel and the axle in its supports. The rails should be long enough to accommodate your longest tray. I painted the rails to avoid having aluminum oxide rub onto other surfaces.

#### **Axle and wheels**

Eye bolts hold the axle in place (*Photo 2*). I spaced the wheels about 24" (61cm) apart, which is narrow enough to get through doors but wide enough for good stability. To avoid scratching other objects, mount the wheels so that the axle does not extend past the outside face of the wheel. Position the tray so the headstock of the lathe is near the wheels to keep the center of gravity low when using the transporter.

#### **PVC roller and supports**

Using this lathe transporter means you'll never have to lift the entire weight of the lathe.

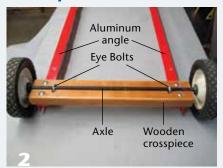
The roller is made from 3" (8cm) PVC pipe (which has an inside diameter of 3" and an outside diameter of 3½", or 9cm). Two turned wooden plugs 4" (10cm) long with a centered hole serve as axle bearings. The plugs are sized to fit into the ends of the PVC roller and have a small flange at the outside edge to limit penetration. The axle runs through the PVC pipe and wooden plugs and is captured in a blind hole in each of the L-shaped roller supports (*Photo* 3). As shown in *Photo 4*, the holes for the axle must be positioned so that the roller does not contact the work surface when the lathe is in use or when the support bracket is supporting the transporter; otherwise, the transporter may move unexpectedly, causing more excitement than you want. Since the exterior radius of the roller is 13/4" (44mm), the axle hole must be positioned less than 13/4" from the end (mine are at 11/2", or 38mm) of the L-shaped support so that the roller protrudes and can touch the surface when the wheeled end is lifted. And the holes must be positioned higher than 1¾" from the work surface (mine are 2" or 5cm), when the support bracket is on it.

To achieve maximum grip on a work surface, the included angle between the two legs of the roller support should be greater than 90 degrees (*Photo 4*).

### Combining tray and transporter

Bolt the lathe (or other heavy tool) to a tray that it will remain on by running bolts up from the underside of the tray to

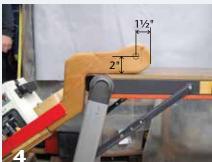
#### **Transporter**



Wheel, axle, and rail assembly using commonly available parts.



Wooden plugs with centered through-holes act as axle bearings and fit into each end of the roller. Blind holes in the supports hold the axle. The aluminum angle rails (red) are bolted to the supports and a crosspiece, which serves as a handle for lifting and to keep the rails parallel and the axle in the supports.



Roller axle location for a 3½" OD roller. To avoid unwanted movement, the roller is positioned so it does not engage the work surface until the opposite end is lifted.

the lathe's mounting holes. Countersink all bolts and screws on the tray bottom to avoid scratching work surfaces.

Drill holes in the tray's frame aligned with holes in the transporter's rails so they can be bolted together.

#### **Using the transporter**

With the tray on a work surface, position the transporter over the tray and bolt the two together. I use star knobs to make it easier to connect and disconnect the transporter (*Photos 5, 6*). With the tray bolted to the transporter, you are now ready to move the lathe to a new location.

Lift the wheeled end a couple of inches, so the PVC roller contacts the

work surface and the tray comes up from the surface. Pull the transporter until the roller is a few inches from the edge of the work surface, then lower the wheels to the ground (*Photo 4*). The roller supports, but not the roller, will now rest on the work surface and prevent the transporter from moving. Next, lift the handle, or roller supports, and wheel the transporter away.

Reverse the procedure to put the lathe and tray on a new work surface or in a vehicle. Lift the wheeled end and move the transporter on the roller to the desired position. The roller allows greater latitude to position the transporter than wheels would. Remove the

star knobs, lift the transporter off the tray, and you are ready to turn.

Walt Thies has retired from a career in researching tree diseases for the USDA Forest Service in the Pacific Northwest. He started turning with his kids in 1980 and joined the AAW in 1989 as a member and, later, officer of Cascade Wood Turners. He is now a member and past president of the Willamette Valley Woodturners. Walt demonstrates woodturning for clubs and in public venues and can be reached at wathies@amail.com.

# You read the article—now see the video!

This article has an accompanying online video in which Walt Thies demonstrates the use of this handy lathe



transporter. To view the video, visit tiny.cc/movelathe (case sensitive) or scan the QR code with your mobile device.



#### **Custom tray for grinder**





Customize a tray for any heavy tool. The tray bolts to the rails of the transporter using star knobs for quick connect/disconnect. When a tray is flat on the work surface, neither the wheels nor the roller touch the work surface.

# **ELLIPTICAL TURNING**

on a

# SHOPMADE CHUCK

**David Springett** 

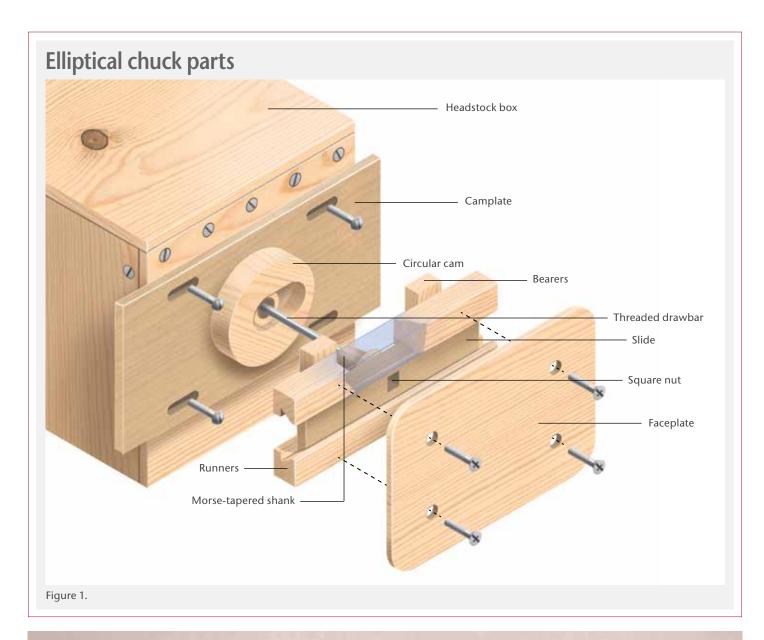


## JOURNAL ARCHIVE CONNECTION

For more on elliptical turning, see "Oval Traditions" (AW vol 19, no 2, page 24), a 2004 article in which Alan Lacer describes oval turning at the historic Old

the historic Old Schwamb Mill. AAW members can access all past journal articles online at woodturner.org. lliptical, or oval, turning is fascinating and mysterious, yet entirely possible for woodturners using a shopmade chuck on the headstock of a regular wood lathe. The chuck is a fairly complex piece of apparatus (*Figure 1*), but you can make it by following the sequences accompanying this article. You can see the chuck in action in my short video, where you will also hear it vibrating and clattering as it whirls (*see end of this article for links to the video*).

Because of the complex motion of the workpiece, elliptical turning is quite unlike regular turning. There's a lot of noise and vibration. Surprisingly, the cut is constant once you establish the ellipse, not intermittent, provided you take light cuts and hold the tool tight on the rest. The profile is difficult to view while the lathe is running and not all tools will work, since tracing an ellipse involves a long sweeping curve quickly followed by a tighter curve. This tighter curve can trap deep parting tools and interfere with a gouge's bevel, but small scrapers and gouges work well enough, provided the cut stays right at the lathe's center height.



#### **Required Materials**

Because of the elliptical motion of this shopmade chuck, there is always a risk that something could come apart. That's why, except for fasteners and the threaded rod, the chuck is made entirely of wood, with each piece carefully chosen for its purpose. While you could experiment with making the cam of plywood and Morsetapered shank of nylon or Delrin®, it would not be safe to introduce metal parts.

**Headstock box:** Dimension to fit your lathe; make of hardwood plywood joined with glued-and-screwed battens.

**Circular cam:** Dense hardwood, 3" (8cm) diameter by <sup>3</sup>/<sub>4</sub>" (19mm) thick; choose species to minimize wood movement. Cam shown was oriented end-on, long grain parallel to the lathe axis.

**Camplate:**  $\frac{1}{4}$ " - (6mm-) thick hardwood plywood,  $9\frac{1}{2}$ " × 5" (24cm × 13cm).

**Slide with Morse-tapered shank:** Dense hardwood (I used pau amarello), 61/4" (16cm) long by 3" (7.6cm) by 2" (5cm); make as one piece or join from two pieces.

**Runners:** Glue up four pieces of oak, two 61/4" long by 11/4" (32mm) wide by 11/16" (17mm) thick; two 61/4" long by 11/4" wide by 1/4" thick.

**Bearers:** Two pieces of oak, 3%" (9cm) long by 11/8" (29mm) wide by 1/2" (13mm) thick.

**Faceplate:** 1/4"-thick hardwood plywood, 75/8" × 7" (19cm × 18cm).

Hardware: Four 1/4" pan-head bolts with cross slot for screw-driver, 2" long, with nuts; one 5/16" (8mm) threaded rod, 3' (1m) length cut to fit your lathe, with two square nuts; various screws, including several 1"- (25mm-) long #6 flathead steel screws to attach the bearers.

As you'll see in the elliptical frame project on page 34, it is crucial to saw the blank close to finished shape and to mount it securely on the oscillating faceplate—I use newspaper glue joints and hot-melt glue on pre-heated mating surfaces so there is time to position carefully. You will find yourself having to remove a straight line at the center of the work, not the usual circular nub (*Photo 1*), and the line can be difficult to remove. The solution is to keep the edge of the tool cutting at the lathe's center height, which you can locate by shining a level laser line onto the whirling workpiece (*Photo 2*).

The laser solution was devised by the late Prof. Johannes Volmer. If you become seriously interested in elliptical turning, then you must visit his website, volmer---Ovaldrehen.de. He made the most comprehensive study of oval turning and was the designer of the Steinert® picOval lathe, which is capable of turning ellipses at high speed.

#### Cut at center height



The edge of the lathe tool must cut at the lathe's center height. Deviation above or below center will create a new pathway and a confusing profile.



Guide the cut by shining a centerheight laser line onto the faceplate. The cutting angle may not always be perfect but its position will be.

#### How the chuck works

The chucking apparatus consists of a rigid wooden **headstock box** bearing an adjustable **camplate** and an offset **circular cam**. The lathe rotates a **slide** mechanism that drives a pair of **runners** and **bearers** riding the offset cam while carrying a **faceplate** and, ultimately, the **workpiece** (*Figure 1*). The combined rotation of the slide with the back-and-forth action of the runners moves the faceplate on an elliptical path. The farther off center you locate the circular cam, the more pronounced the elliptical shape.

This is an all-wood chuck that efficiently rubs wood on wood. There can be considerable vibration while turning, especially at low speeds, against some risk of burning due to friction at higher speeds. Do not go faster than 500 rpm, and work in short bursts to keep everything cool, including yourself: this work requires intense concentration. And be sure to keep an eye on all screws and fixings while you work; they can easily vibrate loose.

#### **Making the chuck**

Dimension the headstock box to fit your lathe, making sure its front plate is truly vertical and square to the ways. Mine was made from plywood joined with glue, screws, and solid-wood battens. The box holds a wood camplate firmly in place, with the lathe spindle protruding through its center hole, so it must be rigidly clamped to the lathe ways.

The camplate carries a circular cam at center height bolted in place through slotted holes, permitting sideways adjustment to change the major axis of the ellipse. The hardwood cam has an elongated center hole, so it too can be adjusted sideways; the back corner of the camplate might need to be cut away to avoid interfering with the lathe motor. Use the slots in the camplate to mark holes for the fixing bolts on the front of the headstock box.

The slide mechanism consists of a wooden shank Morse-tapered to fit the headstock spindle, driving a rectangular

#### Headstock box



To lock the front of the headstock box in position, make a simple toggle that can be tightened under the lathe bed.



The front of the headstock box must be vertical and square to the lathe ways. Mark a horizontal line across the face of the box at center height and note how far the spindle projects, as this distance limits the thickness of the cam and bearers.

wooden slide with beveled edges. The slide mechanism is fixed directly to the headstock by a threaded drawbar through the lathe's hollow spindle, so it rotates like a propeller. The photo and figure sequence, Slide with Morse-tapered shank, shows the slide mechanism sawn, bored, and turned from one piece of dense hardwood, with the tight drawbar overcoming any shortgrain weakness. You could instead make it of two pieces, a Morse-tapered shank tenoned and glued into the slide piece. You would be making the shank of longgrain wood, but you might have to juggle dimensions to set the nut down flush.

A pair of runners mounted on a pair of bearers fits over the slide and can move back and forth along the slide. The bearers are screwed to the runners at right angles, parallel to each other and spaced exactly the cam-diameter apart. This keeps them in close contact with the cam as the chuck rotates, creating the elliptical motion. I made these parts from a less-dense hardwood, oak, because they are easier to replace than the slide and are the parts that wear out first.

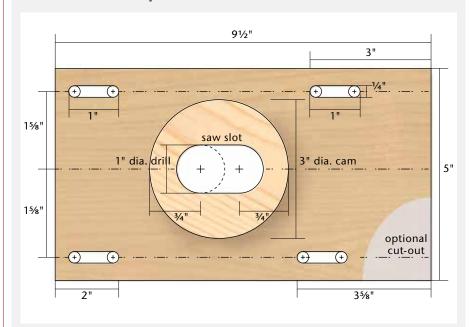
#### **Final fitting**

When you fit the bearers to the cam, check with a square that all parts stay in line. If you fear a bearer will slip during attachment, try running a weld of hot-melt glue along the edge away from the shank. The bearers should make a good firm fit against the circular cam and run easily, as should the runners on the slide. Lubricate the wood with candle wax or spray-on furniture polish. Depending on how far your lathe spindle projects from the head-stock box (%", or 22mm, on my setup), you might need to adjust the cam thickness, bearer thickness, or slide length so everything moves without interference.

To fit the drawbar that connects the chuck to the headstock spindle, turn a simple handwheel for the outboard side, center-bore it 5/16" (8mm) and epoxy a nut into it. Lock down the camplate and push the bearers onto it, guiding the wooden Morse taper into the headstock spindle. Feed the threaded rod through the headstock spindle and screw it into the slide nut. Now you can mark and cut the rod to length on the outboard side, then attach and tighten the handwheel to lock everything into place. Adjust the fit as needed before you epoxy the threaded rod into the slide.

Make the faceplate from ¼"- (6mm-) thick hardwood plywood, carefully rounding its corners. Screw the faceplate to the runners, and the elliptical chuck is ready to run. Rotate the lathe by hand to see the elliptical motion. It should be a tight, squeaky movement. To test it, run the lathe at 500 rpm and mark your first ellipse with a pencil held firmly on the centerline. ▶

#### Cam and camplate



Make a camplate from  $\frac{1}{4}$ " plywood marked out according to the drawing. Drill and cut slots for mounting bolts.



Mount and turn the cam blank on a softwood faceplate using a newspaper glue joint that you can split when done. Make sure the edge is 90° to the face and mark clear centerlines. (Note: A primer on making good newspaper glue joints can be found in one of David Springett's prior AW articles, in vol 30, no 1, page 28.)



Glue the circular cam on the centerline of the camplate; note that it is offset toward one end.



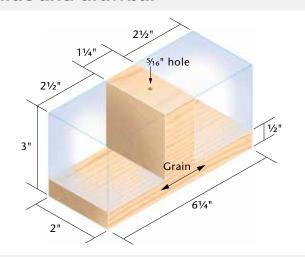
Mark and drill the cam and plate using a 1" (25mm) saw-tooth bit. Use a coping saw to join the two holes, and rasp to clean up the slot.



Add plywood squares to locate and glue nuts on the back side of the headstock box front. These nuts will accept the camplate's mounting bolts.

#### **SLIDE WITH MORSE-TAPERED SHANK**

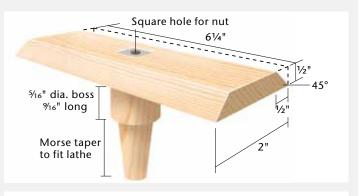
#### Slide and drawbar

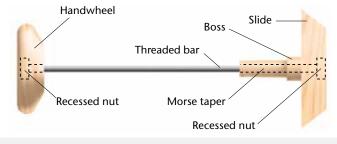


 $(\mbox{\it Upper left})$  For optimum strength, the slide is best made from a single block of wood.

(Upper right) The finished slide.

(Lower right) Slide and drawbar assembly. The drawbar extends through the hollow lathe spindle and holds the slide firmly in place.





#### Prepare and mount stock







(Left to right) Saw the waste away from the slide blank and bore a 5/16" (8mm) vertical hole through its marked center.

Use the hole to locate the blank on a 5/16" dowel centered in a wooden faceplate. Secure it with two screws plus a weld of hot-melt glue.

Turn the central boss fully round and down to about 15/16" (24mm) diameter. Clean up to the flat face of the slide.

#### Turn the Morse taper





Use a Morse taper accessory such as a live center to take measurements for turning the shank of your slide. (Note: If you use the tailstock to take these measurements, be sure the tailstock and headstock have the same Morse taper size. If not, take the measurements using the headstock.) Insert the live center, mark where it exits, and measure this diameter: about 11/16" (17mm) for a No. 2 Morse taper. Take the diameter at a point 17/8" (47mm) from the exit mark: about 5/8" (16mm).



Cut a shoulder %16" (14mm) from the flat face, and turn the shank to match the measured taper. Turn with care, testing the fit in the tailstock.

#### Shape the slide



Mark the 45° bevels on the top of the slide and plane the slope to the layout lines.



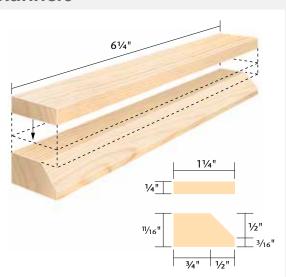
Chisel a recess for the 5/16" square nut and set it flush to the surface of the slide.

#### RUNNERS, BEARERS, AND FACEPLATE



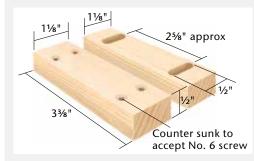
The slide mechanism moves between runners mounted on bearers that are set the cam diameter apart. The work-holding faceplate, at right, gets screwed to the runners and moves with them.

#### Runners



Create two identical runners to fit the slide by assembling each from two pieces of hardwood. Plane the 45° bevels before assembly. Glue and clamp the two parts, and be sure to remove any squeezed-out glue.

#### **Bearers**



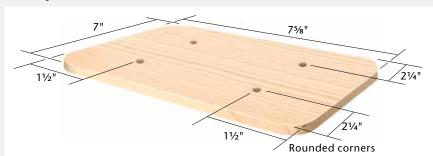
One bearer has joined holes to form slots for adjustment. Choose #6 screws long enough to penetrate solid wood, but make sure they do not foul the sliding grooves.

#### Affix bearers to runners



Mark a centerline squarely across the two runners, flanked by lines the cam diameter apart. Clamp or glue-tack one bearer on the line, then screw the other bearer against the cam and adjust for a firm fit.

#### **Faceplate**



The faceplate has four #6 countersunk screw holes positioned to penetrate the runners while avoiding the sliding grooves.



To change faceplates, clamp the runners against the slide to hold them in position while you loosen screws.

## Turning an

# ELLIPTICAL FRAME

n elliptical work, you must always turn with the tool edge precisely at center height, the Point of Tranquility, where the cut is still and the turning is easy. Misaligned cuts result from the tool cutting above or below the centerline; raising or lowering the gouge to "improve" the cut will only cause trouble.

Turning elliptical frames always poses the additional problem of how to hold the workpiece. My solution, the best I've found so far, relies on newspaper glue joints in a careful sequence, as follows:

- 1) Newspaper-glue the blank face down on the elliptical chuck's faceplate. Turn the rebate in the back that holds glass, picture, and backing, leaving enough rim (at least 3/8", or 10mm) for the wall-hanging fixings. Separate the joint to remove the workpiece.
- 2) Newspaper-glue an oversized blank onto the faceplate and turn an elliptical plug to fit inside the elliptical rebate. Newspaper-glue the workpiece onto it.
- 3) Turn the outer edge of the workpiece down into the supporting plug. Turn through to remove the center waste, then shape the inside of the frame. Sand and polish, then separate the newspaper glue joint to release the finished frame.





This project, scaled to the chuck just described, produces an oval frame about 5" (13cm) high and 4" (10cm) wide, with variations in size depending on how far you offset the circular cam. Make the frame from a piece of hardwood 6" (15cm) by  $4\frac{1}{2}$ " (11cm), 1" (25mm) thick; the photos show maple. You'll also need tracing paper, pencil and felt pen, masking tape, white glue, newspaper, hot-melt glue, and two #6 × 1" wood screws.

Bumpy cuts can be caused by loose runners in the chuck; inconsistent cuts usually result from worn parts or loose fixings. Before each work session, give the chuck a complete checkup. Replace any worn parts and tighten where needed.

For straight-in cuts, a square-end cutting tool works best, ideally supported on a flat, shelf-like toolrest. For shaping cuts, use a typical toolrest and small gouge.

#### Turn an elliptical recess



Mark on the faceplate an ellipse slightly larger than the size of the finished frame. Trace this ellipse onto a maple blank and saw it out.



Newspaper-glue the blank onto the faceplate, bringing up the tailstock for clamping pressure. Let dry overnight.



Use the square-end tool to turn a ¼"-inch groove in the back of the blank, leaving a ¾" outer rim of wood. Widen the groove to prevent the tool from grabbing.



Turn out the middle with a small gouge, leaving a flat-bottomed recess ¼" deep. You will struggle to keep the gouge at center height. Note the laser line.



Make a reference tracing of the oval recess, then carefully split the workpiece away from the faceplate.

#### Remount on a plug chuck







Saw an oversized ellipse of 1"-thick wood, cut notches for access to screws, then newspaper-glue the blank to the faceplate and clamp with the tailstock.

Draw an ellipse to match the turned recess and use the small square-end tool to turn a  $\frac{1}{16}$ " (2mm) trial plug. Confirm the fit before cutting the plug to  $\frac{1}{4}$ " height.

Drill and countersink two screw holes in the middle of the recess. Newspaper-glue the workpiece to the pluq and tighten the screws.

#### Turn the picture frame



Turn the outer edge of the oval frame and extend the turning into the supporting wood. Keep the cutting edge on the lasered centerline.



Turn the frame down to ¾" (19mm) thick, avoiding the two screws. Sand and polish the edge, then, for added support, glue-weld the joint between chuck and workpiece with hot-melt glue.



Use the recess tracing as a guide to mark the smaller frame opening, then with the square-end tool, turn through to the supporting plug. Unscrew the center waste and remove it.



Turn the inside profile of the frame with a small gouge, always cutting on the centerline.



Sand and polish the inside profile and, when satisfied, peel away the glue weld.



The newspaper glue joint now can be split to release the finished frame.

#### You read the article—now see the video!

This article has an accompanying online video in which David Springett further explains and demonstrates the use of this shopmade

elliptical chuck. To view the video, visit tiny.cc/TurnElliptical (case sensitive) or scan the QR code with your mobile device.



David Springett is a British woodturner known for his inventive creations.

He is the author of Woodturning Wizardry, Woodturning Full Circle, Woodturning Magic, and, with Nick Agar, Woodturning Evolution.

All illustrations by Robin Springett.



y favorite turnings are small- to medium-sized jewelry boxes with lids, in either endgrain or sidegrain orientation. When I wanted to incorporate a unique design, it dawned on me that my love for applied geometry might contain the answer.

Applied geometry includes geometric constructions such as regular polygons, which you may remember from a high school drafting course. I envisioned a series of polygonal vessels, turned top and bottom but with flat sides. The flats would make the design unique, and the turning would still be done about a central axis. The key would be to saw the flats first, before going to the lathe, not after completing the turning.

Excited by the prospect, I began drawing pentagons, hexagons, heptagons (seven sides are difficult), and octagons. After turning several lidded vessels based on regular polygons, I saw that shaping the top and bottom of the vessel defined the flat sides of the polygon with beautiful catenary curves. I will explain turning a five-sided vessel (pentagon) with a lid and finial, but you may want to try turning one with six, seven, eight, or nine sides.

This project will introduce you to turning intermittent wood and air, to the basics of hollowing, to using a jam chuck to remount work on the lathe, and to turning a finial. Completing this project will not only give you a sense of accomplishment, but also will add significantly to your woodturning repertoire.

#### **Prepare the stock**

The *sidebar at right* explains how to draw a polygon with any number of sides using a protractor and a straightedge. Make a pattern by laying out the size polygon you want on a piece of stiff paper. For our pentagonal vessel, I suggest sides of about  $2\frac{1}{2}$ " to 3" (6cm to 8cm) in length. A  $4\frac{1}{2}$ " - (11cm-) diameter circle will yield a  $2\frac{3}{4}$ " (7cm) side, and a 5" - (13cm-) diameter circle will yield a 3" side. These lengths are approximate.

To demonstrate this project, I chose 1¾"- (4cm-) thick spalted maple for the vessel and lid, with a 1" (25mm) square of African blackwood for the finial. I chose blackwood for its lovely contrast

#### Mount the blank



Carefully saw the polygonal blank. Saw just outside the layout lines.



Center-bore the blank for mounting on a worm screw held in a scroll chuck.



Thread the blank onto the worm screw, tight against the chuck jaws.

with the maple. Whatever wood you choose, I recommend a thickness of around 13/4".

Transfer your polygon pattern to the wood, then cut it out on the bandsaw (*Photo 1*). With a steady hand, cut the lines outlining the polygon as straight as you can. Leave the wood rough from the saw because there will be less of it to sand after you turn the vessel. Saw

#### **Drawing Regular Polygons**

I remember from my high school mechanical drawing class an assignment to draw regular polygons such as a pentagon, hexagon, or octagon. It's not hard to do with a little know-how. A regular polygon is a closed figure composed of straight lines with equal corner angles, equal central angles, and sides of equal length. Regular polygons can be inscribed within a circle or circumscribed around a circle.

#### Find the central angle

You can find the central angle of a regular polygon by drawing lines to the center from two adjacent vertices and measuring with a protractor (*Photo a*). Since there are 360° in a circle, you can calculate the central angle of a pentagon by dividing 360° by five, for 72°.

#### Find the corner angle

To find the corner, or included angle, you can use a formula from high school geometry, where N is the number of sides:

$$\frac{(N-2) \times 180^{\circ}}{N}$$

For a pentagon, N=5, so the calculation would look like this:

$$\frac{(5-2) \times 180^{\circ}}{5} = 108^{\circ}$$

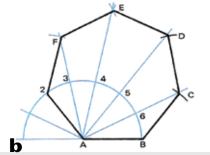


Using compass, straightedge, and protractor, you can draw regular polygons of any size with any number of sides.

Draw a seven-sided polygon

While there are strict compass-and-straightedge constructions for regular polygons, it is simplest to use a protractor. The following steps show how to draw a polygon with seven sides (*Photo b*); you can follow this same procedure for polygons with any number of sides. In this case, the length of the side is given as AB.

- 1. With radius AB and A as the center, draw a semicircle and use the protractor to divide it into seven equal parts. Each segment has a central angle of 180°÷ 7, or 25.7°.
- 2. Draw radial line A2 through the second division.
- 3. Extend radial lines through points 3, 4, 5, and 6.
- 4. With AB as the radius and B as the center, stop line A6 at C.
- 5. With the same radius and C as center, stop line A5 at D. Repeat for E and F.
- 6. Connect the points with straight lines as shown.



Drawing a seven-sided polygon.

the round,  $3\frac{1}{2}$ " - (9cm-) diameter lid blank from the same wood.

There are several methods for holding stock for turning, but since this is a sidegrain project (where the grain is running perpendicular to the ways of the lathe), I chose to use the worm screw that was supplied with my Oneway chuck. It requires boring an <sup>11</sup>/<sub>32</sub>" (9mm) mounting hole <sup>3</sup>/<sub>4</sub>"

(19mm) deep in the center of both blanks (*Photo 2*). Drill the hole in what will become the top, or opening of the vessel; you will eliminate the hole later when you hollow the vessel. Chucks vary, so install the jaws that will hold the worm screw in your chuck (No. 2 jaws for me) and securely thread the stock onto the screw (*Photo 3*).▶

#### Turn and hollow the vessel

True the face of the blank. I use a 3/8" (10mm) bowl gouge to prepare it for laying out the foot and chucking recess. A comfortable recess measures 1%" (35mm) diameter by 3/16" (5mm) deep. Begin the recess by cutting straight in with a parting tool to the required depth. Align the parting tool with the ways below to ensure a cut that is perpendicular to the face of the blank. Then use a small bowl gouge, cutting from outside to center, to create a flat bottom inside the recess. Now cut a small, flat foot extending about 3/8" out from the recess. Define the outside of the foot by cutting straight in about 1/16" (1.6mm) with the parting tool (Photo 4).

# Shape the vessel's bottom half



Part a shallow groove to define the foot of the vessel, about %" outside the chucking recess you'll need for remounting later.



Use a small bowl gouge to shape the vessel's underside. With the grain perpendicular to the lathe axis, "downhill" goes from small diameter

Use a small bowl gouge to shape the convex bottom from the foot to the flats you cut earlier on the bandsaw (*Photo 5*). This cut will transform the straight bottoms of all the flats into blended catenary arcs reaching upwards around the vessel. Sand the recess, foot, and curved bottom using the grit sequence of your choice, smoothing to 400-grit abrasive. To complete the turning of the vessel bottom, check the foot with a straightedge to be sure it is flat.

Remove the worm screw and its jaws from your chuck and install jaws that will fit inside the recess (No. 1 jaws for me), using the chuck in expansion mode. Decide how big you want the opening in the top of the vessel to be; it is 13/4" diameter in the photos. Lay the radius out from the center and draw the circle indicating the opening diameter (Photo 6). Locate the opening by cutting straight in with a parting tool about 1/4" (6mm) deep, then use a bowl gouge to remove just enough wood to establish the opening (*Photo 7*). Now continue with the bowl gouge to turn a smooth convex curve from the opening down to the flats. You will be turning air between the flats and will need to control the gouge by pressing it tight on the toolrest. Shaping this curve will require more than one pass. Sight the profile from the edge of the workpiece to compare the symmetry of the cuts from the foot and top of the vessel (*Photo 8*).

The interior is easy to hollow because it is not too deep and the opening is relatively large. I use several inexpensive bent-tip hollowing tools and a roundnose scraper. Begin by cutting straight in with a round-nose scraper, then move the tool to the left to remove most of the wood, paying close attention to the depth of the cut. I try for a bottom thickness of 3/16". Next, use an angled or benttip hollowing tool, or any small hollowing tool you have, to remove wood from the interior sides, blending the cuts tangent to the bottom and up to the rim of the opening. I have found that a slight negative rake works best to remove wood with few catches, achieved by raising the toolrest up a little so the tool handle is higher than the cutting tip (*Photo 9*). Stop often to check the depth of cut and

#### Shape the vessel's top half



Remount the work via the chucking recess so you can lay out the vessel's opening around the worm-screw hole.



Part to define the opening, then remove the first layer of waste with a bowl gouge.



Shaping the vessel creates beautiful catenary curves along the flat sides.

#### Hollow the vessel



To hollow smoothly with a bent-tip tool, position the toolrest slightly above the lathe axis and raise the tool handle.



Gauge the depth of the vessel with a pencil and aim for a  $\frac{3}{16}$ " (5mm) bottom thickness.



Your fingers are the most sensitive calipers for evaluating wall thickness and smoothness.

gauge your progress using your most sensitive calipers—your fingers (*Photos 10, 11*). Continue hollowing until you achieve a smooth, uniform surface with no ridges. Complete the interior of the vessel by sanding at a slow (safe) speed using the grit sequence of your choice, smoothing to 320-grit abrasive.

There are several ways to sand the flat sides smooth. You can leave the vessel in the chuck and hand-sand with abrasive wrapped around a block, or take the workpiece to a stationary disk or belt sander. I prefer the latter option because it is quick. Hold each flat side parallel to the disk or belt and make several quick contacts with the abrasive to remove the ridges left by the band saw. Finish the sanding by hand.

#### Turn the lid

The lid blank is extra thick, so there is plenty of material for you to thread it onto the worm screw, turn the lid, and part it off. Begin by truing the exterior of the lid stock and laying out the opening diameter. I use Vernier calipers to take an accurate measurement of the vessel's opening. I like the lid to have a gentle ogee curve from the edge up to the finial, with the lip beveled at about 45°.

First, use a sharp parting tool to turn the tenon of the lid to fit the opening of the vessel. Make the tenon about 3/16" long. Remove wood incrementally so you can sneak up on a tight fit, and stop often to check the fit of the tenon with the vessel opening (*Photos 12, 13*).

Use a small skew or spindle gouge to undercut the lid several degrees so that when the lid rests on the vessel, it will conform to the vessel's convex shape. Check the fit of the undercut against the vessel's top surface several times while completing this cut. When you are satisfied with the fit, create a slight dome on the underside of the lid (inside the tenon) so it is not flat. This is a subtle feature often overlooked on vessel lids. Part off the uncompleted lid, leaving enough material to turn the ogee shape on the top of the lid. I like to stop parting midway and complete the cut with a coping saw (*Photo 14*). ▶

#### Turn the lid



Mount the lid blank on the worm screw, then use a parting tool to size a tenon that fits snugly into the vessel's opening.



Check the fit often by offering the box opening up to the lid tenon.



After forming the bottom of the lid, part it off the blank. Be sure to leave enough wood for its top surface.



Remount the lid in a jam chuck so you can cut a gentle ogee on its top surface.

#### Turn the finial



Shape the finial with a small gouge.



Evaluate the finial by holding the vessel and lid up to it, and keep turning until you like its size, shape, and proportions.



Form a small tenon on the base of the finial, then part it off.

To remount the lid so you can complete its top surface, true up the remainder of the blank still in the scroll chuck, and make it into a jam chuck by cutting a tight recess for the lid tenon. After a light final sanding of the vessel opening with 400-grit abrasive, take an accurate measurement and cut a matching recess in the jam chuck. I like the fit to be so tight that I have to tap the lid tenon into it. Once the lid is secure in the jam chuck, use a small bowl gouge and ride its bevel to cut a gentle ogee curve from the edge of the lid to its top (Photo 15). The bowl gouge leaves a smooth surface. You might choose to shape the lid with a round-nose scraper, but you would have more sanding to do.

Complete the lid by drilling a hole to accept the finial. Mount a drill chuck in the tailstock with a ¼" Forstner bit and bore a ¾6"-deep hole.

The lid might be too tight in the jam chuck to remove with your fingers. If so, it may be necessary to use a chisel and mallet to split the jam chuck.

#### **Turn the finial**

Remove the worm screw from the chuck and install the chuck's smallest jaws for holding the finial blank. I used a 5" length of African blackwood for the finial because it complemented the maple vessel and lid so well. No matter what stock you use, it is important to cut the blank square so the jaws of the chuck make good contact and grip it securely.

After roughing the finial stock into a cylinder, shape the finial to your own design or imitate the onion top (zwiebelturm) that I used for this vessel. Use a small gouge to cut the onion top shape, cutting carefully down to the sharp but delicate point (*Photo 16*). I turn the bottom half of the onion with a small bowl gouge but complete it with a skew or the sharp tip of a parting tool when the skew is too large to engage properly. A parting tool makes an excellent skew and its small cutting edge makes sense in tight situations. I cut the smaller sphere below the onion top with the skew and parting tool combo as well. I like to compare the size and proportion of the finial with the vessel as I cut it down to a size that looks right (Photo 17).

A tenon on the base of the finial will fit into the recess you drilled into the top of the lid earlier. To form the tenon, use a sharp parting tool to carefully scrape away wood, reducing it down to a calipered ¼" diameter. Sand the finial to 400 grit and polish it on the lathe using paste wax. Mark

the length of the tenon at 3/16" and carefully cut the finial off using a skew or parting tool (*Photo 18*). Skillful turners with years of experience will cut all the way through and catch the finial in one hand. A safer method is to cut almost all the way through, stop the lathe, and twist the finial off into your hand.

Check the fit of the finial, making sure its lowermost feature comes in full contact with the lid surface. If necessary, shorten the tenon slightly with sandpaper. Assemble all three parts and give your work a final inspection before gluing the finial into the lid.

I used Danish oil on the vessel and lid because I like the medium satin sheen it produces on most woods.

Photos by John Kelsey.

Ted Rasmussen, a retired industrial arts teacher with thirty-two years of service, is an active member of the Lancaster Area Woodturners in Pennsylvania. He is a past president, current board member, and chair of the standards committee of the Lancaster Designer Craftsmen, a local chapter of the Pennsylvania Guild of Craftsmen. Ted was invited to teach at the John C. Campbell Folk School in 2013 and will return for another stint in 2015.

# MEMBERS' GALLERY

#### Paul Anderson, Utah

I began turning nutcrackers after my sister gave me one from her trip to Germany. The gift offered a challenge: to make one to give back to her for Christmas in 1980. Each year, I made nutcrackers as Christmas gifts for my siblings. As my work improved, I would get ideas and requests for different figures, each one presenting unique problems to solve—how to make a baseball cap or how to put a bend in an arm. With every challenge came experience and improvement. Most figures are 14" to 24" (36cm to 61cm) tall and can include up to fourteen turned elements. I also have made figures as tall as 6' (1.8m).

For more, visit oneofakindnutcrackers.com.





(Left) Quilter Lady, 2011, Maple, poplar, black walnut, 151/2" (39cm) tall

My mother is an award-winning quilter and teaches quilting classes. This figure has delicate turned maple ears and nose to match the head.

(Right) Little Clyde, 1999, Maple, cherry, 17" (43cm) tall

The Anderson Seed and Garden store has been in my family for three generations. I created this figure in honor of my father, the master gardener.

#### Dale Larson, Oregon

I started turning ovals six years ago using a Vicmarc oval-turning chuck. I find the oval shape pleasing to the eye, but turning oval bowls presents several challenges, including it being almost impossible to "ride the bevel" on the inside of the bowl. The ovals shown here represent the average size I turn. I enjoy working with several of our beautiful local woods but prefer burls so I don't have to deal with endgrain. I use the same process used with round bowls: the oval blank is rough-turned green, allowed to air dry, and then finish-turned.

The fact that oval turning has been around for hundreds of years connects me to the history of woodturning.

Photos by Dan Kvitka.



2011, Big leaf maple, 4¾" × 15%" × 11%" (12cm × 40cm × 30cm)





Untitled, 2011, Pacific madrone,  $3" \times 16^{3}/4" \times 13"$  (8cm × 43cm × 33cm)

ou don't know Scott Boley's work. That's fine with him.
Boley prefers to work out of public view. And it's safe to say he is the only pediatric surgeon who turns strictly for his own pleasure at a huge, custom-made lathe in a basement shop in a New York City apartment building.

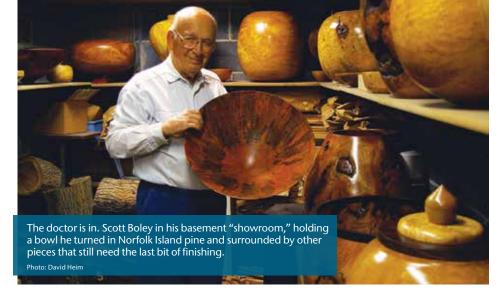
Boley has been turning bowls, vessels, and boxes for nearly thirty years. In that time, he has had only one public exhibition of his work. He does not sell his pieces or even display them in the instant galleries at symposia. And, at age eighty-seven, he is not about to change his ways.

"I never wanted to compete with my friends and others who turn for a living," he says. "I don't need the money and have given more than 200 bowls away as gifts. I don't need to sell turnings for my ego. My medical career has satisfied that." He has published more than 250 medical papers, book chapters, and books and has spoken all over the world. "With woodturning," he says, "I'm an amateur in every sense of the word."

#### The making of an amateur

Like many others, Boley happened upon woodturning by chance. In the mid-1980s, he noticed a door ajar in his building's basement. He looked in to see a well-equipped woodshop and a man at work. "I envy you," Boley told him. "I don't have a hobby like this. I just play tennis when I have the time." The woodworker, Billy Arnold, replied, "If you want to learn, I'll teach you." Later, after Boley's tennis-playing days ended because of a knee injury, he went to Arnold for the promised instruction.

"I knew absolutely nothing about a shop. I couldn't even tell one screw from another," Boley says. "I was not allowed near the bandsaw, the jointer, or the planer because a surgeon is supposed to protect his hands," he says, holding his up as if he has just finished scrubbing. "The tablesaw was absolutely off-limits."



# Doctor Who? AN AMATEUR STILL AT WORK

David Heim

The shop did include a small Rockwell lathe, though, on which Arnold taught Boley the basics of woodturning.

Boley became devoted to turning a few years later, on a vacation in New Brunswick, Canada. A friend introduced him to Gordon Dunphy, a dairy farmer and award-winning wood-turner. Boley, Dunphy, and another friend, Neil Hood, would spend two weeks a year searching for burls (the bigger the better), spalted yellow birch, and other hardwoods. They scoured what Boley calls hardwood cemeteries—areas where loggers had already moved through, leaving plenty of deadfall behind. Dunphy also

became a major influence on Boley's woodturning style—simple, basic forms with minimal but carefully positioned texturing or embellishment, oriented so the wood's grain and figure accentuate the shape.

Boley qualifies as an outsider artist, someone working on his own, not necessarily following current styles and trends. However, his pieces look as if they could sit next to works by some of the biggest names in woodturning. But Boley firmly denies being influenced by other present-day turners. His two New Brunswick friends and Ron Kent, a noted woodturner in Hawaii, are the only ones he mentions.



**Scott Boley**, Untitled, 2002, Norfolk Island pine, 8" × 19" (20cm × 48cm)



**Scott Boley**, Untitled, 1997, Manitoba maple burl, 14" × 14" (36cm × 36cm)



Boley's modest Bronx, New York, apartment is filled with his work. When he wants to bring in a new piece, his wife makes him take one out.

Photo: Courtesy of Trevor Hucey

#### A city-dwelling woodturner

Boley and his wife Sandra (appropriately nicknamed Sunny) live on the top floor of a building in the Riverdale neighborhood of the Bronx, an area of well-kept, century-old houses and upscale apartments.

Boley stopped performing surgery at age eighty-four; he now teaches three days a week. Two nearly invisible hearing aids seem to be his one concession to age. He and Sunny take several long fishing trips each year, regularly traveling to Canada, the South Pacific, Hawaii, Russia, and Argentina. At home and in his shop, Boley is unfailingly patient and self-effacing. "When we turn..." he always says, as if Gordon Dunphy or Billy Arnold still watches him.

When you enter the lobby of his building, you quickly notice the large piece of turned burl on the black marble counter of the doorman's station. It's one of a half-dozen Boley pieces decorating the lobby. As you walk to the elevator, you pass a dramatically lighted niche holding another turned burl. But none of that prepares you for Boley's apartment.

Immediately to the right as you enter, glass shelves hold two dozen of Boley's smaller works, including pieces in maple, cherry burl, and Norfolk Island pine. Straight ahead are more than a dozen large pieces—a thin-walled bird's eye maple bowl, propped on edge, that is a good 18" (46cm) across; a spalted-maple

vessel standing as tall as the bench for a Yamaha organ; and an even taller vase sits atop the organ. Smaller vases and pots are arranged here and there on the carpet. Every one of Boley's turnings is flawlessly detailed and finished.

"My wife has a strict rule," Boley says as he looks over his collection. "No new bowl can get in the house unless one goes out." Fortunately, Boley works at a deliberate pace; his larger pieces take weeks to produce. The exiles return to what Boley calls his showroom, a small storeroom across the hall from his shop. Shelves on three walls hold dozens of pieces—from small bowls to vessels that look as if they could hold ten gallons. Besides the banished turnings, the room holds finished pieces waiting for a home, others ready for a final finish, and Boley's store of wood for turning, much of which he acquired on his travels.

## Boley's workshop—sharing it forward

Much of Billy Arnold's woodworking machinery is gone, but the Rockwell lathe is still in the shop. It's now used mainly by David Gonzales, an engineer who worked at Boley's hospital and now shares the shop much the way Boley did with Arnold.

"I lost Gordon. I lost Billy," Boley says, referring to the friends and mentors he has outlived. "It was a godsend when David came along. I can discuss problems with David. Woodworking is the same as medicine in one respect. You can practice by yourself, but it's better if you practice with another doctor, someone who can share insights with you."

Boley's lathe dominates the shop. He had it made about fifteen years ago. The bed is made from three thick-walled, square, steel tubes stacked one atop the other. The headstock can slide along one tube to increase the lathe's already considerable swing. A 2½-hp motor powers the machine. The lathe has multiple speed ranges, delivered through stepped pulleys and a variable-speed control.

The headstock has a 1½" (38mm) spindle, held by two beefy pillow blocks. Boley uses a ceiling-mounted winch to help him hoist wood into position.

Although he keeps scroll chucks in the shop, he prefers faceplates to hold his work. The ones he uses were custommade at a New York City machine shop. Boley also uses a massive captive-bar hollowing system of his own design. The bar is a piece of 1½"-square steel rod more than 6' (1.8m) long, screwed to a wooden handle; it weighs a good forty pounds. The cutters look like the nose of a roundend scraper. He settled on the current design after smaller, lighter bars didn't work well for the large pieces he regularly turns. "This one doesn't chatter," he says.

He leaves the door to his shop open when he's at work because he enjoys it when neighbors stop to say hello and chat. One fellow peeked in recently and, after some small talk, asked, "When did you retire?" Without missing a beat, Boley replied, "I'm not retired yet. Still at work." Later, looking over the shelves of his rough-turned pieces, he said to another visitor, "I have more turnings than I can finish in my lifetime. Even if I live to one hundred, I'll never finish them all." But that doesn't mean he won't try.

David Heim is a hobbyist turner who lives in Connecticut and works on a considerably smaller scale than Scott Boley. He previously profiled William H. Macy and Tim Yoder for the journal. David can be reached at davidheim1@comcast.net.



Boley at his lathe, custom-made and designed to accommodate extremely large, heavy blanks. The bowl in progress is relatively small, as his turnings go.



Making Lampposts While Remaking the Rules
David M. Fry

Bruce Landskroener remembers the day thirty-seven years ago when a visitor came into his restoration woodworking shop in Chestertown, Maryland, in search of someone who could produce 8' (2.4m) redwood lampposts bored end to end. The inquirer even offered to supply long augers and pillow blocks to steady them. Although it was far afield of his standard architectural millwork, Bruce took the job with little inkling that a multimillion-dollar payout would eventually follow.

The client was pleased enough with the outcome that he offered to help market similar products to building and lighting supply wholesalers in Pennsylvania and New Jersey. Within a few years, the new Bruce Post Company was selling to the trade all the way up to Massachusetts and down to Georgia and Mississippi. Meanwhile, satisfied retail customers were boosting local business by word of mouth. By 1985, the small shop was grossing \$250,000 annually, a pace that continued until the late 1990s. During peak periods, 2,500 posts were shipping out annually. In recent years, demand has slackened, but the company continues to market lampposts, as well as assorted finials, newel posts, and other outdoor wood products.



Bruce Landskroener ensuring that the first inches of the bore run true. Bungee cords moving the steady rests line the lathe bed. An auger-sharpening setup sits off to the left.

Photo: Chuck Engstrom

#### **Drilling straight in the lathe**

During the early days, lamppost coring proved to be wasteful and tedious. Bruce used a Milwaukee Hole-Hawg® right-angle drill to bore the long stock from both ends. Even with external guide bushings in place, it was not uncommon for the bit to wander and drill through the side. A local teenager hired for the task could bore four posts a day—two good, two bad. There had to be a better way.

Bruce recalls that his mentor, engineer extraordinaire Joseph Suydam, "suggested I get a long-bed lathe from a junkyard to solve the drilling problem. I found a Civil War-era 18' (5.5m) Blaisdell in Philly with a 30"

(76cm) swing and attached carriage. The flat-belted headstock alone weighed 1,500 pounds. I replaced it with a direct-drive electric motor, extended the rack and pinion, and added power feed to the carriage. The back edge was precisely milled so that measurements taken off it reflected parallel alignment with the lathe axis." The end result is a semiautomatic, horizontal boring machine that spins a chucked auger into the clamped stock. Bungee cords pull spaced steady rests along as the bit advances through a guide bushing next to the wood. With this setup, "I can drill up to 7' (2m) and flip the workpiece to get 14' (4m)." Brief reaming with a portable drill

takes out any misalignment where the two bores meet. "When I was younger, I could drill forty-two posts a day this way."

Hole accuracy depends on two critical variables: bit entry and sharpness. Starting at full diameter, Bruce drills "barefoot," without a lead point that can be deflected by grain direction, particularly in harder softwoods. He noted that "Mr. Suydam believed if you start the bit properly in the wood, the wood itself becomes the bushing." The first 4" (10cm) of Bruce's augers establish the true axis in this fashion, while the remainder follows with a slightly reduced (0.002") diameter for clearance.

Even with alignment fully addressed, bits can wander as they lose sharpness, causing the drilling carriage to rise. Slow lathe speed and bit travel help forestall dulling by reducing friction and tool stress. With a semiautomatic setup, dialing back the rate of boring can also open up time for the operator to do other tasks. But it is still important to monitor the progress of the auger. After reaching full depth, it will no longer take a chip and heat will build at the cutting edge. Bruce has found that tips made of Stellite®, a hard cobaltbased alloy that he welds to his bits, provide the best resistance to wear. Although they can be sharpened with aluminum oxide, he achieves keener, longer-lasting results with CBN (cubic boron nitride) wheels. "But if I drill all day, I still handhone the tips before leaving."

Perhaps more than anything, Mr. Suydam's advice to reconfigure the long-bed lathe proved to be decisive. He believed it was cheaper and more efficient at larger scales to move the tool than to rotate the work. It was also more accurate. Cranking the tailstock quill to drill a spinning

#### A custom bit



The welded Stellite® tip of the 11/4" (32mm) auger does not have a point or screw.

70-pound, 10' (3m) redwood post risked bore runout from wood warp, flexing, and density variations. Indeed, these same issues required attention when Bruce decided to buy another lathe for rounding the exterior of his lampposts.

#### **Putting wood in motion**

Although the big Blaisdell dominated the shop for years, it was not set up for changeover to conventional turning. Other tools profiled the lampposts. At first, Bruce used a circular saw on a sled to cut tapers along the upper portion, but eventually rigged up a semiautomatic carriage that advanced a compact Hitachi bandsaw with a 3" (8cm) blade through the stationary workpiece once again moving the tool instead of the work. If needed, a router cut chamfers or flutes. To this day, the bandsaw and/or router have shaped most of the lampposts leaving the shop, which is to say they were not turned. But Bruce knew early on that the ability to offer round posts, perhaps with beads and a finial, could attract new customers. Another lathe would also allow fabrication of products like newel and porch posts, birdhouses, and table legs.▶



Western red cedar lamppost. A  $5" \times 5"$  (13cm  $\times$  13cm) looks best with a fixture 20" (51cm) tall and 10" (25cm) wide.

Photo: Chuck Engstrom



Bruce's big Hapfo copy lathe with extension and large-bearing steady rest. Who says spindle turning always takes place between centers?

In fact, Bruce purchased several additional lathes over the years. He soon realized he wanted something more than a basic machine requiring continuous operator control, especially for big orders. "There's not enough gin in the world to make me want to handturn a thousand spindles." That largely explains why the Hapfo 6000 copy lathe, which sells new today for more than \$100,000, functions as his current workhorse for turned profiling. The standard 8' bed is doweled into an 8' extension. The semiautomatic, motorized copy carriage cannot travel the full bed, but it doesn't need to because lampposts typically have 4' (1.2m)

left square at the base. Besides, Bruce doesn't turn his lampposts between centers, so there is no need to make room for a tailstock. Instead, a rotating, adjustable steady rest built up around a slim, 10"- (25cm-) inside diameter (ID) bearing from an electrical generator encloses the free part of the workpiece, although usually not at the very end. This leaves up to several feet of wood hanging over, which can whip several inches off-axis if the stock has a bend. Unlike the smaller steady rests that came with the lathe, this anchored bearing does not ride the motorized carriage for close workpiece support. Nor does it squarely sit midway between the ends of the blank to minimize chatter. Rather, it is positioned to shorten the distance for bringing the stock into round by placing any serious bow away from the cutters—that is, in the base.

To turn lampposts, drilled stock goes on the lathe with the very top already rounded down by a rotary tenoning machine. The tenon, sized to mate with a standard light fixture, goes into Bruce's four-jaw chuck. The free portion of the post is secured along the base by four screw pads set into the large steady rest.

Once the lathe is running, Bruce starts the motorized carriage and brings the hinged cutter assembly down to meet the spinning workpiece. In fullcut mode, the Tantung® roughing and HSS finishing knives progress automatically down the workpiece, guided by the stylus tracing a Plexiglas® template or real work sample. Springs hold the cutters and stylus in position as the profile miraculously emerges in one pass. On thinner stock, it is sometimes preferable to deploy just one cutter to reduce lateral pressure and vibration. With the banjo and toolrest added to the motorized carriage, a handheld skew can be run down the workpiece to clean up any tearout before sanding. The banjo also provides support for manually turning small jobs that don't warrant fabrication of a flawless new template and for cleaning up ornaments on certain production runs.

#### Raw materials

Redwood has always been Bruce's wood of choice for rot resistance, workability, and appearance. It also comes in large sizes: "Chuck and I did a replacement post for the Number 1 tollbooth on the New York State Thruway. The contractor brought

#### **Automation**



A single knife automatically cuts the pommel on a post.



The swift birth of a finial is an awesome sight. The roughing knife at the left is taking a  $\frac{3}{4}$ " (19mm) chip.

Photo: Chuck Engstrom

#### Finishing by hand

Chuck Engstrom cleaning up with his 3/8" (9.5mm) square-nose parting tool. "After difficulty mastering the conventional skew, I found better results with this square tool and still prefer it for detail work."

Photo: Chuck Engstrom



me a piece of clear heart redwood 11' (3.4m) long and 17" (43cm) in diameter. They had to use a crane to get the wood into the shop. Chuck turned it." That would be Chuck Engstrom, on-call lathe pro on Bruce's jobs and past president of the Chesapeake Woodturners. Chuck's monumental turning went back in a moving van.

Over time, the dwindling supply of old growth timber and restructuring of the national wholesale trade drove up the price of redwood to as high as \$20 a board foot. In addition, the uneven grain of second-growth wood coming onto the market did not appeal to Bruce. By 2001, he had switched over to western red cedar for most of his posts. Cedar has proven to be a durable replacement if the bottom 2' (61cm) of the buried base is coated with roof patching compound, the remainder above ground sealed and painted/ stained, and an 8" (20cm) brass skirt anchored 4" (10cm) below grade to shield against moisture, microorganisms, and weed whackers.

Because large timbers are not kiln dried, some checking can take place after shop fabrication, particularly if the pith remains. This is usually not

a serious problem with Bruce's FOHC (free of heart center) lampposts, but for pineapple finials, dryness is important. If shrinking occurs after turning and carving, the traditional gold leaf finish will flake off. Laminated or old (dry) stock works best for these.

#### **Marketplace survival**

Shifts in the timber industry were not the only economic forces that gradually affected Bruce's business. The 1980s saw the rise of Home Depot, as well as the production of PVC (polyvinyl chloride) posts for outdoor residential use. Plastics in particular created substantial competition because they are relatively cheap, low maintenance, and easier than wood to ship and handle. But they require a concrete footing and are subject to cracking and water infiltration. And, ultimately, they lack the feel and cachet of solid wood. As Bruce observes, "Someone getting an expensive lighting fixture doesn't want a \$20 lamppost." On the downside, "Ninety percent of new construction is over budget before the lighting goes in. So people tend to invest any remaining dollars

in interior fixtures and purchase something cut rate for outside."

Competition, changing consumer tastes, and misfortune have often stimulated creativity and resilience in Bruce's operations. When his Chestertown shop burned in 1990, he was up and running within 90 days in nearby Price with 1,600 additional square feet, despite the \$30,000 loss. As materials became more expensive, he saved cutoffs for shingles, stavebuilt birdhouses, composters, and strawberry towers. With turned posts, he offered "clad" bases with 11/16"-(17mm-) thick mitered laminates all around, essentially converting a  $4" \times 4"$  (10cm × 10cm) into a  $5" \times 5"$  $(13cm \times 13cm)$  for a more robust look with less waste.

Not every strategy has been successful. Advertising and company sales reps failed to meet expectations. Even turned lampposts have proven difficult to sell at competitive prices. While his square tapered post sells wholesale for \$150, Bruce needs \$300 for the more time-consuming turned version that will retail for \$400 or \$500. Meanwhile, the big wood products companies down south can knock out ten to twenty posts an hour with their automatic rotary-knife lathes and sanding machines. But he remains the go-to guy for extra-long bored posts.

The day is approaching when Bruce will put his company on the market after a nearly forty-year run. He is eager to pass on the knowledge gained from a lifetime of working wood, from his family's door and sash company to his present workshop of ingenious machines. Along the way, he's broken almost as many rules as he's learned and come out ahead. In the end, "Quality is the number-one thing. If it's got my name on it, it's something I'd want in my own yard."

David M. Fry turns wood and writes near Washington, D.C.



# CREATURES, Connections, and CIRCULAR CUTS



rafting masterworks of wood, ceramics, or metal—whether for utility or simply the delight of the eye—historically has been predicated upon intensive training, as generations of master craftspeople have counseled their apprentices in the tools and techniques of their trade. In today's woodturning circles, a younger generation of makers has taken advantage of the mentorship of artistic elders, whose creative minds have unlocked technical and stylistic approaches for new turners to draw upon. For Pennsylvania's Derek Weidman, this reality has contributed to a body of work unlike anything that has preceded him. In looking at the story of Weidman and his innovative sculptural forms, we begin to see how turners of all persuasions are tied into a decades-spanning web of influential discourse.

#### **Foundations**

Whether it is genes, a personal calling, or fate, the life of the wood sculptor was custom fitted for 33-year-old Weidman, who was born and raised in the shadow of Philadelphia—a city with a rich history in early-American furniture-making. Weidman's father dedicated his free time to extensive woodturning and decoy carving. With young Derek growing up amid the circuit of woodworking shows (a setting he calls his old "playground"), the seeds were planted early for the development of his deep-seated visual processes.

Likewise, hints of Weidman's eye for design were uncovered while he was an impressionable three-year-old. Before he was able to create with his own hands, his mother would sketch freehand pictures for him. Young Derek would cry persistently until her drawings were altered to his compositional liking. When finally able to pick up the pencil, he drew incessantly and soon became attracted to the creative flourishes of

comic book art, particularly the work of illustrator Todd MacFarlane. Weidman realized as a young artist that the sweeping, dark lines of this style (similar to the bold, black outlines in effective tattooing) would not require what he calls "cheating"—that is, the process of drawing from study.

With this sensibility, Derek regarded the standard rules of fine art practice with apathy during his adolescence a mindset that went hand in hand with the lack of premeditation in his illustrations. However, with maturity came the unavoidable exposure to the various conventions of painting and sculpture. This led to Weidman's captivation with Hieronymus Bosch's emotive triptychs, tribal art of various African societies, Salvador Dalí's surrealist dreamscapes, Inuit animal figures, and Constantin Brâncuși's sculptural masterpieces. It is clear that the thread weaving its way through these seemingly disparate influences is Weidman's natural attraction to work not solely grounded in reality.

#### The "turning" point

Weidman has received much commendation over the last ten years, but his early success did not forge itself overnight. After an initial pursuit of philosophy in his undergraduate studies, he returned to his father's studio at the age of twenty-one and began a series of turning and late-night carving sessions. This homecoming was a deeply personal experience, as the reunion with his father marked the end of a years-long separation between the two. Eager to make strides forward, Weidman acquired a foundation of lathe fundamentals through local woodturner Dave Hardy, who has mentored numerous turners in the region.

After a chance encounter with furniture maker and woodturner Mark Sfirri in 2005, Weidman was persuaded to take a class under his guidance at Bucks County Community



College (BCCC)—an experience that served as a turning point in his artistic identity and technical development. Sfirri, who was named a distinguished educator by the Smithsonian's James Renwick Alliance in 2010, opened Weidman up to the potential of the lathe as a carving tool. Sfirri espouses a handsoff, self-discovery approach to both his teaching methodology and artistic practice. "My teaching informs my making, and my making informs my teaching," he notes. This approach would appear to fit like a glove for Weidman, but the freedom often allowed him to neglect the expectations of the classroom. As Sfirri humorously recounts, "Derek was an unusual student in that he seemed not to want to do the assignments."

Much the way Weidman forged his own path after (and while) studying at BCCC, Sfirri was similarly influenced by the unrestrictive instruction of famed Danish furniture maker Tage Frid, who mentored him in the 1970s during his time as a student at the Rhode Island School of Design. Furthermore, with a lack of instructional books and videos in the field of woodturning at the time, there was essentially no way for Sfirri not to be inventive at the lathe. And according

**Doug Weidman,** 2001, Bachelor Herd, Maple, paint, 11" × 8" × 8" (28cm × 20cm × 20cm)

Derek's father Doug, a turner and carver, set an early precedent for Weidman as a maker working in wood. Made from a single piece of maple, the elephant profiles in this piece were turned, as in German ring turning but in this case on the outside of a vessel.

Photo: Derek Weidman

to Mark, the totality of Frid's faceplate and spindle-turning instruction "lasted about an hour," so he was forced to find his own way in technical matters. Sfirri's desire to expand beyond bowls and platters would become the jumping-off point for his later journeys into the world of asymmetrical expression, with furniture maker Alphonse Mattia being the most prominent influence on his ambitious new direction.

#### An artistic identity emerges

Looking for an innovative direction of his own, Weidman began making provocative works that might be mistaken for maquettes of *Cirque du Soleil* characters. His artistic identity also became refined through fortuitous encounters with many of woodturning's principal names. Some of his most transformative experiences came through the series of Echo Lake Conferences in Pennsylvania from 2005 to 2010, where he met Jacques Vesery, who helped narrow Weidman's focus on head forms and influenced his use of color and pyrography.

This period in Weidman's career overlapped with works such as *Knight Fall* and *Torch* being featured in AAW symposium exhibitions. It was common at that time (and still is) for Weidman's sculptures to be one of the few figurative works presented in a display of turning virtuosity. Moreover, the provocative and circular cuts of the lathe, which are left evident in the work, are a defining characteristic that distinguishes him from his peers.



#### The language of the lathe

This circular language is the cornerstone of Weidman's multiaxis turning, a practice where a wood blank is turned between two axis points, taken off the lathe, and then repositioned on an alternative set of axes—hence the term multiaxis. Just as in segmented work, multiaxis turning is predicated upon mathematical principles critical to executing the finished product. However, despite a process that typically involves six to ten axes for Weidman (and sometimes more than twenty), his calculations are mostly by feel in an approach that can only be called free-form lathe sketching. Prior to turning, Weidman conceptualizes the upcoming form by thinking of it in sections of circles. The front and back profiles are turned on the first one or two axes, and details are applied on subsequent sets of points.

With such an intensive process of reconfiguration and perceived mathematical necessity, one might wonder how Weidman is able to visualize the lines of his cuts and the final product. The short answer: intuition attained from persistent experimentation,

hard-earned years of familiarity with his tools, and the spark to "just go" in the creative process. His successful "sketching at the lathe," using multiple axes without calculation, sets Weidman apart.

He is even able to demonstrate this spontaneous approach interactively for students. Instead of charting a pre-determined course, he receives a project suggestion from the audience (for example, a horse, eagle, or bear) and uses it as an instruct-as-you-go vehicle to demonstrate his intuitive decision-making. While some multiaxis techniques are universal, it is understandable that Weidman needs a teaching format with flexibility, as all of his works are one-off compositions. The instructional manual for a four-axis boar is going to differ from that of a nine-axis tiger. It is the difficult hashing out of how cuts work with one another on the wood that is an ongoing investigation in Weidman's progression.

This rigorous process is a tug-of-war between mind and material, the latter of which is usually tight-grained holly. This pale wood is the perfect vehicle for showcasing the light acrylic paints that adorn the surface of Weidman's forms. The end results are compositions that are part sculpture and part colorful canvas. Like Binh Pho, Joey Richardson, Malcolm Zander, and Donald Derry, Weidman uses bold color in his work, yet the turnings are even bolder in their execution.

The perceived instability of off-axis work can deter even the most experienced turners. Many would label Weidman a glutton for danger, or at the very least a crazed prodigy lacking any sense of self-preservation. There are instances in Weidman's work where large, heavy blocks of wood are positioned on the lathe, resulting in a tremendous amount of weight rotating off-center. The visual effect can be an unnerving experience for those unacquainted with multiaxis norms. Weidman is deeply mindful of the perceived foolhardiness and counters this with a mindset that embraces responsible practices of technical ingenuity.

#### **Exposure and progression**

In the late 2000s, the attention-grabbing nature of Weidman's multiaxis forms led to one of his big breaks in gaining public recognition: having work shown through Del Mano Gallery at SOFA Chicago (the renowned art fair dedicated to sculptural objects, functional art, and design). Suddenly, Weidman went from displaying his work in primarily local, Pennsylvania-based settings to being on an international stage that highlights the finest achievements in wood, glass, ceramics, and other media.

An important part of Weidman's artistic development was his Thought Series, which began as a way to confront the crippling and intrusive thoughts that resulted from obsessivecompulsive disorder. With this series, a diversity of identities and beliefs (thoughts) were referenced in both historical and mythological figures, particularly deities. While vessels typically carry empty space, these head forms were vessels for thoughts. Standout works from this period include Gaia, Neptune, and Among the Cairns, which put Derek's internal narratives on view via surface details. "I was dealing with head forms in a field of vessels," he notes, recognizing that his sculptures contrasted even with many of the experimental turnings of the time.

With a now-increased capacity for handling his material, Weidman uncovered stronger ways to develop his objectives at the lathe. His 2010 residency with the International Turning Exchange (ITE) jumpstarted his ingenuity. Take, for example, the influx of Celtic mythology in Brighid, on which he began using the burnt edges that would later become a prominent feature in his Animal *Series*. The extensive blowtorching in this work brings graphical qualities to the sculpture, while also serving as an effective alternative to the sanding process. The technique was particularly effective for the expressive depiction of Brighid, a goddess of flames who was venerated for her poetry. Derek's ITE residency also prompted works such as Mandrill,

We are part of this animal kingdom, but at the same time we've kind of mechanically separated ourselves from it."

—Derek Weidman

which at the time was the largest piece he had ever attempted and is now in the collection of The Center for Art in Wood. At ITE, he was continuing to work out the solutions to his questions, and he sought the right brand of circular language that could develop his forms.

For Derek, greater exposure has meant greater freedom to experiment and take on new projects. 2012's *Father's Watch* is an important work in this progression, as he expanded beyond the single profile and included a multiaxis robin, nest, and set of eggs. This piece pays homage to his father's bird carving, while thematically referencing his father's "watch" over the family after Derek's mother passed away when he was a child. Weidman's more recent work

has accentuated movement and fluidity through the use of small angle grinders. While many of his early works felt grounded, or heavy, these new offerings depict creatures ready to lift off their stands and extend into the air. There is a lightness present, especially in *Blue Claw*, which employs a softer color scheme than many of the darker compositions of the *Animal Series*.

#### **Communicating through the lathe**

After witnessing the ambition of his practice and the outward appearance of his forms, one may be surprised to learn that Weidman's imaginative works are not meant to be true abstractions, but merely the most effective rendering possible of his



Father's Watch, 2012, Holly, pigments,  $7" \times 6" \times 7"$  (18cm × 15cm × 18cm)

Blue Claw, 2015, Holly, pigments, 14" × 10" × 9" (36cm × 25cm × 23cm)

The tool marks, emphasized with color, help create a sense of motion and "pinching" in this work.







(Left) Saint of Bossou, 2015, Holly, pigments, 10" × 10" × 10" (25cm × 25cm × 25cm)

After hearing of chimps in the Bossou area of Guinea seeking out and disarming hunters' snares, Weidman offered this depiction of a chimpanzee as saint.

Photo: John Carlano

(Right) Pan, 2009, Holly, ebony, pigments,  $10" \times 7" \times 6"$  (25cm  $\times$  18cm  $\times$  15cm)

Photo: Bill Smith

figures through the language of the lathe. Derek is able to filter his freewheeling approach through the traditional toolkit of beads, coves, and straight lines.

"I've chosen a machine that forces me to make visual compromises," Weidman declares, yet he delights in the restrictive nature of his lathe practice. Derek is among a select group of woodturners who achieve creativity within the framework of multiaxis turning—along with artists such as Mark Sfirri, Jean-François Escoulen, and Alain Mailland. His expressive swipes of the lathe also echo the harsh chainsaw slashes of Mark Lindquist in the 1980s.

Thematically, Weidman is troubled by the careless way human beings co-exist with other creatures—an issue he sees firsthand in his volunteer work at a wildlife rehabilitation center. *Mend* was directly influenced







 $Connection, 2015, Holly, steel, pigments, 7' \times 4' \times 1' \\ (2.1m \times 1.2m \times 30cm) \\ \quad \text{\tiny Photos: John Carlano} \\$ 

Metal fabrication with help from Ron Gerton.

Mend, 2015, Holly,

Photo: John Carlano

pigments, 8" × 5" × 31/2"

Hands cradling a bird with a broken and bandaged

wing, this piece was directly inspired by Weidman's

time at the AARK, a wildlife rehabilitation center.

 $(20 \text{cm} \times 13 \text{cm} \times 9 \text{cm})$ 

by his experiences there, and Saint of Boussou and the arctic-preservationthemed *Polar Kinship* are particularly significant expressions of Weidman's concern. Pan (a Greek god of nature) is an early work Weidman made after helping a family of raccoons cross the street by blocking traffic with his car—a fitting story illustrating Weidman's view that all species are interconnected and important in everyday experience. The straddling between motifs of mechanization and the organic in Weidman's Animal Series reflects his conviction that humans too readily distance themselves from their place in the natural world. He asserts, "We are part of this animal kingdom, but at the same time we've kind of mechanically separated ourselves from it." Weidman's recent Connection is a tour-de-force work of sculpture, installation, and scale that showcases this dichotomy while suggesting the reintegration of the natural and the industrial.

#### **Collaboration**

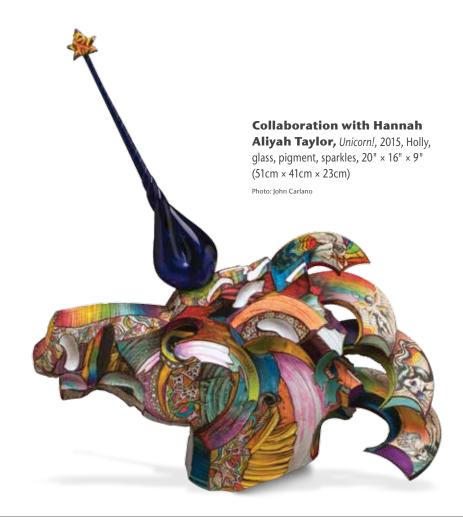
With such specialized work, it would be fair to conclude that Weidman is in command of his creative domain. However, collaboration is a deeply valued element of his practice, as he believes it is essential for personal growth. Weidman insists that working with others helps to assert a stronger artistic voice, as a bold voice avoids the possibility of getting one's contribution overshadowed in the collaborative process. His joint work with Graeme Priddle, Binh Pho, Ashley Harwood, Norm Sartorius, Jacques Vesery, and others (including non-turners) has given him an appreciation for unfamiliar techniques. He notes, "An artist's work is often very much of their identity, so to see something that is yours change drastically by someone else's hands can allow very rapid breakthroughs in one's own work."

This influx of new technique is not something he guides and micromanages in the collaborative process. As Derek affirms, "Telling another artist how to do what they do is, in my opinion, absolutely against the nature of a healthy collaboration." Pursuing a goal in partnership is another example of the way Weidman pushes himself and breaks his own rules. He is all about looking ahead, and the thrill of the next big idea is chased like a fix. During time at the lathe, rather than prescribing a course of objectives for his work, Weidman does a call-and-response exercise with the material until he reaches an emotionally satisfying endpoint. The finish line is always unknown at the outset, and he honestly admits, "If I had decided on these endpoints, I would have never made the work that I'm making now—I'm not clever enough."

#### The new generation

The melding of dialogues and perspectives in contemporary woodturning is advantageous for Derek Weidman and the budding new wave of turners. While there is certainly a cross-section of opinions for both practice and vision, the close-knit community of woodturners comprised in the AAW provides valuable opportunities for discussion between groups of geographical and generational separation. It is easy to believe that the more ambitious turnings of today are sitting on an island unto themselves, but Derek Weidman is the perfect example of how innovative work is simply the next logical chapter in the expanding history of woodturning.

Michael McMillan, Associate Curator at Fuller Craft Museum in Brockton, Massachusetts, can be reached at mmcmillan@fullercraft.org.

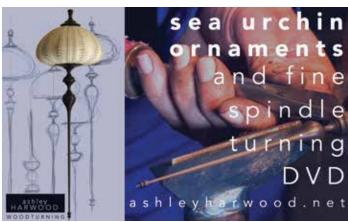






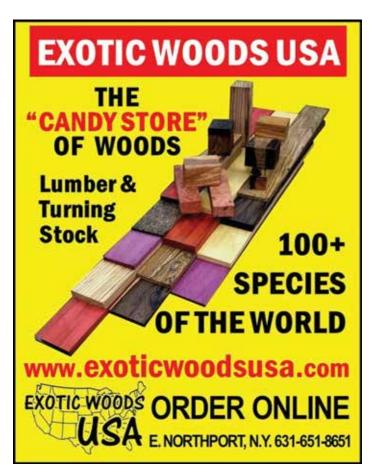




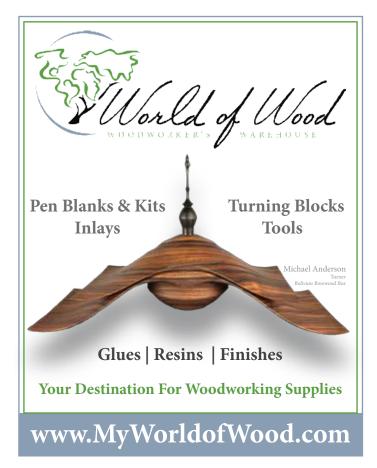


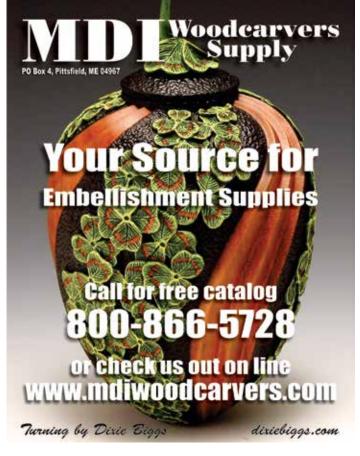














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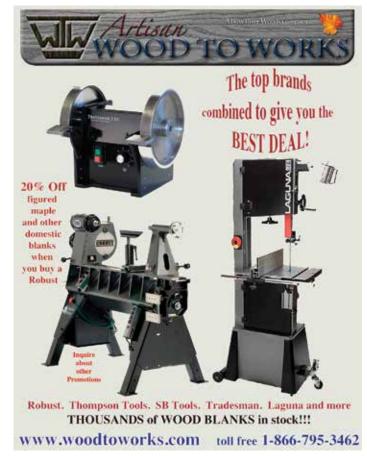
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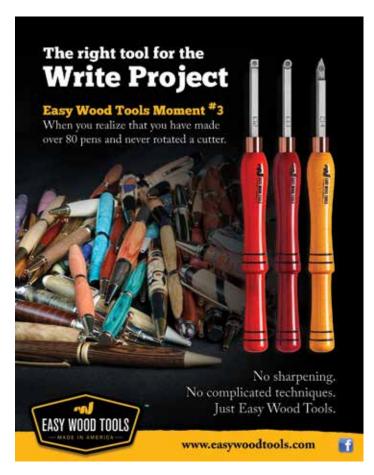
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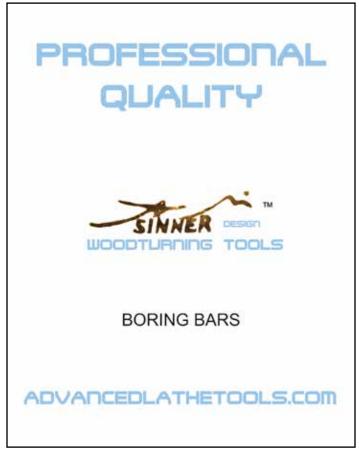
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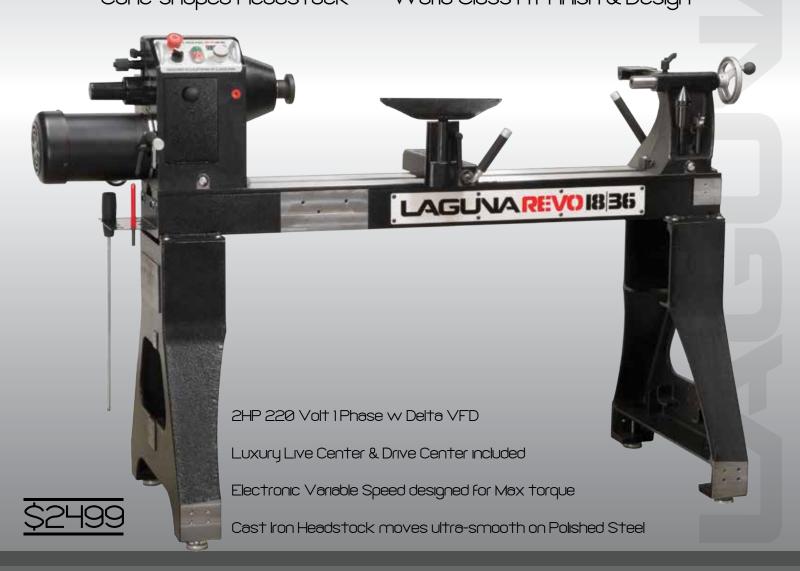




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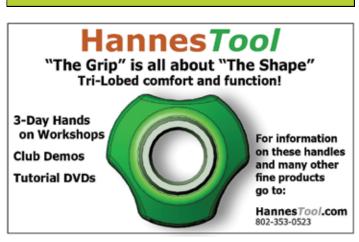


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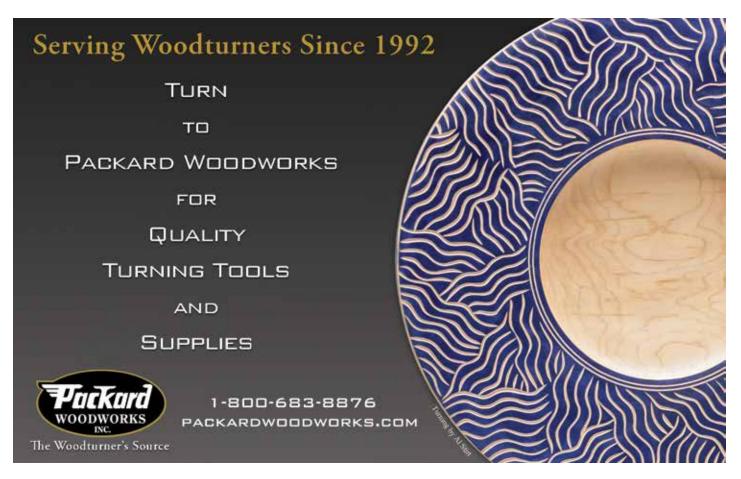
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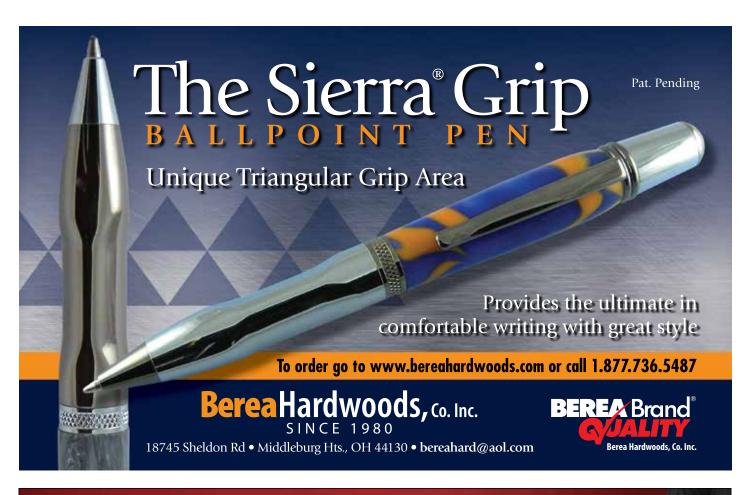
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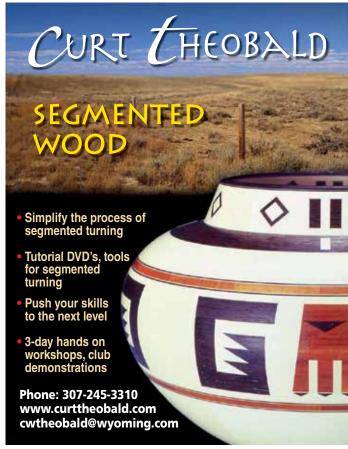
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For more, visit kimberlywinkle.com.

(Top and right) Tit for Tat Tables, ongoing production since 2009, Poplar, mahogany, 22" × 20" × 20" (56cm × 51cm × 51cm)

(Middle) Yellow Scribble Stool, 2013, Poplar, 15" × 15" × 15"

(Bottom) Riff Rattle, 2014, Poplar, horse hair, linen thread,  $3" \times 6" \times 6"$ (8cm × 15cm × 15cm) Photo: Ben Corda









#### JOURNAL ARCHIVE CONNECTION

Kimberly Winkle discusses the creative use of milk paint, including special effects, in her 2012 AW article, "The Magic of Milk Paint" (vol 27, no 6, page 28). AAW members can access this and all past journal articles online at woodturner.org.

