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AMERICAN WOODTURNER

Journal of the American Association of Woodturners

June 2018 vol 33, no 3 • woodturner.org

BINH PHO
2018 POP MERIT AWARD RECIPIENT

CUTTING BOWL BLANKS FROM A TREE

INSIGHTS ON VERY DEEP HOLLOWING

OUT OF THE WOODS
TRADITIONAL FORM REVISITED

Professional Outreach Program Exhibition

Out of the Woods: Traditional Form Revisited

AAW International Symposium, Portland

Photos by Tib Shaw/AAW, unless otherwise noted.

Out of the Woods – Traditional Form Revisited is the twelfth in a series of exhibitions presented by AAW's Professional Outreach Program (POP). Intentionally international, the shows feature small-scale works by emerging, mid-career, and established artists. This year, there are thirty-eight pieces by artists from ten countries and eighteen states.

The exhibition will be on view during the AAW International Symposium, Portland, Oregon. There will be an opening reception June 14, 5:00 to 6:30 p.m., and all pieces will be included in a live and online auction at the Symposium June 16, 3:30 PDT. Funds raised support POP initiatives, including fellowships, exhibitions, Instant Gallery awards, and panel discussions. For more, visit tiny.cc/PortAuctions.

Though there is always an interesting range in the interpretations of Professional Outreach Program (POP) exhibition themes, this year's theme was particularly open to variety. The first part of the title, *Out of the Woods*, could just mean that one's entry will be made of wood. Or since it's plural, it could require several species of wood. Or one could focus on the idea that the piece comes from the forest, as the burned and painted surface of Mike and Georgianne Jackofsky's bowl illustrates. Of course, another interpretation is that one has escaped danger, which is implied in Jim Piper's piece, in which a pristine bowl emerges from a charred tree limb.

The subtitle, *Traditional Form Revisited*, could refer to traditional turned forms, returned to with their tradition intact, as with Steve Sinner's classic vessel, or reinterpreted with only an allusion to tradition. Danny Kamerath's carved bowl looks like a traditional form that's been altered, something like a thrown ceramic pot that has been pushed and formed while still in a malleable state. Or it could be traditional form in another sense, as in the case of Mark Waninger's blackberry, a traditional form from nature.

There are wild cards thrown into the mix from people outside the world of turning, who often bring a different understanding to the table. Katie Hudnall's whimsical ode to the wingnut is one example, as is, in contrast, Kristina Madsen's precise chip-carved box, whose accompanying haiku refers to the woodlot, alluding to the first part of the exhibition's title.

This is not to take away from the artists who make up the rest of this creative exhibit, whose work ranges from more traditional form and technique to the completely unexpected, as Mike Lee's nested pod forms and Kristin LeVier's wrapped egg demonstrate. One thing is for sure, there is something here for everyone. This exhibition ranks right up there with the best of them. ■

—Mark Sfirri, POP Committee

Danny Kamerath,
Mesquite Vessel, 2018,
Mesquite, 4" × 5¾" × 4"
(10cm × 15cm × 10cm)
Photo: Courtesy of the artist

Michael Lee,
Honeymoon Suite, 2018,
Koa, tagua nuts, milk paint,
2" × 6" (5cm × 15cm)

Mark L. Waninger, *MLW Berry,* 2017, Holly, maple, 4¼" × 5¾" (11cm × 15cm)
Photo: Courtesy of the artist

James Piper, *Treasure in the Ruins,* 2017, Douglas fir, 4⅜" × 5¾" × 4¼" (11cm × 15cm × 11cm)
Photo: Courtesy of the artist

Kristin LeVier, *Nest,* 2018, Maple, compressed cherry, acrylic paint, 4" × 5½" × 4" (10cm × 14cm × 10cm)

Steve Sinner, Untitled, 2018, Myrtle, gold leaf, spar urethane, 6" × 3½" (15cm × 9cm)
Photo: Courtesy of the artist

Katie Hudnall, *The Right Nut for the Job,* 2018, Salvaged woods and plywood, fasteners, glass lens, various polychrome, found wing nut, 4½" × 5½" × 6" (11cm × 14cm × 15cm)

Kristina Madsen, *Box,* 2018, Maple, dyed pear wood veneer, ebony, silk, 1¾" × 5⅝" × 3⅝" (4cm × 14cm × 9cm)

Mike and Georgianne Jackofsky, *Enchanted Forest,* 2017, Boxelder, ink, 2¾" × 3⅝" (7cm × 9cm)

AAW | AMERICAN ASSOCIATION OF WOODTURNERS

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

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

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

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

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

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

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

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

Or join online at woodturner.org

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

MIX Paper from responsible sources FSC® C084269

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COVER

Cover – Neil Turner, *Nature's Form II*, 2018, Jarrah, aluminum tubes, 6" × 4¾" (15cm × 12cm)
Photo: Tib Shaw/AAW

Nature's Form II is part of this year's themed Professional Outreach Program (POP) exhibition, *Out of the Woods.*

Back Cover – Cindy Drozda

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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.

*Web address is case sensitive.

Editor's Note

There are so many avenues to explore in woodturning. For example, have you ever worked with banksia pods? Cindy Drozda has—extensively—and she shares her knowledge of this unique, natural material in a feature article on page 32. Cindy has mastered many areas of turning beyond banksia, including fine finials, working with burls, and impressive hollow forms. Don't miss the chance to learn from Cindy and other demonstrators at the AAW Symposium in Portland, Oregon, June 14–17. It's a surefire way to turbocharge your learning curve.

I'm really proud to present the lineup of authors in this issue. We have not one but two past AAW presidents, who continue to be passionate about woodturning: Tom Wirsing brings us up to date on advances in tool steels and grinding wheels (page 38), and Kurt Hertzog offers practical tips for taking better photos (page 24). What these and the other authors have in common is a passion for various aspects of woodturning—and the impetus to share what they know. Please reach out to me with ideas on what you'd like to share or what you'd like to see covered within these pages.

—Joshua Friend

From the President

Learning and friendships

About three years ago, a guy we'll call Bud contacted me about turning lessons. Those lessons evolved into long-term mentoring and I hope a longer-term friendship. When teaching Bud, I stressed that you learn more from your failures than from your successes and that practicing turning is often more important than making pieces. To emphasize this point, I showed him that my firewood pile had a number of partially turned pieces. Trying more demanding projects might result in failures, but abilities would improve much more quickly.

One day I saw Bud loading my discarded pieces into his car. He told me he was taking them and finishing them, then selling them to tourists in Florida. When I asked for my cut, he offered me some marketing lessons. At our last club meeting, he showed some pieces he copied from me, telling other members he's helping me expand my abilities. I guess Bud was just being complimentary.

When writing the president's letter for each issue of *AW*, I do a draft, then send it to various people for review and comment. One of those people is Josh Friend, who is responsible for this journal and some of AAW's other editorial functions. What you are reading now is my second letter for this edition, as Josh pointed out with the subtlety of "horseradish on a jelly sandwich" that my first draft was a failure. I threw that draft onto the firewood pile. I'm pretty sure Bud won't steal it because I don't believe he can read!

Being a sensitive person, with tears flowing, I wrote this, my second draft. By the way, the first draft related to safety issues at the AAW's Annual Symposium. Again, being a sensitive guy, I took a middle-of-the-road approach. Josh correctly advised that safety is an issue that AAW should deal with assertively throughout the year, not just at its Symposia. Josh is my writing mentor and, hopefully, a long-term friend. Again, I learn more from my failures than from my successes.

When I received the April 2018 issue of *American Woodturner*, I thought it was outstanding. The articles by and about my friends Malcolm Zander and Nick Agar made me want to get in the shop and stretch my abilities—or, more likely, add to my firewood pile. Some members told me they thought the April edition might have been too "artsy" for newer members. John Kelsey came on board as editor of *Woodturning FUNdamentals*. His outstanding background ensures a quality product that will focus on the needs of our beginning and developing turners. I hope that those who say *AW* is too artsy will direct newer turners to our *FUNdamentals* publication, which is designed to help turners prepare for future achievements. By the way, I didn't mention the criticisms to Josh—wouldn't want to hurt his feelings.

The other thing I remind Bud and myself of is that our objective, whether in turning or writing about turning, is to have fun. To that end, I can't wait to get out into the shop, turn on Arlo Guthrie singing "Ring Around a Rosie Rag," and take to heart his lyrics: "I had a friend, a friend I could trust." The great thing about woodturning is we all acquire a lot of friends. Just be careful about trusting the "Buds."

Final thoughts

Just a thought on safety: pay attention to the long-term issues as well as the immediate threats. Protecting your lungs is cheaper and makes more sense than dealing with the damage. Oh, and about lifting those logs, get "Bud" to do the heavy work. You'll feel better the next morning, and Bud's over the hill anyway. Maybe I'm not such a sensitive guy.

Talking about friends, congratulations to Jean LeGwin on her upcoming recognition at our Portland Symposium. This year, Jean will receive the AAW Honorary Lifetime Membership award (see page 7 for more).

Looking forward,

Greg Schramek
President, AAW Board of Directors

POP – 2004 to Present

As the Professional Outreach Program (POP) enters its eighteenth year, it is clear that a huge number of AAW members do not know what the POP is or the extent and importance of its activities within the AAW.

The POP was established in 2004 to help address the needs of professional woodturners and the growing number of those wishing to become professional. To begin with, we have never attempted to define the term *professional* because we don't want to establish limits that would instantly separate one person's ideas from someone else's.

Instead, the intent of the POP is to address the concept of *professionalism* in woodturning through panel discussions and exhibitions at our national conferences, as well as articles and announcements about the POP in this journal and on the POP webpage at woodturner.org. Our intent is to broaden the horizons of our field with topics that help people grow in their personal artwork. Some of these topics include design, photography, video language and communication skills, exhibitions and marketing, and critique. POP also conveys grants and awards of recognition—all with the ultimate goal of instilling a sense of community that will help the field of woodturning grow into the future on all levels.

We welcome those who can attend this year's conference in Portland, Oregon, and encourage all AAW members to participate in future conferences. Come benefit from the POP panel discussions, be inspired by exceptional works in POP's annual themed exhibition (this year titled, *Out of the Woods, Traditional Form Revisited*), and enjoy the merits of this unique learning experience through the POP.

All POP activities and awards are supported with proceeds from the annual POP auction, held during the AAW Annual International Symposium.

—David Ellsworth

2017 POP Merit Award recipient Ron Fleming gave an informal talk at a special exhibition of his work during the AAW Symposium in Kansas City.

Photo: Andi Wolfe

Call for Demonstrators AAW Symposium 2019

The AAW's 33rd Annual International Symposium will be held in Raleigh, North Carolina, July 11–14, 2019. To apply to be a demonstrator, visit tiny.cc/CallsforEntry (case sensitive) between May 1 and August 1, 2018. For more information, call the AAW office in Saint Paul, 877-595-9094 or 651-484-9094, or email inquiries@woodturner.org.

Andy Cole of Hawai'i demonstrates nested natural-edge bowls at the AAW Symposium in Atlanta, Georgia, 2016.

Photo: Andi Wolfe

Correction

On page 38 of the April 2018 issue of *AW* (vol 33, no 2), the first venue for the *New Horizons* exhibition was noted as the Allied Arts Gallery. The correct location is Gallery at the Park, 89 Lee Blvd., Richland, Washington. For more, visit galleryatthepark.org.

WIT Grant Opportunities

WIT (Women in Turning) is dedicated to encouraging and assisting women in their pursuit of turning, to sharing ideas and processes to further members' skills and creativity, and to increasing participation of women in the field of woodturning. For that purpose, WIT has established several types of grant opportunities that support WIT objectives. Grant applications will be evaluated and funds distributed quarterly. To check the grant types currently available and to access the online application, visit tiny.cc/WITGrants.

Symposium Volunteers Needed!

The success of every AAW International Symposium is due in part to the many individuals who volunteer for a variety of tasks before and during the event. Many volunteers for the Portland Symposium are already at work. If you plan to attend the Symposium this year, please support this vital effort. The greatest need is for demonstrator assistants, aids in the Youth Room, and help in the Instant Gallery. When you participate, the rewards are enriching; even two hours of your time will be appreciated.

For your convenience, we have created an online volunteer sign-up tool; just visit tiny.cc/2018Volunteer. This page provides a link to volunteer opportunities and specific time slots needed. If you have questions, please email the 2018 Symposium liaison and volunteer coordinator, Dale Larson, at volunteer@woodturner.org.

2019 POP ARTIST SHOWCASE OPPORTUNITY

Application period: August 15, 2018, to October 1, 2018

Each year the Professional Outreach Program (POP) showcases two wood artists at the AAW's Annual International Symposium. They are either experienced artists who have made significant contributions to the woodturning field but have not received appropriate recognition or emerging artists who have the potential for making significant contributions to the field. The two selected artists each give two demonstrations and receive free Symposium registration plus a small honorarium. Their work is displayed prominently in the Instant Gallery. The 2018 artists will be Sally Burnett and Vivien Grandouiller.

Keith Holt was one of the two POP Showcase Artists featured at the 2017 AAW Symposium, Kansas City.

Photo: Andi Wolfe

Artist applications are invited for the 2019 AAW Symposium in Raleigh, North Carolina. Applications will be juried by the POP committee. The application period is August 15, 2018, to October 1, 2018; see online application at tiny.cc/Calls.

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 registrations, 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.

At the end of 2018, 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; international winners will be responsible for shipping costs from the U.S.

2018 Donors

(Others may be added during the year.)

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- Mike Mahoney (bowlmakerinc.com) 16 oz. utility oil
- Thompson Lathe Tools (thompsonlathetools.com) $100 gift certificate
- Hunter Tool Systems (huntertoolsystems.com) $100 gift certificate
- Trent Bosch (trentbosch.com) Trent Bosch DVD
- Nick Cook Woodturner (nickcookwoodturner.com) Nick Cook DVD
- Powermatic/JET (jpwindustries.com/brands) Lathes

AAW Chapters/Symposia (each donating an event registration)

- Tennessee Association of Woodturners
- Turn on Chicago
- Turning Southern Style
- Ohio Valley Woodturners Guild
- Oregon Woodturning Symposium
- North Dakota Symposium
- Southwest Association of Turners (SWAT)
- Totally Turning Symposium

Jean LeGwin

2018 AAW HONORARY LIFETIME MEMBER

Terry Martin

The AAW Board of Directors at its discretion confers honorary lifetime membership to persons who, in its judgement, have made extraordinary contributions to the American Association of Woodturners and the advancement of woodturning.

Photo: Terry Martin

With around 16,000 members, probably the only generalization you can make about the AAW membership is that they all have an interest in woodturning. Beyond that, those who belong to this remarkable organization range from absolute beginners to the most successful professionals, from members who live only a few miles from AAW headquarters to those who live at the far ends of the earth. They include retired surgeons, active schoolteachers, farmers, office workers, would-be artists, "round and browners," and more—all united by their love of turning. For a long time, I have wanted to write a story about one person who embodies the interests and values of AAW, but it is quite a challenge. How do you choose such a person? Does he or she need to be a good turner? A frequent volunteer? An active local chapter member? As is often the case, the answer was right under my nose.

I have known Jean LeGwin since we sat together years ago at one of the annual AAW Symposia. Jean is a small bundle of energy with a delightful twinkle in her eye, and it didn't take us long to recognize that we are kindred spirits. Regular meetings at woodturning gatherings and visits to her home in North Carolina have guaranteed a lifetime friendship with her and her partner Peg. But Jean is a very modest person, so the depth of her commitment to the AAW only became apparent after I talked to many other people.

"Try it—why not?"

Jean's earliest memory of working with wood is of whittling when she was seven years old. She loved working with her hands and puts it down to the influence of her father: "He put himself through college by making furniture," says Jean, "so he was very good with his hands." Her father was a USAF officer who joined the military during WWII. Jean was born in 1944 in Wilmington, North Carolina. The family lived on various bases in many states across the U.S. and even as far away as Japan, so from the age of four, Jean remembers moving on average every two years. She says that on the bases there were "hobby shops" where personnel could indulge their interests: "You could do anything you wanted, like fix cars or build furniture. My father always encouraged me to help him and taught me to believe a girl could do anything. He used to say 'Try it—why not?' When I was about 10, I bought a used bicycle for $5. I took it all apart, painted it, and put it back together. There were a few parts left over, but it worked! I gained confidence to try things I knew nothing about by doing things like that."

Jean's military-base lifestyle ended when she went to Duke University in Durham, North Carolina, in 1962 to study English. "I've always loved books," Jean explains, "and I remember my first purchase from my allowance was a book. In all the years we traveled from base to base, I often had to leave things behind, but my books were the first thing I packed, and I still have that first book." After graduating in 1966, Jean took a job representing publishers at book fairs, making a lot of contacts and gaining many insights into the publishing industry. In 1974, she set up a partnership with a friend in Austin, Texas, specializing in the design and production areas of publishing. This was followed by a period as a production manager in Boston for several years before she started her own design and production company working with textbook publishers, university presses, and small publishing houses producing ▸

a wide variety of books and journals until 2003.

In 1980, Jean bought a house in Boston and decided to renovate it herself. With this experience gained, she then bought a bigger house and worked on every aspect of house renovation. "Taking a run-down house and turning it into something valuable is a very special feeling," she says proudly. It was during this time that Jean first discovered woodturning. "I was at a woodworking supply store with Peg. Beth Ireland was there demonstrating woodturning, and while I was buying supplies, Peg enrolled us in a class. We turned a mallet, a pen, a box, the usual things that beginners do. It was the green-wood bowl that really hooked me—I loved the long ribbons of shavings. I thought, 'I don't care if I make anything, I just want to make shavings!' Soon I bought a lathe and started turning in my unheated barn." The energetic Jean soon enrolled in a woodcarving class with Janet Collins at North Bennet Street School in Boston. Janet told her about the AAW, so Jean joined and also became a member of two local AAW chapters, South Shore Woodturners and the Association of Revolutionary Turners.

Coming home

Jean retired in 2003, and in 2005 she and Peg moved back to Wilmington to care for her mother. They built a small house on land next to her parents' home and beside that she built her dream workshop. "I remembered the cold in my shop in Boston, so air conditioning and heating were very important. I also wanted space, so my shop has a thirty-foot-square footprint. Because of all my years as a production manager, I am very conscious of workflow, so I have a big roll-up door for bringing wood right to my bandsaw, and I have a flexible layout with lots of natural light." You only have to stand beside Jean's lathe and look out the wide window to see how inspired Jean's plan was—the vista is priceless. Jean soon became involved in the local AAW chapter, WAWA (Wilmington Area Woodturners Association), and for some time her shop was the venue for WAWA hands-on workshops.

Seldom the one with the loudest voice in the room, Jean prefers working behind the scenes and creating structure for others to use.

Taking on bigger responsibilities

Jean's energy is astonishing and on top of all her activities at home, she gradually became deeply involved in the administration of the AAW at a time when it was undergoing significant changes, as she explains: "While I was still in Boston, the AAW had put out a call for volunteer members to help archive the journal, *American Woodturner*. Because of my publishing experience, I volunteered for what turned out to be a very long and involved process that I didn't finish until four or five years later. The best thing was that it gave me a great chance to carefully read all the back issues, so I learned a lot about the journal, woodturning, and the AAW." Jean's quiet strength and wisdom were soon recognized and she was asked to run for the AAW Board of Directors. She was elected in 2006. "I stayed on the board for six years and was put in charge of publications. I looked at how the budget was being spent and realized AAW was not using their money efficiently, so after convincing the others on the Board that a reorganization would be beneficial, we were able to increase the number of issues per year from four to six—for less money! I suppose the journal archive and the journal reorganization were my most important achievements for AAW."

While on the Board, Jean also served on several committees and was secretary for five of her six years of service. Since being off the Board, she has served as a Board advisor and became a founding and continuing member of AAW's Women in Turning committee.

A dedicated turner

Jean is an active member of a high-quality co-op gallery in downtown Wilmington, and it has given her work a strong focus: "Members take turns at staffing the gallery, so communicating with the public has given me more

"You soon learn that subtle changes in form make all the difference." —Jean LeGwin

Photo: Terry Martin

Jean's use of color and patterns adds distinction to this trio of bowls.

insight into what works best. I am proud that I support the gallery and earn an income. What's more, it has helped me hone my skills, so I am confident I can make anything I want to." Jean picks up one of her superb pepper mills and says, "Production turning makes anyone more efficient by developing good tool skills, and you soon learn that subtle changes in form make all the difference. I'd advise any turner to find an outlet and see if they can start a process that ends up with regular sales. It gives focus to your work and structure to your day in the shop."

Like many production turners, however, Jean soon identified the pitfall for the unwary. "Even though it can make you more perceptive," she says, "it can also lead to a narrow way of thinking. Now I'd like to free up my brain a little and concentrate on the part that is more challenging for me—creativity."

A fine example of Jean's use of local spalted timber.

Jean understands the importance of perfect lines and good form. Her woodturning expertise is surpassed only by her dedication to the mission of the AAW.

On wood and turning

Jean explains why she is so happy working with wood: "Wood is a live thing and we are surrounded by it. You can work it in many ways and do so many things with it. The process of making is so compelling that I believe most people would jump at the chance to make something if they are given the opportunity. Just put them in front of a lathe and they will go for it! With turning you can make a product from start to finish in a reasonable amount of time, but it also teaches you to be careful because you can't put the shavings back on when you make a mistake—or should I say, when you create a design opportunity!"

Jean's success with the AAW has been based on much more than her undoubted skill as a turner. There is something else that touches her deeply, as she explains: "Woodturning is a solitary activity and I am an introvert, so it suits me. But the woodturning community is a sort of family and it brings people together from different walks of life. Being in woodturning has taken me to places I have never been before, and I've made friends with wonderful people I never would have had the chance to meet. You get out of it what you put into it. At the local level, it's very direct—you get the chance to be mentored and to mentor others. If you have problems of any kind (wood, equipment, technique), put out a call and you will likely get an offer of help. With all the help available in the AAW and in local clubs, you can go from being a beginner to a competent turner in no time at all."

Sharing the energy

Jean never pushes herself to the fore, but after she became active in the Wilmington turning community, her wisdom and balance soon showed through: "As I became known as an experienced turner, people started calling for advice and I found myself passing on knowledge to those getting started. It has been both gratifying and humbling because I realize all the things I don't know and that there is usually more than one answer to every question. When I mentor people, I always encourage them to go to other people, too. I like to make sure that people learn the basics (beads and coves!) and learn to turn safely."

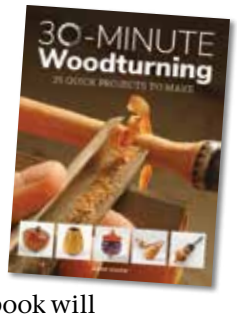
Reflections

When I asked Jean what woodturning has done for her, she thought long and hard, and her answer was typically humble: "It's taken me way out of my comfort zone and contributed to my personal growth. Being on the Board and working in a local chapter have brought me out of myself in ways I never imagined. I am a quiet person and I don't like the spotlight. I learned I had to be extremely well prepared to achieve my goals." Seldom the one with the loudest voice in the room, Jean prefers working behind the scenes and creating structure for others to use.

It's easy to write about the big names, but it is those hard workers who don't seek the limelight who make the AAW what it is. Jean initially refused outright when I asked if I could write about her, and it took a lot of time to convince her that AAW members should know more about her. I had just finished writing this story, when I received the unexpected news that Jean LeGwin had been selected to receive the AAW's Honorary Lifetime Membership Award. I am so proud of my friend Jean, and I hope her story touches many in the AAW and that more of us find time to acknowledge the legion of unrecognized members who work behind the scenes. ■

Terry Martin is a wood artist, writer, and curator who lives and works in Brisbane, Australia. He can be contacted at eltel@optusnet.com.au.

Book Review: *30-Minute Woodturning: 25 Quick Projects to Make,* by Mark Baker, Guild of Master Craftsmen Publications, LTD., Essex, England, 2018, 199 pages, paperback



Woodturning editor Mark Baker's latest book offers twenty-five skill-building projects aimed at the budding woodturner. While the title might suggest that the book is pitched at the turner who can only sneak short trips to the shop, think of the approach more like stopping into the gym, but with less pain. The concept here is that it is possible to build meaningful skills through a series of projects, each of which has been completed by Baker in thirty minutes—your mileage may vary! This book should appeal to anyone looking for guidance and project ideas to build their turning chops, irrespective of shop time.

The book opens with a thirty-two-page serving of background information on turning. Topics in this section are as diverse as lathe fundamentals, personal safety, chucking methods, abrasives and sanding, dust collection, and an overview of essential tools for completing turning projects.

Baker then leads the reader through a thoroughly documented, step-by-step set of instructions to complete each project. The projects are arranged in ascending order of complexity and therefore the growing base of fundamental skills needed to address each form. The concluding page of each project includes four suggested variations on the form that was just presented, so one could argue that the book actually offers more than 125 projects for experimentation.

Fifteen years into my own turning journey, I still periodically pull Baker's *Woodturning Shapes* off of my bookshelf and mine its pages for ideas. My guess is that *30-Minute Woodturning* will have great appeal for the beginning turner, but waning appeal once skills are established. But the book will also provide a source of inspiration for instructors looking for student projects, so its purpose on the bookshelf may shift over time.

In spite of its background material and its careful documentation of each project step, no book can substitute for hands-on instruction. *30-Minute Woodturning* should not be the only book on a turner's shelf; there are too many subtleties to be learned about tooling, sharpening, sanding, and all the minutia that elevate a project from *good start to fine art*. But with those caveats in mind, I do think Baker's latest publication will fill an important spot on the turner's shelf or workbench. ■

—Don McIvor

Book Review: *Multi-Axis Spindle Turning: a Systematic Exploration,* by Barbara Dill, Schiffer Publishing, 2018, 128 pages, hardcover

Barbara Dill incorporates her wealth of knowledge of multiaxis spindle turning in a comprehensive, well-documented book that is sure to appeal to a wide audience. The book provides valuable insights that will be helpful to novice and expert turners alike.

To help illustrate the possible outcomes of multiaxis spindle variations, Dill offers a useful four-quadrant table. Each quadrant shows the resulting shapes from the combinations of axis placement and type of cuts employed. Axis placement (moving from parallel to cross-axis) and types of cuts (arc and cylindrical) are explained, and variables in these processes are illustrated with extensive diagrams and photographs.

Dill reviews each quadrant in detail, showing how both axis placement and cut can yield a multiplicity of possibilities. I found her use of overlay lines on photographs of finished pieces particularly useful, as you cannot always deconstruct the method of turning once the spindle is removed from the lathe. The diagrams, photographs, and accompanying text walk the reader through the process of understanding and turning basic multiaxis forms.

Dill also devotes a chapter to split and thermed turning. She describes split turning as the process of attaching two or more pieces of wood together, turning them, separating them, rotating them, re-attaching them, and turning them again. In therming, a jig is used to offset the blank from the centerline and shallow arcs are turned on the wood. Examples of both processes are illustrated with excellent diagrams and photographs.

Later chapters explore the making of a three-sided cup as well as useful tips, tricks, and fixes for issues that may arise, such as when a too-small drive center becomes ineffective on green wood. The final chapter is a gallery of work by well-known turners in this discipline.

I have long admired Barbara Dill's work as a turner and teacher. Her new book is sure to inspire anyone seeking to advance their skills and results in multiaxis work. ■

—Ian Stewart

Jennifer-Navva Milliken

Photo: Joanna Kresge/425 Magazine

CAW Names New Artistic Director

Philadelphia's The Center for Art in Wood (CAW) has announced the appointment of Jennifer-Navva Milliken as its incoming artistic director. Milliken was chosen to lead the Center after Co-Founder and Executive Director Albert LeCoff stepped down in May 2018.

Milliken is an experienced curator and acclaimed art historian who has worked for arts institutions in New York and in Israel, and most recently was the interim curatorial director for the Bellevue Arts Museum in Washington State.

For more, visit centerforartinwood.org. ■

LIWA Supports Beads of Courage

I want to thank the AAW for introducing me to the Beads of Courage (BoC) program. Our club, the Long Island Woodturners Association (LIWA), responded by producing thirty boxes for the children being treated at Stony Brook University Hospital (New York). Another turning club from Long Island contributed eight more boxes and will work with its woodworking affiliate to produce rectangular boxes for another hospital in Manhattan.

The accompanying photos were taken during our presentation at Stony Brook's Cancer Center. When we delivered our BoC boxes, I thought I knew something about the program. But until I saw the beads, learned what they represent, and heard a few of the stories about some of the patients, I could not have internalized it. When I saw the collection of about two dozen different-colored beads and learned their significance, I started to choke up. The various beads correspond to medical treatments the children undergo, and the kids receive a bead with each step in their treatment. The BoC boxes are offered to hold these special milestones.

Here are some of the bead colors and their corresponding treatments: beige = bone marrow aspirate, biopsy; white = chemotherapy; silver = dressing changes; brown = hair loss; lime = isolation; tortoise = lumbar puncture; black = needle pokes (all kinds); glow-in-the-dark bead = radiation; dark green = stem cell harvest; star = surgery; red = transfusions; aqua = tube placement; pink = respiratory support.

When the child life specialist commented on our boxes, I apologized for bringing some that were much larger than the others. She then told me about

a few patients who had so many strings of beads they could stretch them over 15' (4.5m), and some were used by their parents to wrap around their Christmas tree. She told us about a boy who was treated for leukemia for five years. When he returned to school after beating the disease, his classmates asked where he had been. He brought in shoeboxes full of beads to show them what he had been through. Now, such a child can store his beads in a handcrafted wooden box.

Besides pediatric oncology and hematology, some hospitals are enrolled in the BoC program for their cardiac, NICU, and burn unit patients, as well as for those with chronic illnesses such as cystic fibrosis and renal disease. Just as the children at Stony Brook deserve a nice box for their beads, so do the thousands of other kids associated with BoC. I urge all woodturning clubs to get involved in this meaningful program. ■

—Les Hoffman, President, Long Island Woodturners

For more on Beads of Courage, visit beadsofcourage.org.

BoC treatment beads include special ceramic and hand-blown varieties, each with a different significance corresponding to medical treatments the children undergo.

Involved woodturners, from left: Pete Richichi, Les Hoffman, and Barry Saltsberg.

AAW Grant Helps School Turn Toward Community

Chester Lewis Academy, an alternative high school in Kansas' biggest school district, lost its shop classes six years ago due to budget cuts. Our staff immediately noticed how negatively the loss of wood-, metal-, and food-related classes impacted students. We existed as only a credit-recovery program, with no opportunity for extracurricular activities. A leadership change led to the idea of starting a student woodturning club, and I hoped to use my woodturning passion to give students a chance to learn a trade beyond the classroom.

A 2016 AAW Educational Opportunity Grant (EOG) allowed us to get up and running with lathes and tools. I tapped into a wide variety of sources—vendors, the AAW, Women in Turning (WIT), and members of the South Kansas Woodturners—for advice, wood, and new and used equipment. The Chester Lewis Academy principal allowed me to convert the back end of my computer classroom into a woodshop. Four students came on their own time daily over the eight weeks remaining that school year. We accomplished a lot, concluding with an open house, immense pride, and a "Thank You" video to AAW, which was shown at the Atlanta Symposium that year.

Inevitable growth

After summer break, more students wanted to join. There was not nearly enough equipment, so we alternated which nights students could come. I was outnumbered. Two members of the South Kansas Woodturners volunteered, the students fell in love with them, and they still help today.

As the student club grew, I learned of community service grants, necessitating videos to outline projects we could do for the community. Since I teach filmmaking at the school, this was easily accomplished. We won more than $4,000 in grant money, which was much more than any other groups that applied, and these funds went a long way in addressing our expanding equipment and tool needs.

The grant money supported community service projects that included turning fifty pens for the Freedom Pens Project (freedompens.org), making spinning tops for kids at an elementary school, and making Beads of Courage bowls/boxes. The money also supported growing the program because adding more equipment allowed us to invite more students to try turning. Additionally, for the elementary school's spinning tops project, a student delivered the tops and spent time with the younger students. This also improved our image within the community.

Our student turners come from a wide variety of backgrounds. Many haven't had a lot of positive opportunities in the past, and it has been a joy to see how readily they have given of their time—and turnings—to others. Before receiving the community grants, the students turned Christmas trees and snowmen for patients at several assisted-living homes and went caroling on a Sunday.

A continuing presence

As we work through our third year, the benefits for our young turners have been numerous. Along with helping them to develop relationships with friends, the process has given many of them more direction regarding school. Further, attendance is up, grades are up, and credits keep coming! That all leads to graduation and, amazingly, a richer life due to their woodturning experiences. ■

—Janet Sutter, South Kansas Woodturners

Members of the student woodturning club at Chester Lewis Academy in Wichita, Kansas, pause for a photo during a Freedom Pens turning session.

An initial 2016 grant from the AAW helped build the student woodturning club at Chester Lewis Academy enough to attract additional grants based on community service. Students hold up a $4,000 check from the Wichita Community Foundation.

Janet Sutter, the driving force behind the student club, offers mentorship to a Chester Lewis Academy student.

Calendar of Events

August issue deadline: June 15

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

Canada

July 20–22, 2018, 2018 Sask Woodturners Symposium, Persephone Theatre, Saskatoon, Saskatchewan. Registration includes two lunches and one supper. Featured demonstrators to include Graeme Priddle, Melissa Engler, Michael Hosaluk, Molly Winton, and Steven Kennard. For more, visit hubcityturners.ca.

New Zealand

October 4–7, 2018, Woodturning New Zealand International Symposium, Wesley College, Paerata, Auckland. Demonstrators to include Eli Avisera, Dixie Biggs, Sally Burnett, Philippe Cristophini, Stephen Hughes, Neil Joynt, Richard Raffan, Chris Ramsey, Ken Rays, Keith Tompkins, Neil Turner, and Derek Weidman. For more, visit sawg.org.nz.

Colorado

September 14–16, 2018, Rocky Mountain Woodturning Symposium, The Ranch Larimer County Fairgrounds, Loveland. Symposium to include forty-two demonstrations, large tradeshow, Beyond the Bark gallery display, and live and silent auctions. Demonstrators to include Mike Mahoney, Dale Larson, Jason Breach, Sally Ault, Merryll Saylan, Trent Bosch, Brian Gisi, Doug Schneiter, and Michael Roper. For more, visit rmwoodturningsymposium.com.

Georgia

September 21–23, 2018, Turning Southern Style Symposium, Dalton Convention Center, Dalton. Three-day event includes demonstrations, banquet, instant gallery, tradeshow, and spouse activities. Attendees are invited to bring a youth guest at no cost. Featured demonstrators to include Nick Agar, Graeme Priddle, Melissa Engler, and Mark Palma, with local demonstrators Peggy Schmid, Frank Bowers, and Mike Peace. Discounted price of $155 until August 21; plus Saturday-only rates available. New this year: Special Interest Night. For more, visit gawoodturner.org, email symposium@gawoodturner.org, or follow Turning Southern Style Symposium on Facebook.

Illinois

August 3–5, 2018, Turn-On! Chicago 2018 Symposium, Conference Center at the University of Saint Mary of the Lake, Mundelein. A three-day woodturning symposium sponsored by the Chicago Woodturners, includes fifty demonstrator rotations plus hands-on pen turning, a tradeshow, all meals, banquet, and auction. Demonstrators to include Rudolph Lopez, Betty Scarpino, Kip Christensen, Harvey Meyer, Jennifer Shirley, and others to be announced. For more, visit turnonchicago.com.

Massachusetts

March 31–November 18, 2018, *Tricks of the Trade: Illusions in Craft Based Media*, Fuller Craft Museum, Brockton. An exhibition featuring *trompe l'oeil* ("fools the eye" in French) work in multiple media; wood artists include Michelle Holzapfel, Lincoln Seitzman, Tom Eckert, and Miriam Carpenter. For more, visit fullercraft.org.

Minnesota

Ongoing, The AAW Gallery of Wood Art in Saint Paul features four to six woodturning exhibitions per year, including works from AAW's annual themed member and POP exhibitions. In 2018: *Turnabout – Women at the Lathe*, June 3 to July 29; *New Horizons*, August 5 to September 30; *Dia•Log,* October 7 to December 28. On continuous display is the "Touch This!" family-friendly education room. For more, visit galleryofwoodart.org or email Tib Shaw at tib@woodturner.org.

Missouri

October 11–14, 2018, The 6th Biennial Symposium of the Segmented Woodturners, Marriott St. Louis West, St. Louis. Three days of demonstrations, a banquet, instant gallery, raffle, and camaraderie with some of the finest segmenters currently turning. Confirmed demonstrators include Malcolm Tibbetts, Robin Costelle, Tom Lohman, Bob Behnke, Lloyd Johnson, Al Miotke, and Michael Hosaluk. For more, contact Russ Braun at Russ@deforestinc.com or visit segmentedwoodturners.org.

Montana

September 29, 30, 2018, Yellowstone Woodturners Symposium, Roaring 20s Club House, Billings. Featured demonstrator/instructor will be Stan Record (instructor for Craft Supplies USA), specializing in embellishing platters, bowls, and boxes using grinder, colored paste, texturing tools, rotary tool, relief carving, and color applications. For more, visit yellowstoneturners.org/wp or call Tim Morgan at 406-690-8730 or Dr. Van at 406-545-0777.

Pennsylvania

May 4–July 21, 2018, *Connie Mississippi: Circle of Time*, The Center for Art in Wood, Philadelphia. An exhibition featuring the work of Connie Mississippi, "highlighting the interconnections between Mississippi's two-dimensional practice and her sculptural work." Curated by Miriam Seidel. For more, visit centerforartinwood.org.

September 28–30, 2018, Third Annual Mid Atlantic Woodturning Symposium, Lancaster Marriott, Lancaster. Event includes a tradeshow and instant gallery. Demonstrators to include John Jordan, Malcolm Tibbetts, Art Liestman, Beth Ireland, Mark St. Leger, and Michael Kehs. For more, visit mawts.com.

Tennessee

January 25, 26, 2019, Tennessee Association of Woodturners' 31st Annual Woodturning Symposium, Marriott Hotel and Convention Center, Franklin. Featured demonstrators to include Al Stirt, Ashley Harwood, Jacques Vesery, and Todd Hoyer. Celebrating its 31st TAW Woodturning Symposium, this event is one of the longest-running and most successful regional symposia in the U.S. The 2019 Symposium will feature a tradeshow, instant gallery, people's choice awards, and Saturday night banquet with auction. Registration opens September 1, 2018. For more, visit tnwoodturners.org or email symposium@tnwoodturners.org. Vendors, contact Grant Hitt at vendorinfo@tnwoodturners.org.

Texas

August 24–26, 2018, Southwest Association of Turners (SWAT) Symposium, Waco Convention Center, Waco. Lead demonstrators to include Stuart Batty, Keith Gotschall, George Hatfield, Dan Tilden, Craig Timmerman, and Alan & Lauren Zenreich. Also vendors, instant gallery, hands-on area, banquet, and drawings. Lunches are provided. For more, visit swaturners.org.

Virginia

November 3, 4, 2018, Virginia Woodturning Symposium, 279 Expo Rd., Fishersville. Biennial event featuring forty-one rotations for turners of all levels. Featured demonstrators to be Cindy Drozda, Rudolph Lopez, Donna Zils Banfield, Nick Cook, Barry Gross, Frank Penta, Graeme Priddle, Joe Fleming, Mark St. Ledger, and Lyle Jamieson. For more, visit virginiawoodturners.com.

Washington

May 21–July 1, 2018, *New Horizons*, Gallery at the Park, Richland. Then, August 5–September 30, 2018, exhibition will move to the AAW Gallery of Wood Art, The Landmark Center, Saint Paul, Minnesota. An exhibition wherein artists were asked to produce work outside of the signature style they are known for. For more, visit newhorizonswoodart.org.

September 20–23, 2018, Ornamental Turners International Biennial Symposium, Doubletree Suites, Seattle. Includes lectures, demonstrations, and gallery. Gallery open to the public September 22, 1:00 to 4:00 p.m. Registration fee includes meals and banquet. For more, contact Brad Davis, braddavis@netins.net.

Tips

Sight assist

A headband magnifier has become an invaluable part of my turning kit. I often use it when turning small finials or making fine finish cuts. It is also extremely useful when sharpening. My headband magnifier is an OptiVISOR brand, and it comes with lenses in different focal lengths and magnification strengths.

Safety Note: While some models are advertised as a "high impact visor," this style of magnifier should not be considered a replacement for safety glasses. However, they can be worn over safety glasses, as illustrated in the accompanying photo.

—Bob Rosand, Pennsylvania

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

Double-decker grinding station

When I upgraded my grinder, I thought of a way to eliminate the time I had been wasting resetting it for the jigs I use for various tools. Rather than dispose of the old grinder, I kept it and used it as part of an expanded, multi-use grinding station, with a grinding wheel dedicated to each of the categories of tools I normally use: bowl gouges, spindle gouges, coring tools, and scrapers.

In addition to having a dedicated setup for each grind, the stand I devised is at a height that doesn't require me to bend over when checking the setup, has storage for jigs, and is stable. A salient feature is the brass used in the depth jigs for each grinding setup. The brass ensures that the gouges don't dig farther and farther into the wood with each insertion.

—Dennis Belcher, North Carolina

The keys to attaining a sturdy upper level are solid supports in the back and cantilevered side brackets. These factors help achieve rigidity while still allowing access to the wheels for when they need to be removed for any reason.

Sanding stick for open-segmented projects

I turn a lot of open-segmented projects and have always had difficulty sanding the openings. It can be especially difficult to remove glue squeeze out. For my most recent project, I decided to solve the problem and made a tool that does the task quickly and easily. It is made from a scrap stick of wood, cut to fit inside the openings and about 12" (30cm) long. I cut a long strip of sandpaper just wide enough to wrap around the stick and attach it using double-sided tape. The sanding stick is long enough to extend through the bowl so that two openings can be sanded at the same time.

—Bill Wells, Washington

Magnetic chuck key holder

I keep my chuck's tightening key nearby—mounted on the lathe's headstock—so it's always in reach when I need it (and not in the shaving pile on the floor). I placed the magnet high and to the left to ensure the handle wouldn't get in the path of the spinning chuck. You could attach the magnet to the headstock with glue, but I haven't found it necessary.

I bought an inexpensive, heavy-duty magnet at Harbor Freight.

—Rick Erexson, North Carolina

Magnet shroud captures grinding dust from CBN wheels

Grinding dust is not good to breathe. I found I could capture most of the dust at the grinder by making custom magnet shrouds around my CBN (carbon boron nitride) wheels. The magnet shrouds naturally attract the powdery metal grinding dust.

I made the magnet shrouds from the bottoms of five-gallon paint buckets. The magnets I used came in a roll with sticky tape on the back. After applying the magnets to the plastic shroud, I put packing tape over them for easier removal of the grinding dust. You could also just mount magnets under or behind your grinder, but they might not be as effective as a shroud.

I screwed the shroud to a vertical piece of plywood just behind the grinding wheel. A little dust does get by, but the magnets capture most of it. I use a wooden stick to remove the dust from the packing-tape-covered magnets when it is time for cleaning. This system works well for me.

Editor's Safety Note: This Tip is intended for use with only CBN wheels, which don't run the same risk of flying apart as conventional stone wheels do. It seems to be common practice by users of CBN wheels to remove the grinder's side guards, and this would allow for the installation of a custom magnet shroud. Guards, or shrouds, help to contain sparks from grinding. These sparks are usually harmless from CBN wheels, but nonetheless you should take care that no flammable material is near the grinder. An example of this is wire wool (steel wool), which if left close enough to a grinder can catch fire from sparks and possibly ignite other materials such as wood dust or shavings.

—Curtis Myers, Virginia

A custom magnet shroud does a great job of capturing grinding dust from CBN wheels.

Flat-bottom bits for drilling a thin box lid

When I make a box lid with an attached knob, I drill a stopped (non-through) hole in the lid to accept a small tenon on the knob. Sometimes I turn the lid fairly thin and there isn't much material left for drilling a stopped hole. If I were to drill a stopped hole using a Forstner or bradpoint bit, the bit's centerpoint might poke through the bottom of the lid. My solution is to use milling cutters or router bits with a flat bottom and no centerpoint. This lets me drill deeper without poking through the lid, and the knob tenon can be a little longer.

—John Lucas, Tennessee

From left: router bit, Forstner bit, and milling cutter. The centerpoint on the Forstner bit effectively limits the potential depth of a stopped hole in thin wood.

Without the centerpoint of a Forstner or bradpoint bit, a milling cutter drills a deeper stopped hole with a flat bottom.

Extended life for a short gouge

When a gouge no longer clamps securely in a grinding jig, create a new flat at the end of the flute. An angle grinder does the job quickly with the turning tool clamped in a vise.

Gouges that have been ground and sharpened repeatedly over several years can begin to slip in holding jigs like the Oneway Vari-Grind. Naturally, your favorite gouge is the one sharpened most and is where you will find the problem first. Sharpening jigs require a flat spot on the gouge for firm clamping of the tool in place. As gouges become shorter from grinding, the clamping location moves from across the flatness of the flutes to the roundness of the bar stock. A round surface under the clamp will allow the tool to slip as it is sharpened, leading to nasty and potentially dangerous results.

To extend the life of a short gouge that no longer clamps securely in a grinding jig, simply grind a new flat spot on the round bar at the end of the flute. The flat can be ground easily with an angle grinder. ■

—Dennis Belcher, North Carolina

Making an Executive Spin-Top

Sam Angelo

An executive spin-top is an elegant and functional bit of art that can sit upon the desk of that very special person in your life. There are two elements to this project: a base, or stand, and a spin-top that sits in the base when not in use. Both parts are turned from one blank of wood. I used Mexican kingwood in the example shown in this article, but any wood with prominent grain would be good, as the grain running from base to top will line up.

A hole drilled into the top of the base allows the spin-top to rest with its handle pointing either up or down. My aim is for the base to cradle the top securely either way. This is a good project for beginning turners who want to practice spindle-turning skills, including drilling at the lathe.

Wood selection

You can turn this project from any piece of well-seasoned or kiln-dried wood. The blank used in this article measured 2" (5cm) square by 4" (10cm) long. The base will be left solid with only a ⅜" (10mm) hole drilled for the handle, or stem, of the spin-top. If you are using air-dried lumber, be cautious about selecting wood that has not reached equilibrium with the moisture content in your area. The best guide is your own experience selecting wood that you can trust will not crack after you have completed the project.

Turn the spin-top

Start by mounting the blank between centers and rough-turning it round. The diameter of the turned blank is about 2". The section that will become the spin-top is 1⅝" (41mm) long, and the base blank is 2⅜" (6cm) long. Turn a shallow groove with a narrow parting tool to indicate where the base will be parted from the spin-top.

While the workpiece is still mounted between centers, form a spigot, or tenon, at the spin-top end of the blank, then mount the workpiece in a four-jaw chuck. The shorter section, nearest the headstock, will become the spin-top.

Form a tenon on the opposite end for mounting the base later; I use a point

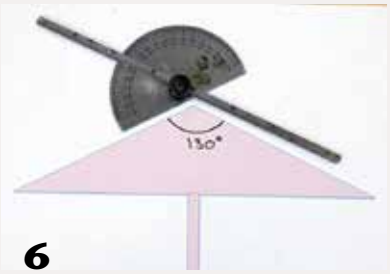
Prepare blank sections

With the blank held in a chuck, form a tenon on the tailstock end, then part off the base, or bottom, section. The smaller part remaining in the chuck will be the spin-top.

Turn spin-top angle

Turn the spin-top angle. The author begins with a spindle gouge, then uses a skew for a finishing cut. Making the final pass with a skew chisel creates a cone of waste wood that will disappear with the completion of the cut.

An angle that works well



A spin-top angle of 130° makes for a solid performer.

tool for this job, but you could also use a spindle gouge or parting tool. Using a thin parting tool, part off the base blank section (*Photos 1–3*).

Starting at the point end of the spin-top, use a spindle gouge to remove wood and shape the top's angle (*Photo 4*). The shaving coming off the spindle gouge shows which part of the edge is doing the cutting. To start this cut safely, begin with the flute closed (rolled toward the 3 o'clock position), the bevel lined up in the direction of the cut, and the tool held horizontally. Once the cut has been initiated, the flute can be opened to 45°, a more efficient cutting angle.

I make a final pass with a skew chisel (*Photo 5*). You may prefer to use just a spindle or detail gouge or some other tool that works best for you. Whatever tool you select at any point in this project is certainly a personal preference.

During the process of writing this article, I turned several other executive tops to completion. I used different woods and experimented with the shape of the spin-top. The point angle on my first top measured 140°; this proved a bit too shallow. It did spin, just not very well. In subsequent attempts, I made the point steeper, around 130°, and it was much easier to make the top spin (*Photo 6*).

I sand and apply finish to the spin-top at three stages in the process: one, after I form the top's angle; two, after I form the flat top of the top; and three, after I form the spin-top's handle, or stem. I sand each section to 1000-grit abrasive. Using a small piece of shop towel, apply friction polish with the lathe off (*Photos 7, 8*). Then buff with a dry section of paper towel with the lathe spinning at 500 rpm. Another option is to buff the piece using a buffing wheel off the lathe. An important rule is never to use cloth around a spinning lathe, as a cloth wrapped around a finger could result in a severe injury if the cloth gets caught on the spinning wood.

My favorite tool for removing wood in a tight spot is a ¼" (6mm) bowl gouge with a short bevel and a 50° nose ▸

Sand and finish as you go

The author sands the spin-top angle to 1000 grit, then finishes with friction polish. Sanding and finishing as you go ensures sufficient support for the workpiece.

Remove excess material

A small bowl gouge ground with a short bevel works well for removing excess wood in tight spots.

A small skew chisel reduces the stem diameter while maintaining bevel support. The tool is angled slightly, with the short point making the cut. Using a scraper on a thin stem would produce vibration and a poor surface.

Part off top

The author uses a skew chisel to make small "V" cuts until the top is parted off.

Drill the base

Drill into the base section with a ⅜" bit, deep enough for the spin-top handle to go all the way in.

angle (*Photo 9*). I find that using a small bowl gouge helps dampen vibration. Turn, sand, and finish the flat top of the top section.

Richard Raffan, in his DVD, *Turning Toys with Richard Raffan* (Taunton Press, 2014), says, "It's not a project for scrapers or scraping techniques; spinning tops demand slicing cuts." I agree. A small skew chisel works well to reach and make proper bevel-rubbing cuts on the top's handle (*Photo 10*). Turn the handle to a diameter just under ⅜", so it will fit into the hole you will drill in the base section. Sand and apply finish to the handle.

Part off the spin-top at the handle end. I use a skew chisel, making a "V" cut with the long point down (*Photo 11*). Increase the size of the cut until the spin-top drops away. The point on the top handle's end where it was attached can be sanded and finished off the lathe.

Turn the base

With the base section securely mounted in the chuck, begin by drilling a ⅜" hole into the top of the base (*Photo 12*). Prior to the drilling operation, I create a small recess on the end of the blank at center. This helps prevent the drill bit from wandering. I use a skew chisel in scraping orientation (flat on its side), but you could use any tool with a square corner: a beading or parting tool, a bedan, or a square-end scraper.

Drilling the hole early in this process allows me to periodically check the fit of the spin-top into the opening of the base. The final fit between the top and base must be secure with no side-to-side movement.

Photo 13 shows that on the flat top of the top area, I've turned a few steps, or elevations, including a small bead at the base of the top's stem. The top of the base is outlined in white pencil to correspond to the profile of this part of the top. The goal is to turn away the appropriate levels in the base so the top will sit nicely in it.

I remove the bulk of the wood from the recess at the top of the base with a bowl gouge (*Photo 14*). Notice in the photo that I am cutting toward the center of the recess—into unsupported wood because it is endgrain. Although the quality of the finish is adequate, I will improve it and refine the profile "steps" using my skew chisel (*Photo 15*). It is critical to present the skew horizontally in a scraping orientation. There is a sweet spot between removing wood safely and an unpleasant catch. Take light passes to get the feel of it. It also helps to remove the burr from the skew with a diamond hone, as this results in a better surface and a less aggressive scrape in dense wood.

As I progress, I measure each stepped element on the top periodically with calipers. These dimensions are carefully transferred to the recess in the top of the base. Marking with calipers will only approximate the final fit; it is important to stop the lathe and insert the top into the recess to check your progress. Do this until the top and base match up seamlessly.

With the top held in the base, you can see how the spin-top becomes part of the overall design. It sits slightly proud of the top of the base. This feature allows the top to be removed easily. Using a beading tool, I form two beads at the bottom of the base. The outer diameter of the spin-top forms another bead that plays off the two beads on the base (*Photo 16*).

Form recess in base


13
White pencil marks on the base correspond to the profile of the spin-top.


14
Begin forming the recess with a bowl gouge, then switch to a skew presented on its side to refine the shape according to the top's profile.


15

Part off and finish bottom

The next step is to part off the completed base. Using a newly sharpened thin parting tool, I slightly undercut the base (*Photo 17*). With a sharp tool and a slow traverse, my goal is to create as clean a surface as possible. This will help minimize any cleanup when the base is reverse-chucked in the next step.

Photo 18 shows the setup for jam-chucking the base to finish turning its bottom. Reverse-chucking involves using a small scrap of wood for a friction drive. A short tenon is formed on the friction drive that mates snugly with the recess in the top of the base. Secure the base on the jam chuck using the tailstock, then turn away any tool marks on the bottom with a detail gouge.

Sand and apply a finish to the exposed area at the bottom of the base. A point tool makes simple work of adding decorative grooves (*Photo 19*). The small area covered by the live center can be completed off the lathe. I sand this area using a 1" (25mm) sanding pad chucked into a drill press or die grinder. With this last step, the project is completed.

Alternatives

This executive top and other small projects not requiring a great investment in wood or time can be a good way to explore design options. Turning a second executive top with an identical shape but in another species of wood can look entirely different. Another option is to create a lidded box with the spin-top serving as a lid. Have fun turning your own executive top. ■

Finalize and part off base


16
Seeing how the spin-top looks when inserted into the base can give you an idea of what the overall design should be. In this case, the author has added two beads at the bottom of the base.


17
Part off the base.

Finish bottom of base


18


19
A jam chuck setup for reverse-mounting the base. Note the custom wooden live center, which won't damage the workpiece. A short tenon is formed in the wasteblock to accept the recess in the top of the base. The author uses a point tool to add decorative lines on the bottom.

Sam Angelo began woodturning in 1988 using a borrowed lathe. He initially repaired furniture parts for his restoration business; then his interests expanded to lidded vessels, hollow forms, and decorative pieces. Sam's favorite projects incorporate hand-chased threads. He continues to turn daily in his Wyoming shop and to produce educational videos for his YouTube channel: wyomingwoodturner. View examples of Sam's work and contact information at wyomingwoodturner.com and samangelo.com.

Custom-Turned Housing *for a* WIRELESS SPEAKER KIT

John Lucas

I came across a wireless speaker kit (sold by Rockler Woodworking and Hardware, rockler.com), and it seemed like a fun and useful woodturning project. This wireless speaker uses Bluetooth technology to connect to your smart phone, tablet, or other Bluetooth-enabled device, so you can broadcast your digital music any place you want, such as in the shop, kitchen, or office. I leave my phone on a stand about 10' (3m) from the lathe because I have had lots of problems with wood dust getting into the phone when I kept it in my pocket.

A wireless speaker, housed in a custom-turned stand, was just the answer to that problem; now I can have a speaker near the lathe where I can hear it, yet keep my phone away from the dust.

Rockler's kit comes with three main parts: a speaker, a control pod, and a USB charging cord. You need to drill or turn a hole 1⅞" (48mm) in diameter to accept the speaker and control pod, which are mounted by friction fit. These parts need to be 2" (5cm) apart to have room to run the wires. My turning project comprises three main components: the speaker housing, a stem, and a base. Here's how I made it.

Speaker housing

I decided I wanted a simple but elegant design, using maple and walnut scraps from my shop. To make the speaker housing, I glued up a turning blank using two 4¼"- (11cm-) square pieces of maple ¾" (20mm) thick. To hold the speaker components, I needed enough material to make a stack at least 2" thick, so I glued ⅜"- (10mm-) thick pieces of walnut to both sides, sandwiching the maple and adding contrast.

After the glue had dried, I predrilled one side of the blank so I could mount it on a screw chuck (*Photo 1*). With the blank

Mount, turn, drill

1 Mount the speaker housing blank on a screw chuck. Note the wooden spacer at left, added to shorten the reach of the screw into the blank.

2 Drill part-way into the blank with a 1⅞" Forstner bit. Alternatively, this hole can be hollowed using turning tools. The 1⅞" diameter is a critical measurement related to this wireless speaker kit.

rough-turned round, I used a 1⅞" Forstner bit held in a drill chuck in the tailstock to drill a hole on center (*Photo 2*). This hole will ultimately go all the way through the speaker housing, but I could drill only a little more than halfway through at first. Remember the length of the screw chuck and that this mounting method limits how deeply you can drill. If you don't have a drill chuck and Forstner bit, just hollow the opening with turning tools, starting with a parting tool and then finishing with a spindle gouge or flat scraper.

With the hole partially drilled, begin shaping the outside profile of the speaker housing. For my design, I wanted a cone shape with the front being larger than the rear (*Photo 3*). The front is 3¼" (8cm) in diameter, and the rear is 2⅞" (7cm), but these measurements aren't critical at all. Feel free to change the shape as you wish.

On the outside profile, I decided to hide the glue line in the center of the maple with a shallow V-groove. I also textured an area on either side of the glue line using a wheel-type texturing tool (*Photo 4*) and bordered this area with two more grooves. Sand lightly with 600-grit abrasive so you don't damage the texturing.

With the outside profile completed, I began shaping the front, or speaker, end, where I reduced the contrasting walnut down to ¼" (6mm) thick. Then I cut away the walnut from the center area down to the maple. I used a ⅜" detail gouge to form a rounded bead on the walnut trim. This can be tricky, so take light cuts. To smooth the bead further, I used the gouge in shear-scraping mode (*Photo 5*). A good alternative is to use a skew on its side like a scraper to refine the bead.

To finish cleaning up the narrow area of maple inside the walnut bead, I switched my lathe's direction of rotation and turned in reverse using a spindle gouge (*Photo 6*). Some lathes have this capability and some don't. When turning in reverse direction, there is a risk the chuck could accidentally become unscrewed from the spindle and fall or fly off the lathe dangerously out of control, causing an injury. To prevent this from happening, I put the chuck on firmly by hand and then use the chuck key to further tighten the chuck on the spindle. I find this allows me to safely turn smaller work in reverse. Also, if your chuck has set screws that hold it onto the spindle, be sure to tighten them down before proceeding. Of course, you could also turn and clean up this section with the lathe spinning in the usual direction. A square-nose scraper would work well for getting into the corner.

The next step is to flip the workpiece end for end, so you can complete the through-hole started with the Forstner bit. How to hold the work on the lathe? If you have a chuck with jaws that will go down to 1⅞" in expansion mode, just reverse the turning and expand your jaws into the opening. If you don't, you'll have to make a jam chuck to hold the workpiece for turning its opposite end (*Photo 7*).

I turned a long tenon on a scrap of wood to a little over 1⅞" diameter and then "snuck up" on the right fit, leaving the last ⅜" slightly tapered. You want the walnut face to bottom out on the shoulder of the jam chuck for proper alignment, but the tenon has to be snug enough to really hold the piece on, as you will be drilling into the other end. If you get a fit that is too loose, try a layer of tissue paper or paper towel on the tenon. If it ▸

Outside profile

Shape the outside profile of the speaker housing.

The author adds texturing to an area defined by V-grooves.

Detail front end

Form a bead on the walnut accent wood. The author refines the bead using a spindle gouge in shear-scrape mode. With the flute facing the wood and the handle down, drag the lower cutting edge carefully around the bead.

The author cleans up the narrow maple area inside the bead with the lathe running in reverse direction.

Reverse-mount on jam chuck

The speaker housing is flipped end for end and mounted on a jam chuck. Pictured here is an unturned housing blank to illustrate the jam chuck. Turn the back end to mimic the front.

Turn the stem

The stem is a spindle turning about 5½" long. Tenons are formed on each end for assembly with the speaker housing and base.

still doesn't fit as tight as you want, use blue painter's tape to secure the work to the jam chuck. Remember, you will have to get it back off, so it's important to get just the right fit. I have had problems in the past prying a turning off a jam chuck. A thin kitchen knife works well to gently tap in between the turning and chuck to help get it back off if you have this problem.

Drill (or turn) the hole on the back end of the speaker housing, then repeat the procedure for turning a bead and face. The opening diameter is the only area that is critical, as it will accommodate the friction fit of the speaker components. So don't worry if the holes don't line up exactly in the middle of the housing. If you are turning the inside, as opposed to drilling all the way through, leave the center area a little thicker for the hole you will drill to accept the spindle, or stem.

Stem and base

I turned the stem and base as two separate pieces. For the stem, I mounted a piece of maple 1½" (38mm) square by 5½" (14cm) long between centers (*Photo 8*). Turn a ½"- (13mm-) diameter tenon on the end that will attach to the base, and undercut where the tenon meets the first feature so it will sit firmly down on the contour of the base. Form a ⅜"-diameter tenon on the top end, which will be inserted into a hole in the speaker housing. Now it's just a matter of turning whatever spindle shape you want for the rest of the stem.

When gluing up a blank for the base, I started with a 1"- (25mm-) thick block of maple about 3" (8cm) square. I decided to add a thin layer of walnut to contrast the light-colored wood, just as I did with the speaker housing section. I glued the

Quick Tip

An easy way to add interest and accentuate key project areas when gluing up turning blanks is to include contrasting species, such as layers of walnut over maple.

Turn the base

The base section is temporarily mounted on a wasteblock, turned, and drilled. Then reverse-mount the base onto a jam chuck to finish the bottom.

base blank to a wasteblock that fit in my chuck.

Rough-turn the base and turn the walnut accent down to ¼" thick. Now drill a ½"-diameter hole deep enough to accept the tenon on the base end of your turned stem (*Photo 9*). Turn the base to the shape you want, but be mindful of the transition from base to stem. I left the top surface of the base just a little wider than the base of my lower finial feature, which created a natural transition. After sanding the base and applying a finish, I used a parting tool to separate the base from the wasteblock.

Next, I reverse-mounted the base on a jam chuck using the same wasteblock to which the base was previously glued. Drill a ½"-diameter hole in the center of the wasteblock and glue in a dowel of the same diameter. Cut the dowel just a hair shorter than the depth of the hole in the project base. This approach might not create a tight enough jam fit; an easy fix is to build up the dowel with several layers of medium or thick cyanoacrylate (CA) glue. When the glue has hardened, turn the CA down until you get a snug jam fit (*Photo 10*).

Mount the project base on the jam chuck and bring up the tailstock for support. Turn the bottom of the base until you have only a very small nub remaining (*Photo 11*). Then either remove the tailstock and turn away that last little bit, or remove the nub off the lathe and sand by hand. Sand and finish the bottom.

Final steps

I drilled the speaker enclosure at its center with a ⅜" drill bit to accept the tenon at the top of my turned stem. I drilled this hole at an angle to give the speaker the appearance of looking up, using a shopmade jig to hold the speaker housing at the correct angle (*Photo 12*). Finally, assemble the parts, using wood glue to join the stem to the speaker housing and base.

Follow the kit instructions for wiring the speaker to the control pod (no soldering required), and press-fit both pieces into your newly turned housing. ■

John Lucas, a retired photographer, has been working in wood for more than thirty-five years and also dabbles in metalworking. He enjoys modifying machines, making tools, and sharing his knowledge through written articles and videos. He has taught classes at John C. Campbell Folk School, Arrowmont, and The Appalachian Center for Crafts.

Drill mortise in speaker housing

A shopmade drilling jig holds the speaker housing at a slight angle. Final assembly is the next step.

Another take

Jeff Hornung,
Eel-lectronic, 2018, Cherry, gesso, acrylic paint, 3¾" × 8" × 3⅜" (10cm × 20cm × 9cm)

Simple Tips for Better PHOTOS

Kurt Hertzog

Photographic equipment has continually improved and become less expensive. Our camera phones are more capable than the professional equipment of just a few years ago. With technology continuing to change by leaps and bounds, it is easy to believe a good camera is all you need to take good photos. But people forget the magic has never been in the tool; it has always been in the hands of the user. Without bombarding you with complicated photographic concepts and terms, here are some very simple tips you can use to improve your images. These suggestions are easily done at little or no cost and can improve your results, regardless of the camera being used or the subject of your photo.

Select and control lighting

Choose a location where you can select and control the lighting for best results. Snapping a photo of a turned object on the bed of your lathe might suffice if you only want a quick shot to help you remember your work, but that kind of location doesn't allow you to control the lighting for optimal results.

A location allowing indirect natural light is great when available, but it is not always feasible, such as at night. Using light fixtures, illuminating your turning from the front but slightly off-center usually works well. A single light source angled 45 degrees from center and 45 degrees in elevation works for nearly any photo subject. It is much like the light coming over your shoulder, lighting your subject and creating some controlled shadowing, which is necessary to achieve a sense of depth and dimension.

Avoid using your camera's flash whenever possible. It offers harsh lighting with bounce-back glare and unflattering shadows. Also check for any glare that may be caused by your light sources. Repositioning the object or the light fixture can help eliminate or at least minimize glare. Soften the light if needed by positioning diffusion materials between the light and the object. Some easily found diffusion materials are thin white cloth, a sheet of velum, or even a frosted shower curtain.

Bounce the light


1


2


3

A white foam board is used to bounce light where needed. Note the shadow at left in *Photo 1* and its absence in *Photo 3*.

Eliminate distractions

4

The infamous picnic table photo. Here, we can't help but notice the tables in the fore- and background, as well as sun spots on the grass.

5

The lathe-bed project shot with distracting wood chips and bedways.

6

Better to use an inexpensive, neutral backdrop such as seamless background paper, so your project can be the star of the photo.

Unwanted shadows

7

With a seamless backdrop, you might get unwanted shadows. Try redirecting your light source or repositioning the object farther from the backdrop to eliminate this problem.

Learn to "bounce" light

You don't need expensive or multiple light fixtures to get good lighting. Light can be "bounced," or redirected, using a reflective material, and this affords you another level of control over your lighting. Any kind of light, whether sun through the window or a strobe fixture, can be bounced. A reflective material as simple as white paper or foam board positioned correctly can bounce light into areas needing additional illumination.

This technique can also reduce unwanted shadows by directing "fill lighting" into difficult areas, such as the lower half of a bowl lit from above. The missing light on the underside of the bowl not only hides detail, but also bypasses the visual information about lift.

At little or no cost, materials that bounce light will help you put light where it can best show off your turning. Simply position bounce cards as needed to reflect light to areas of focus. Like bouncing a billiard ball off a side cushion, you can control the angle of reflection. A single light source and a few pieces of white foam board can light your subject well (*Photos 1–3*).

Eliminate distractions

Unless your photo requires something different for a special purpose, your real subject is your turned object, so feature it alone. Don't dilute it with distractions, as illustrated in *Photos 4 and 5*. A beautiful wooden turning sitting on a bright, multicolor tablecloth on the dining room table forces your viewer to share her attention with distracting patterns and/or nearby items. Situate your subject so it is the main feature in the image without competition, either in the foreground or background.

Using a neutral-colored backdrop with only your turning at center stage will focus the viewer's attention. A plain, neutral gray cloth hung properly can create a seamless backdrop. You can also buy a roll of seamless background paper from a photo-supply store. Hang it in such a way that there is no seam, or crease—just a gradual curve from surface to background (*Photo 6*). This can be done by simply taping it to a wall behind a table and placing the turning on the backdrop rolled out on the table.

Be aware of shadows cast on the backdrop (*Photo 7*). Distracting shadows are often overlooked, yet there are several easy fixes. It may be possible to move the subject farther from the vertical part of the background (closer to the camera) or change your camera position. By moving either one slightly, you can position the shadow out of frame or at least so it is less distracting.

Fill the frame

A good rule of thumb is to try to fill about three-quarters of the image frame. This is called "filling the ▸

Fill the frame

8

9

By positioning the camera closer or zooming in and refocusing, fill the photo frame to about 75%. Some breathing room is good, but an excess of blank space is unnecessary.

Stabilize the camera

10

If you don't have a tripod, set your camera on a bag or two of rice or a small sandbag, all of which have just the right amount of give to accept and hold the camera in place.

frame" with your subject (*Photos 8, 9*). It usually creates a pleasing ratio of subject to frame, with a comfortable amount of breathing room around the edges. When planning your shot, move the physical camera position closer or farther away as needed to accomplish this goal. You may also be able to do this by adjusting the optical camera zoom in or out.

Filling the frame also eliminates distractions and helps with obtaining good exposure. When using automatic functions such as focusing and light metering, important and useful data are captured based on the bulk of the image. Filling the frame forces key data to be based on your subject and not on distractions.

Trying to enlarge images for display or print when the subject was captured too small can present problems. Better to capture the subject larger in the frame so you won't have to enlarge it later.

Finally, don't be afraid to rotate the camera, using either portrait or landscape mode. The differences in appearance and ability to fill the frame will be enhanced, depending on the shape of your subject.

Stabilize the camera

Improved low-light capabilities and internal stabilization in modern cameras have dramatically reduced camera shake problems. The need for tripods and cable releases has been greatly reduced. Even so, you will never go wrong using your camera on a tripod or taking advantage of some other stabilizing opportunity when possible (*Photo 10*). With the camera locked down, you'll have plenty of time to examine the lighting, reposition and make modifications as necessary, and compose the picture. Changes in frame ratio, lighting, and background can be made while examining the preview until you are content. This can be done in just a few moments, allowing you to "create" a photograph, rather than just "take" one.

Further, good stability allows you to use a lower ISO and shutter speed. If you aren't familiar with the term *ISO*, it is the camera's sensor noting available light; this is the digital equivalent of film speed, or ASA, typically used by older film cameras. The quality of the image will be improved by using lower ISO settings, even if the camera is taking advantage of these settings automatically.

Learn how to use the camera's self-timer function for hands-free shooting. Setting the self-timer, pressing the shutter button, and allowing the camera to take the image after a slight delay takes any hand shake out of the equation and allows residual camera movement to settle down.

Focus, focus, focus

Soft focus is reserved for romantic portraits and moody, misty landscapes, not for photographs of turnings. Nearly every camera made today, from phone cameras to high-end gear, has a very fast and accurate focusing system. The focusing problem when shooting turned objects usually results from their roundness and lack of sharp contrast to the background. Most focusing systems detect edges, or changes in contrast, to set the focal point. A bowl, even if it is well lit without harsh shadows, presents a challenge for attaining ample focus.

The two solutions I use are to focus manually or add a temporary focal point to "tell" the autofocus where to look. The manual focus is easy to use and most cameras have a magnification of 5x or 10x while you focus. If you aren't a fan of working manually, you can "fool" the autofocus system. Select the spot you'd like to be the focal point. Place something in that area, either handheld or placed, that contains edges that can be detected by the autofocus function. A pen, for example, held upright at the focal

point, works well. Let the camera focus on the pen you've placed at your desired spot. Begin the exposure using the delay feature and then remove the pen from the field of view. With your camera shutter being depressed, the camera with find and lock focus as well as set exposure. When the delay is counting down to the shutter opening, you will have time to remove your focusing aid from the frame.

Change your perspective

Many images can often be improved by changing your perspective. Taking photos from the standing-in-front position while looking down from eye level may be the least flattering position. Depending on your perspective, round items turn oval, tall items become shorter, lift disappears, shadows causes distractions, etc. Straight on from the front at table level may be the answer, as might a halfway-in-between position (*Photos 11, 12*). The ability to quickly change perspective once you've set up for photos lets you get plenty of different takes with minimal effort.

As you alter your perspective, you may also need to tweak the lighting direction or light bounce. Not only can the shots from a different position potentially be more pleasing, they also may be used differently down the road. Today your need may be simply to put the image in the club newsletter, but later you may need a photo for publication in a magazine article. Altering perspective gives you various options.

Take plenty of shots

In our digital age, the cost of taking photos is really only the few moments of time needed to do it. Your initial shot might be perfect, but perhaps not. The screen on the camera certainly isn't to be relied upon to confirm perfect focus. The focus point or exposure may not be exactly what you see in the preview screen. You won't really be sure until you view it on a computer screen. Taking multiple shots of each and every setup is good practice.

While you have the camera, lighting, and subject in place, take additional photographs of slightly different compositions. The orientation and perspective can be changed easily, and additional looks can be created. Taking multiple shots of each setup is cheap insurance.

Conclusions

You can take stellar photos of your turnings with just about any camera you can lay your hands on. The differences in quality and usability of photographs are rarely caused by the equipment, but more likely by the knowledge of the operator. The simple tips I've suggested cost you virtually nothing once you have a camera but will certainly have an impact on your results.

Of course, post-processing in Photoshop or with other software can improve the final result, but I suggest you strive for excellence as captured by the camera. That makes post-processing work optional. ■

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

Vary your perspective


11


12

Even subtle changes to your photographic perspective can have a big impact on how your subject is portrayed. *Photo 11* is almost straight on, with the camera low; *Photo 12* is taken from a higher elevation with a fuller frame. The effect is a closer, more intimate look.

JOURNAL ARCHIVE CONNECTION

For additional ideas on photography, look to AAW's online archives! See Bob Hawks' Summer 2004 article, "Pictures to Be Proud Of" (vol 19, no 2, page 30); Ed Kelle's August 2012 article, "Stunning Digital Photos Show Off Your Turnings" (vol 27, no 4, page 35); and John Lucas's Winter 2004 article, "Cooler Photography" (vol 19, no 4, page 30). Log on at woodturner.org.

Cutting Bowl Blanks from a Tree

Dale Larson

Photos by Randy Rhine, unless otherwise noted.

Comparing grain patterns. Both bowls were turned from flat-sawn blanks, centered on the tree's pith. Left: Bowl rim facing the trunk's center, resulting in a roughly symmetrical, or butterfly, pattern. Right: Bowl rim facing outward, as with natural-edge bowls, resulting in oval rings in the bottom. These patterns correspond to the bottom and top blanks, respectively, drawn on the log in *Photo 1*.

Right photo: Dale Larson

There are many ways to cut bowl blanks out of a tree, but the methodical approach that I take efficiently uses the tree and produces stable, aesthetically pleasing bowl blanks. If you have a chainsaw and are willing to put it to work, I will explain how to evaluate a tree to determine where the best bowl blanks lie in wait. On the other hand, if you buy bowl blanks, my approach will improve your skill at evaluating the opportunities within the stock available for purchase. The goal is to predict what your finished bowl will look like before a gouge even touches the surface of the blank.

Timing is everything

When I get green wood, it becomes my top priority until I get the subsequent blanks rough-turned. Unprocessed green timber never improves with time. The longer the log sits, the more cracks it will develop, fungus will move in and cause discoloration and loss of luster, and insects will tunnel into the wood. For the log I processed for this article, I cut the blanks on a Thursday and rough-turned them the next day, and this was during a relatively cool and humid part of the year.

I use an emulsified wax solution (Sealtite 60) during warm weather to coat the endgrain as soon as I make the cut. I will also spray water on the blanks and cover them with a tarp until I can rough-turn them. In my experience, a cherry bowl blank cut in July will show visible cracks within an hour. If the blank checks, I will have wasted my time in locating the wood and cutting it up.

Prioritizing the cuts

I almost always start by cutting up the most valuable—meaning highly figured—part of the tree. If the tree has burls, that is where I focus my initial efforts. I cut the crotch pieces next, followed by the lowest part of the trunk where it transitions to the stump. I then work my way up the trunk, leaving the limbs for last. Limbs are full of stress and typically have both the poorest figure and the poorest turning quality. My theory is that if the chainsaw gives up before I do, the best wood from the tree should already be in the back of the pickup.

Dissecting the tree

The yellow poplar in the accompanying photos lies in my driveway, and knowing I have ample time to finish the task, I decide to cut the straight-grain blanks first. Measuring the tree's diameter, I decide to make 14" (36cm) bowl blanks. I slice a few inches from the butt of the log to remove any checking and to help clarify the grain pattern. I then cut the

Chainsaw Safety

While the steps in this article rely on a chainsaw, detailed guidelines for the safe use of this both helpful and dangerous tool are beyond the scope of this article. Several articles related to chainsaw safety have been published in *American Woodturner*; for one, see "Play it Safe," by A.J. Hamler in the Fall 2008 issue (vol 23, no 3, page 56). The price of using a chainsaw without appropriate precautions can be high, even deadly, either for the saw operator or observers who are too close to the action. When I am using a chainsaw, no one is allowed to be close to me or to hold the piece of wood I am cutting.

first round 15" (38cm) long, which will provide leeway to bandsaw the blank to its final 14" diameter.

A stable section for a utility vessel requires leaving the pith out of any blank. Checking originates from the pith, so excluding this area eliminates a reliable source of stress in the wood. With that in mind, there are three basic orientations for blanks from straight-grain wood (*Photo 1*). I have roughly marked the grain lines to illustrate how they are oriented in each blank. The blank on the bottom will yield my favorite grain pattern. It is flat sawn with the center of the bowl aligned with the bottom of the curve of the growth rings. This blank will yield a pleasing, symmetrical grain pattern mirrored in each side of the bowl—a pattern I call butterfly grain.

Quarter-sawn blanks lie on both sides of the pith. For the species of timber that I use, I rarely make quarter-sawn bowls because, to my eye, the resulting grain pattern is not as appealing—the grain lines run straight through the bottom of the bowl and show little or no curl, eyes, or any of the other variants that make wood visually appealing. The exception is when I can acquire a species with strong medullary rays such as our local Oregon white oak (Garry oak). The grain in quarter-sawn oak can far outshine its flat-sawn relatives.

The top blank in *Photo 1* can be used to make a natural-edge vessel, or the outer edge can be removed for a smooth rimmed bowl. The grain orientation running through this blank will produce an approximately round or oval grain pattern in the bottom of the finished bowl. I usually evaluate the blank and consider whether the outer (bark) edge will yield a balanced shape, and if so I will keep the outside intact for a natural-edge bowl. Here I decide against a natural-edge form.

Yet another orientation is possible, an arrangement I call slash-sawn, although the grain orientation approximates rift-sawn dimensioned lumber (*Photo 2*). The slash-sawn blanks will distort significantly while drying, sometimes to the point of being unworkable, and the finished bowl will simply not be as attractive as the flat-sawn bowl. It is true that more of the log will be lost in taking the one flat-sawn blank instead of two slash-sawn blanks. Turner and teacher Lane Philips' mantra is, "Don't trade volume for beauty," and I too encourage taking the best blanks out of the tree, not the most blanks.

I balance the round on wood blocks to prepare it for cutting, ensuring the round is stable and will not roll during the cuts (*Photo 3*). I orient the cut lines vertically, as cutting straight down is easier and more accurate than attempting an angled cut. Because most of my cuts are with the grain, I use a rip, or skip-tooth, chain on my chainsaws. These chains also work for cross-cutting and are less prone to clogging from the long curls generated by the rip cut. A secondary benefit of a rip chain is that when it is dull, it has half as many teeth to sharpen as a standard chain.

I make all the parallel cuts, stopping each cut short of exiting the log (*Photo 4*). ▸

Bowl blank orientations

The three outlined blanks will all yield stable forms, and the top and bottom blanks should have pleasing grain patterns.

The blanks in the top log utilize more of the log, but likely will distort beyond use in drying and show little figure, even if they can be saved.

Cutting straight-grain blanks

The log is cut with the guidelines oriented vertically and the log solidly braced off the ground. While the log is in this stable position, the author partially completes all the cuts before completing the dissection, working from the outside to the inside cuts.

A secondary benefit of a rip chain is that when it is dull, it has half as many teeth to sharpen as a standard chain.

Before I make the first center cut, I mark the location of the pith on the far end of the round. This guides my cut to keep it running parallel through the block with the pith line. Having the grain oriented straight through the blank is important to the appearance of the finished bowl. The prettiest bowl pattern has the grain parallel to the bottom of the bowl. If I have to choose between making the cut parallel to the pith line and the bark line, I generally cut parallel to the bark line to preserve the desired grain orientation.

The quarter-sawn blank rests on my cutting bench, a 22"- (56cm-) high jig that minimizes my stooping and saves wear-and-tear on my back (*Photo 5*). I cut outside the checks around the pith; I will get two quarter-sawn blanks out of the slab. I did not cut through the slab because the support blocks underneath the blank are in the wrong location. A through-cut in this situation could pinch my bar.

The three basic straight-grain blanks sit on the workbench, bandsaw ready (*Photo 6*). The flat top and bottom offer two stable surfaces for the bandsaw table. Trying to cut a round or irregular-bottom bowl blank on the bandsaw can lead to an unsupported and dangerous cut.

Extracting the blanks

5

The center section of the log, next to the pith area, yields quartersawn blanks. Depending on the size of the blank and your bandsaw, it may be possible to take the log section straight to the bandsaw for sectioning.

6

With carefully planned and executed chainsaw cuts, the blanks are ready for the bandsaw table, where the bowl blanks are cut round from the square chainsawed blanks. From left: a flat-sawn, natural-edge-oriented blank (but in this case, with the bark eliminated), a quarter-sawn blank, and a flat-sawn blank.

Cutting crotch section blanks

7

8

As with the straight-grain log, the crotch section is cut apart vertically. Transferring the location of the pith to the top of the log on both ends, as well as drawing the vertical line to the pith, guides the central cut.

9

10

The top two blanks promise the most figure, while the bottom blank will likely be fairly plain. The author decides to sacrifice the bottom blank to optimize the dimensions and location of the upper two forms.

Cutting the crotch

I cut a 15"- (38cm-) round from the tree that includes the crotch section (*Photo 7*). In the area between the two limbs' pith lines will lie an expanse of interlocked feather grain, or crotch figure, and I have attempted to cross-cut the log below this region. A straight line connects the pith of the limb to the pith of the tree. As with the previous round, I orient this line vertically for cutting. I mark the pith at the end of the round and transfer the mark to the top of the log where I will use the location to guide my cut (*Photo 8*). I also mark any checking to be avoided around each pith, of which there is little in this log. *Photo 9* shows the approximate orientation of the three blanks I could extract. If this were expensive or rare wood, I would separate the bottom bowl blank first, but because that blank would be flat-sawn and straight-grain, I decide to forego extracting it.

I make the center cut first, stopping short of cutting completely through

the log (*Photo 10*). Then I slice off each side before returning to finish the center cut. I always saw from the upper end of a crotch section where the most prized feather figure lies. The feather will taper off towards the bottom of the cut, so if my cut wanders a little, there is less likelihood of losing the best figure.

Figure 1 shows how the feather-figure bowls are oriented in the tree's crotch. The side view in this illustration shows the location of the pith, which I intend to bisect with my cut. The bowl bottoms are oriented towards the center of the tree, placing the feather pattern in the bottom of the finished bowl.

With the crotch section halved, I mark out the best patterns with my calipers and highlight the pith lines with red chalk (*Photo 11*). Cutting the blanks along the pith lines yields two bowl and two spindle blanks. The feather figure lies above the pith line of the limb and to the right side of the trunk pith line (*Photo 12*). This crotch did not have a big feather area. Harder to see in the photos is that the weight of the limb has compressed the wood at the junction with the trunk to create fiddleback figure, which I have shaded with a marker.

These blanks are now ready to be bandsawed and rough-turned. I will make my final adjustments to the forms for grain alignment as I rough out the blanks between centers, an approach I learned from John Jordan. Turning between centers gives me an opportunity to make final adjustments to the bowl blank and possibly correct mistakes made during chainsawing.

Final thoughts

There are many advantages to working green wood, including salvaging local timber that may not be commercially available. Cutting one's own blanks offers the chance to optimize blank size and grain patterns. Turning green wood also generates less dust and requires less physical effort than seasoned wood. Finally, when I rough out green blanks, I get to see colors in the fresh wood that no one else will see. Fresh madrone can be bright red, almost fluorescent, and black walnut can show shades of deep purple and green. Unfortunately, these bright colors fade as the wood dries. With experience processing my own trees, I rarely buy a bowl blank. I find I am no longer willing to give up control of this part of the creative process.

For those who would like to dive deeper into this subject, I recommend two books: *Reading the Wood* by Michael Elkan and *Turning Green Wood* by Michael O'Donnell. ■

Dale Larson has been turning bowls for forty years. He is a founding member and past president of the Cascade Woodturners in Portland, Oregon. Dale served on the AAW Board from 2009 to 2014, as both symposium chair and president.

Finding feathers in wood

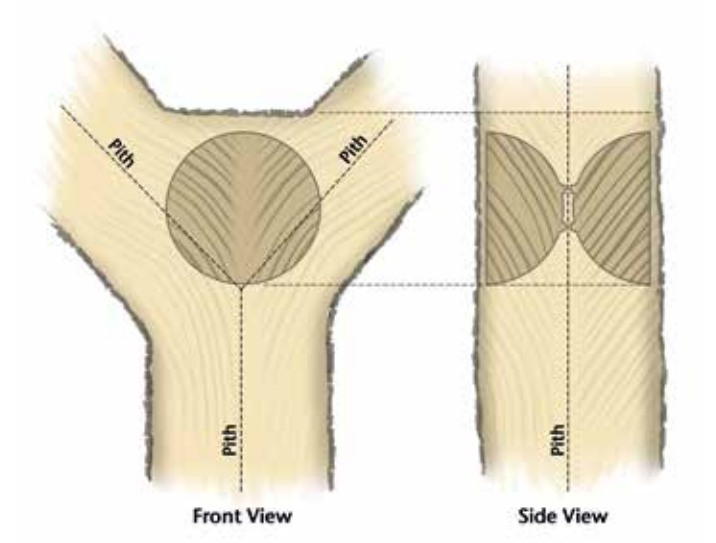


Figure 1. The feather pattern occurs between the pith lines and the crown of the crotch. The figure is typically strongest at the top and tapers off towards the bottom where the pith lines meet.

Illustration: Robin Springett

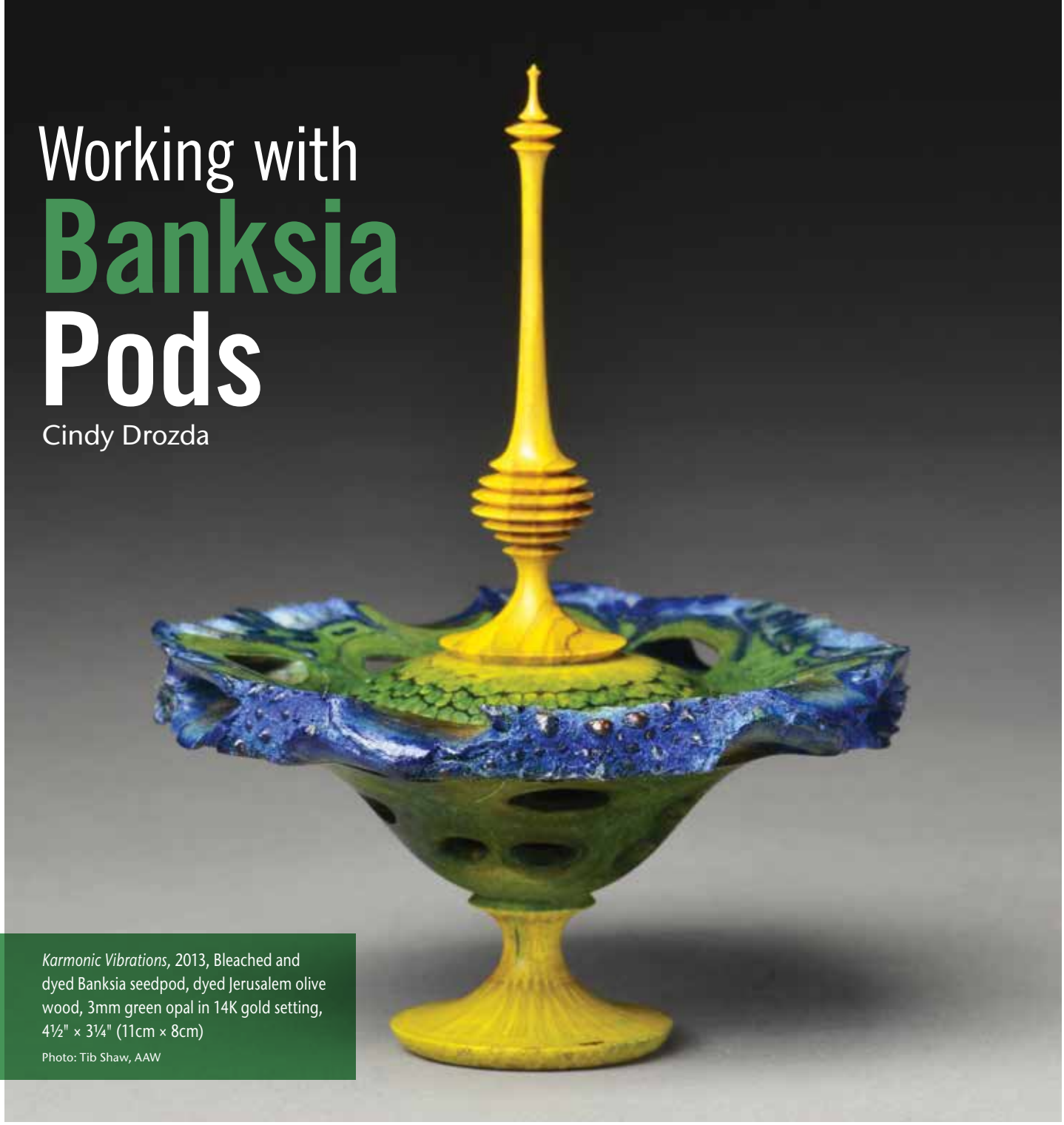
Maximizing the crotch section blanks

Because of the stability of quartersawn timber, the two spindle blanks opposite the limbs are worth coating with wax and setting aside to dry.

Although this particular log has little feather figure, the amount of fiddleback figure below the limb is a pleasant surprise.

Working with Banksia Pods

Cindy Drozda



Karmonic Vibrations, 2013, Bleached and dyed Banksia seedpod, dyed Jerusalem olive wood, 3mm green opal in 14K gold setting, 4½" × 3¼" (11cm × 8cm)
Photo: Tib Shaw, AAW

I like to call the banksia pod a pinecone from down under. It performs the same function as a pinecone, being the seed carrier of the banksia plant, which is not technically a pine, though it is an evergreen. The *Banksia* genus of plants gets its name from Sir Joseph Banks, the botanist who sailed with Captain Cook's *Endeavour* voyage that arrived in Australia in 1770.

Banksia plants range in size from shrubs and larger bushes to trees of around fifty feet in height. They can be found growing outdoors in Australia, Papua New Guinea, and New Zealand. Of the seventy-five named species, sixty-one are found in western Australia, including the *Banksia grandis*, the species that generates the large seedpods. Although it's the size of the seedpod that makes it attractive to artists, the name probably refers to the tree's large leaf size.

The pods, or cones, commonly used for woodturning are the fruit of the plant. These cones can be from 3" to 16" (8cm to 41cm) long. Once the stunning, upright, golden yellow or red flowers fall off, the cone matures

on the tree and the seeds develop (*Photo 1, 2*). There can be both mature cones and flowers on the tree at the same time. Often it is the heat of a forest fire that causes the seed case holes, which give these pods their unique appearance, to burst open and release their seeds.

I saw my first banksia pod in the mid-1990s at our local Woodcraft store and was captivated. It was the oddest piece of material I'd ever seen. I knew it could be turned but didn't have a clue how to begin or what to make out of it. So, for quite a few years the pods were kept on my windowsill as artifacts. When I saw a box made by Bonnie Klein from a banksia pod, I knew what I wanted to make. How to get from rough banksia to box—that was my first adventure. Here are some things I have learned about banksia over the years.

Choose the right pod for the project

How do I choose a "good" banksia seedpod? Not all banksia are created equal. I look for equal distribution of eyes because I like that look better. But really, it depends on what you like and what you're going to make (*Photos 3, 4*). Rather than asking, "Is it good?" ask yourself, "What is the best use for this one?" or "Which is the best banksia for my project?"

The lighter, browner ones tend to be sounder inside. Whitish or yellowish color on the exterior can indicate a punky interior that will tend to tear out when turned but might have some nice color variation. A greyish exterior and broken or weathered-looking eyes might mean a punky interior, or might not.

After inspecting the exterior, the best way to evaluate a banksia is by cutting the ends off, or cutting it in half, on the bandsaw and looking at the cross section. You might see a bug hole in the very center, which may or may not go all the way through. A punky banksia will have lighter-colored areas and might show tearout from the bandsaw cut. If it is soft enough to dent with your fingernail, it is punky and will most likely tear out more easily when turned.

Banksia pods offer a lot of natural texture and surfaces to work with, but there is no worry about grain direction, as with wood.

Cracks at the core (*Photo 5*) might not yield a good finial, knob, or stem (depending on your design) but could make a great-looking mushroom cap. Punky cores usually have a lot of color variation and look nice on a mushroom or weed pot. The ones with random distribution of eyes can make good weed pots or partial natural-edge turnings.

Nicely formed, undamaged eyes and a less-weathered exterior make a better natural-edged piece, but if you are turning the exterior away, the weathered ones work just as well. A sound pod without a punky core will be easier for making a box.

Anatomy of a banksia pod

The banksia consists of a darker brown core that looks like the pith of a branch. This core has no grain ▸

Banksia flower and seedpod


1


2

Banksia trees grow in Australia, Papua New Guinea, and New Zealand. When the flowers fall off, the cone, or seedpod, develops.

Photos: Stacey and Betty Hager

Choose the pod for the job


3


4

No two banksia seedpods are alike. Eye spacing and consistency vary; what character pod do you want for your project?

to it and will break off quite easily at ½" (13mm) diameter. The eyes stop short of the core, so it usually has no voids—unless there is a bug hole. Bug holes typically go up only into that core area and may go all the way through from one end to the other. Or not.

Most visible on the ends, where there are not any eyes, is a pattern in the cross-section of a banksia that looks like a sunflower (*Photo 6*). A slice of this section could work quite nicely as an inlay piece.

The core is surrounded by a roughly concentric zone that is the nicest cutting and strongest. The eyes get smaller toward the center of the banksia pod, stopping at the core. Surrounding this clean-cutting zone is a more porous area that is still nice to turn. It is in this zone where the eyes are the biggest and attached less firmly. It often looks like there is a small space around them. On a thin-walled piece, the eyes are prone to fly out of the matrix in this zone. Drenching with cyanoacrylate (CA) glue or vacuum-stabilizing with resin takes care of that issue if I don't want the eyes to be missing. Not that missing eyes is necessarily a problem—a nice, though bigger, void is left when the eyes come out. This might be the look you're after.

The exterior zone consists of "fur" coated in a thin layer of hard glaze. That fur is what gives banksia such a bad reputation. It makes an awful mess when cut. The fur zone also is the most prone to coming apart. Pieces can fly off and eyes can fly out when cutting in this zone. With a natural-edge turning, I use this exterior furry zone as part of the finished piece. Light cuts and plenty of lathe speed seem to give the best results. Drenching with thin CA, and plenty of it, will keep the edges together, but I don't like using CA because it may not have the longevity that I want for my work. I prefer thin epoxy or other resin. The fur zone doesn't take detail well, being, well, furry!

Make sure the banksia are dry. They are usually fairly (or completely) dry by the time they mature, fall off the tree, and get shipped to the U.S. for us to buy. They tend not to move much as they dry, and if they shrink when drying, it tends to be in a symmetrical manner. I have some banksia boxes that still have the same fit after many years. Even so, I still like to dry every banksia I use in my kiln for a few months so I don't get any surprises.

What to make from banksia pods

Banksia pod sizes range from extra large ones at almost 4" (10cm) in diameter to the smaller 1"- (25mm-) diameter variety I saw growing wild in Brisbane when I was demonstrating at Turnfest. Those tiny ones were 3" to 4" (8cm to 10cm) long. The jumbos can be a foot long or more. The most common size is about 3" in diameter and 8" to 10" (20cm to 25cm) long. After the outer fur is turned away, this

OZ Goddess, 2014, Banksia cone, African blackwood, 2mm black opal in 14K gold setting, 4½" × 2½" (11cm × 6cm)

Anatomy of a banksia seedpod

5 Natural occurrences such as cracks at the core can help dictate the type of project a pod is best suited for.

6 The sunflower pattern at the cut end could make for a nice inlay.

Begin between centers

7 A banksia pod mounted between centers with its core running parallel to the lathe bed. Tenons are formed on the ends for holding in a four-jaw chuck.

8 A banksia pod mounted with its core running perpendicular to the lathe bed.

Untitled Ornament, 2007, Banksia cone, pink ivory wood, 5½" × 2½" (14cm × 6cm)

diameter pod, or cone, will net a 2¼"- to 2½"- (57mm- to 64mm-) diameter piece.

Banksia pods offer a lot of natural texture and surfaces to work with, but there is no worry about grain direction, as with wood. A natural outer surface (like the bark around a branch) and a small diameter but long length make a pod suitable for projects that you would think to make out of a tree branch. Some examples are banana bowls, goblets, mushrooms, boxes, small vessels, and weed pots. Since the core of a pod has no grain structure or grain strength, a thin finial made of it would break off very easily. Thin-walled turnings and thin sections are more apt to break than a comparable shape turned from wood. Using the tailstock helps to lower the failure rate. Natural-edge turnings tend to cut with less eye loss when cutting from the outer edge inward, but other than that, they can be cut in any direction.

You should always wear eye protection when turning, but be aware that when roughing the exterior of a banksia pod, there will be fur and sharp particles flying off. Also, expect to need a bath after turning a banksia pod, as they are very dusty.

Start turning

So far, all of my banksia projects start with cutting the ends off. This allows me to mount the banksia between centers on the lathe and gives me more information about the material and its suitability for what I'm making (as described above).

Be careful cutting the banksia pod ends off on a bandsaw. Use a V-shaped sled to keep the banksia from rolling out of control.

After cutting the ends off, the center core of the banksia can be positioned to engage the live and drive centers when mounting the material on the lathe. This works to center the banksia evenly most of the time. While it's between centers, a tenon can be formed for mounting into a chuck (*Photo 7*). I have not had good luck cutting the end off and just gluing it flat onto a wasteblock with wood glue. Banksia pods don't seem to glue well, with the failure being at the glue line. I have not tried using a faceplate with screws directly into the banksia. Use the tailstock whenever possible for the best success rate. You can also mount a banksia pod between centers with the pod's core running perpendicular to the lathe bed (*Photo 8*), depending on the needs of your project.

Banksia scrape, cut, and sand well, but they are abrasive and will dull your tools much faster than when cutting wood. High speed steel, the new "powder metal" tools, carbide-tipped tools and drill bits, and good quality abrasives are really valuable for turning banksia. I like to cut at high lathe speeds but drill and sand at slow speeds.

A banksia jam-fits better onto a wooden wasteblock than onto another piece of banksia. Using a wasteblock of soft maple, alder, poplar, mahogany, or other compressible wood gives a better and more secure holding. Jam-fitting a delicate, thin-walled banksia turning into a recess instead of over a tenon will reduce the risk of cracking the workpiece. Jam-fits with thin-walled banksia pieces are never very strongly gripped. I use tape for insurance when finishing the bottom without the tailstock. ▸

It is easy to break the piece or knock it off the jam chuck. Too much tailstock pressure can also break a thin-walled piece.

Use CA glue, or stabilizing resin, to strengthen thin-walled pieces. When hollowing to the maximum diameter of the pod, the eyes tend to fall out. CA soaked over the outside of the piece before hollowing will glue in the eyes and will not stain the finished piece. Be sure to let the CA dry completely before turning on the lathe.

I recently started using vacuum-stabilizing with resin to strengthen the banksia for thin-walled turnings. It does a great job of keeping the eyes in (as an alternative to CA glue). Unfortunately, this method does not harden up the infamous fur around the outside. If you want to do that, CA or a thin-bodied resin is good.

I have seen banksia pods cast in resin, filling the holes, though I have not done that myself (yet).

Libra, 2009, Banksia seedpod, African blackwood, black opal, gold, 12" × 6" (30cm × 15cm)

Finish off of the lathe

Some finishes that I like include wipe-on polyurethane, diluted polyurethane, thin-bodied penetrating oil (to minimize having to wipe finish from inside the eyes), and spray-on film finishes such as lacquer, polyurethane, and shellac. It is very tedious to scrape wax or French polish out of banksia eyes. That is why I finish off the lathe. To keep the oil finish from accumulating in the voids, I blow it off with an air compressor right after wiping the excess finish off.

As with any turning, the secret to a nice finish is in the sanding. I will sand banksia to 600 grit if I am planning to spray a film finish. For a wipe-on finish I will sand and polish to 4000 grit and just apply one coat of finish. The material is so dense that not much finish will soak in, and additional coats don't seem to offer any advantage.

Bleaching the banksia piece after turning and sanding gives an interesting effect. I have stained my bleached banksia turnings with dyes and with white pickling stain. The look is otherworldly!

Be sure to sign your work. Metallic gel ink pens write on the sanded surface of a banksia and show up well. Be sure that your chosen finish will not cause the ink to run. I usually use a vibrating engraver to sign my banksia pieces. Filling the engraving gives it more contrast. For best results filling engraving, fill all of the surface voids with epoxy or CA glue and do the engraving after the finish has dried.

Buying banksia

How can you get some banksia to turn? It sounds like fun to go to Australia and gather your own banksia, but plant products with the bark on can't be legally brought into the U.S. in your luggage. It's better to buy them from an importer who has already done all of the import paperwork and gone through the fumigation and quarantine necessary.

You can get banksia from wood suppliers online, but then you will get what they pick for you. I recommend going to a symposium tradeshow and picking out your own. When I do order them online, I buy plenty of them so I will be more likely to get suitable banksia for various projects.

I found the toughest thing was to take the first step. My recommendation is to jump right in. Buy three of them, cut the ends off, mount them between centers, and turn a tenon on one end of each. Then turn some weed pots, natural edge or not. Don't try for thin walls or fitted parts at first. These first three will teach you how banksia cut and how to use the various textures in the banksia.

Banksia seedpods are a truly renewable resource, since no trees are cut down to harvest them. Buy an extra pod or three and don't be afraid to lose one on a new idea. Working with banksia pods is an adventure, but the results are well worth the effort. ■

Cindy Drozda has been turning wood since 1985 and is now a full-time woodturning artist who shares her knowledge and passion as an international demonstrator and teacher. Her website is cindydrozda.com.

Creative Solution for an Out-of-Round Bowl

Kevin Neelley

Several months ago, my club, the Kansas City Woodturners, hosted a demonstration about how to take wood from log to lathe. The wood was beautifully spalted hackberry. The turning demo went well, but the blank was turned a little too thin to become a "twice-turned" bowl. Normally, a rough-turned bowl would be left thick enough to allow for movement during drying. A month later, we found that the bowl had gone so out of round that it couldn't be finish-turned without cutting through its sides.

The diameter across the rim was 8¾" (22cm) in one direction and 9½" (24cm) in the other. The bowl was a full ¾" (19mm) out of round at the rim, and the wall thickness was only ⅜" (10mm). Finish-turning it in its current form was not an option, so I decided to try to save the blank by inserting a segmented filler strip to make the diameter round again.

The process

I cut the bowl in half on the bandsaw, through its longer side—parallel to the grain direction (*Photo 1*). Then I flattened the rough-cut surfaces with a belt sander to ensure sound glue joints.

I laid one bowl half on a piece of paper and drew the wall outline (*Photo 2*), then used a compass to find the best diameter and wall thickness for the filler strip (essentially half of a segmented ring). I made the segmented half-ring of walnut 9½" diameter by ¾" wide by ¾" thick. Walnut was chosen for good contrast to the spalted hackberry. The half-ring was test-fitted on the paper outline (*Photo 3*). I determined that the hackberry blank was only ½" (13mm) out of round halfway down toward the base; to take this into account, I tapered the segmented half-ring to ½" thick about halfway down.

I added strips of white and black veneer to the segmented half-ring to dress it up, then glued the hackberry bowl halves and segmented half-ring together (*Photo 4*).

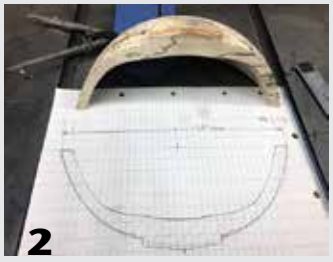
I mounted the glued-up bowl on a Longworth chuck so I could turn the bottom flat (*Photo 5*). Then I was able to center and glue a wasteblock to the foot using the Oneway live center setup, allowing me to mount the bowl on a faceplate and finish turning it. I was able to save the bowl and turned it to about ⅛" (3mm) wall thickness. ■

Kevin Neelley has been an AAW member since 1994 and a segmented woodturner with the Kansas City Woodturners for about that long. He has only been turning "chunk" wood for the last few years and usually adds segmented details.

Cut bowl in half

The bowl was cut in half along the grain, then the cut surfaces were smoothed to ensure good glue joints.

Determine size of filler strip



Tracing the half-bowl's outline on paper aided in sizing the filler strip, a segmented half-ring of walnut.

Glue it back together

The author added black and white veneer to the sides of the filler strip, then glued the entire assembly together.

Finish-turn

A Longworth-style chuck was used to remount the bowl, turn the foot flat, and glue on a wasteblock with faceplate. The bowl was finally turned to ⅛" wall thickness.

MODERN TOOL STEELS AND GRINDERS

Tom Wirsing

Grinding a CPM 10V particle-metal gouge on a CBN grinding wheel. Microscopic views of the grinds reveal that CBN wheels are capable of sharpening particle-metal tools to a very keen edge.

There have been many changes in both the steels used in woodturning tools and in the grinding wheels we use to sharpen them. These changes have created confusion among woodturners. We wonder why we sometimes don't get the results we expect from expensive new tools. Following is a summary of how tool steels have changed and what it means for woodturners.

Evolving tool steels

For many years, M2 has been the most widely used and successful conventional high-speed steel (HSS) used for woodturning tools. M2 revolutionized woodturning by providing tools that were much more resistant to both wear and heat than previous tools. More recently, we have seen growth in the popularity of M42, another conventional HSS. We have also seen the introduction of particle-metal tools (also called powder-metal tools). Tools with steels such as M4 and A11 (Crucible Industries' version of which is called CPM 10V) have become widely available and are gaining in popularity.

What are the differences between conventional high-speed steels such as M2 and M42, and particle metals such as M4 and CPM 10V (A11)? Which are the better choices? It helps to understand how they are made (*Photo 1*).

In manufacturing conventional HSS, iron and carbon are melted in a furnace, and alloys are added to the molten steel. The molten steel is then poured into molds and allowed to cool. The alloys make the steel more resistant to abrasion (wear) and to damage by excessive heat, as well as tougher and more resistant to breakage. Since alloys in steel make it better, logically we would like to add more. But there is a limit to the percentage of alloys we can add to conventional HSS. As the steel cools, atoms of some of the alloys chemically bond with atoms of carbon, forming what are called carbides. Carbides contribute positively to abrasion resistance, heat resistance, and toughness and are much harder than the surrounding steel. But the higher the percentage of carbide-producing alloys, the larger the carbides become. Excessively large carbides create two problems: they are too hard to be ground (sharpened) with most conventional grinding wheels and they rob the surrounding steel of their benefits.

What we'd like is steel with very small, very hard, abrasion-resistant carbides that are abundant and well-distributed. The carbides of vanadium are particularly hard and contribute very positively to abrasion resistance. That's why steels high in vanadium stay sharp longer. The carbides of molybdenum contribute to wear-resistance, and molybdenum contributes to toughness. Carbides of chromium and tungsten contribute positively, too. How can we add all the alloy we would like and at the same time avoid excessively large carbides? Enter particle-metal technology.

In the manufacture of particle metals, iron and carbon are melted in a furnace, and the alloys are added. But instead

When it's time to buy new tools, take advantage of developments in modern tool steels.

of pouring the molten steel into molds and allowing excessively large carbides to form as the molten steel cools, the molten steel is blown through a nozzle, creating microscopic droplets of steel. The droplets are on the order of 6 to 10 microns in diameter, and the carbides within the droplets are 2 to 3 microns in size. One micron is one-millionth of a meter. The steel powder is then put into a metal canister and subjected to extremely high pressure, at forging temperatures, in a process called hot isostatic pressing (HIP), transforming the powder into solid steel. The particles bond together so thoroughly that the resulting steel is very dense, with almost no porosity. We now have solid particle metal with very small, very hard, well-distributed carbides. Particle metals have revolutionized woodturning tools.

A closer look

Figure 1 shows the chemical composition of M2 and M42 conventional HSSs, as defined by the American Iron and Steel Institute (AISI). M2 contains vanadium, molybdenum, tungsten, and chromium, all of which contribute to the formation of carbides, making M2 quite abrasion-resistant and tough. M42 also contains molybdenum and chromium, and smaller percentages of vanadium and tungsten. To compensate for its lower percentage of vanadium, whose carbides are very abrasion-resistant, M42 has 8% cobalt, which contributes to hardness. What M42 lacks in vanadium carbides, it compensates for with greater hardness. M2 is very widely used in woodturning tools. M42 is less widely used, but its popularity is growing.

Figure 2 shows the chemical composition of M4 and CPM 10V (AISI A11) particle metals. M4 is an excellent particle metal but has been adopted by a relatively small number of tool manufacturers. CPM 10V (AISI A11) has been adopted by more tool manufacturers, and its market acceptance is growing.

There are other particle metals, but for purposes of brevity, we will limit our discussion to these two excellent examples.

Grinding wheels

While particle metals perform exceptionally well, the carbides within them have created new challenges. Most conventional grinding wheels are unable to sharpen particle-metal tools to a keen edge. That's why conventional wisdom says we cannot get particle-metal tools as sharp as HSS tools. But that's no longer true—enter cubic boron nitride (CBN) grinding wheels.

CBN abrasive is almost as hard as natural diamond and is highly resistant to abrasion; it maintains its sharp edges so it cuts quickly and efficiently. The CBN abrasive is typically bonded to the surface of a steel or aluminum grinding wheel, so the abrasive sits proud of the wheel. When grinding with a CBN wheel, just the abrasive touches the tool, cutting faster and cooler. The abrasive in a conventional, vitrified cast wheel, on the other hand, is mixed in with a bonding matrix (called the bond) that holds the wheel together. Since both the bond and the abrasive rub on the tool as it is being ground, conventional wheels don't cut as quickly, and they get the tool hotter than do CBN wheels (*Photos 2, 3*).

Since the abrasive in most conventional wheels isn't hard or sharp enough to cut through the carbides, it either shatters the carbides or knocks ▸

M2 vs. CPM 10V steel

From left to right: M2 HSS gouge and scraper, and a CPM 10V particle-metal gouge and scraper. All have been sharpened with CBN grinding wheels. While conventional wisdom says we cannot get particle-metal tools as sharp as conventional HSS, with CBN wheels this is no longer true.

Chemical composition of M2 and M42

Conventional HSS	Fe%	C%	Si%	Cr%	V%	W%	Mo%	Co%	S%	Mn%
M2	81.43	1	0.33	4.13	1.98	6.13	5	0	0	0
M42	74.47	1.08	0.45	3.9	1.2	1.5	9.4	8.0	0	0

Figure 1. AISI definitions allow for tolerances, so exact percentages of alloys may vary. Symbols: Fe=Iron, C=Carbon, Si=Silicon, Cr=Chromium, V=Vanadium, W=Tungsten, Mo=Molybdenum, Co=Cobalt, S=Sulfur, Mn=Manganese.

Chemical composition of M4 and CPM 10V

Particle-metal Steels	Fe%	C%	Si%	Cr%	V%	W%	Mo%	Co%	S%	Mn%
M4	79.53	1.42	0	4.0	4.0	5.5	5.25	0	0	0.3
A11 (CPM 10V)	79.78	2.45	0.9	5.25	9.75	0	1.3	0	0.07	0.5

Figure 2. The higher vanadium content of both M4 and 10V provides greater abrasion resistance, so they stay sharp longer. 10V, with almost 10% vanadium, is exceptionally abrasion-resistant.

Conventional vs. CBN grinding wheels

2

3

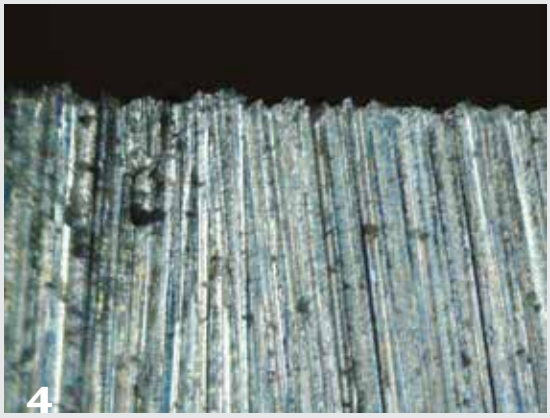
It is true that CBN wheels (right) are generally more expensive than conventional wheels (left), but the price difference is narrowing. CBN wheels have a much longer service life than conventional wheels, so in the long run, the cost of ownership of CBN wheels is lower. Plus, they offer distinct advantages over conventional wheels.

them out of the cutting edge, leaving a microscopically ragged cutting edge. It simply isn't possible to get a particle-metal tool as sharp with most conventional wheels as it is with CBN. And CBN wheels work wonderfully on M2 and M42 as well as on particle-metal tools, getting both steels much sharper.

CBN wheels have three other great advantages. First, they are much better balanced than conventional wheels, so they run more smoothly. Even though conventional wheels can be balanced, as soon as they are dressed, the balance changes. It is almost impossible to keep conventional wheels balanced, and

Comparing microscopic views

M2 ground two ways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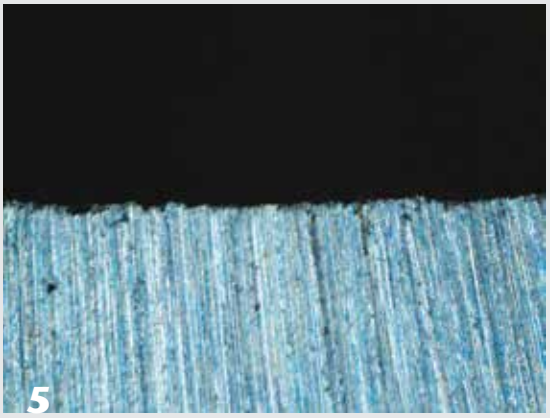
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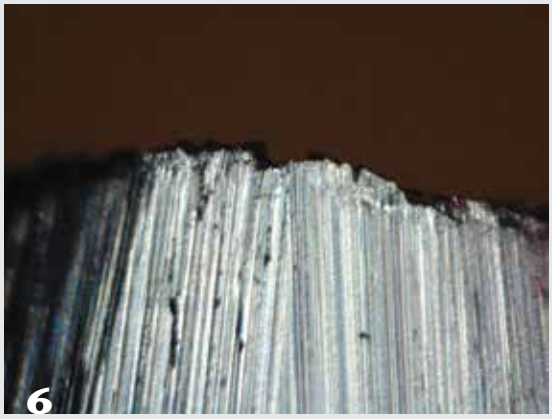
(4) M2 tool ground on an 80-grit conventional wheel. Note the "teeth" along the cutting edge. The parallel lines are the scratch pattern on the tool's bevel.

(5) M2 tool ground on a 600-grit CBN wheel, which produces smaller, sharper, and more uniform teeth.

CPM 10V ground two ways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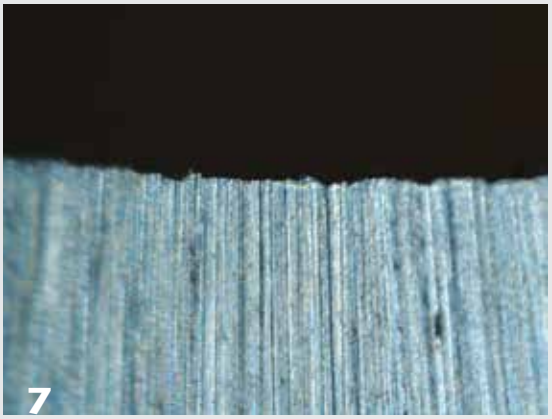
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(6) CPM 10V tool ground on an 80-grit conventional wheel. Compare this with the view of the same tool ground on a CBN wheel. CBN gets the tool remarkably sharper.

(7) CPM 10V tool ground on a 600-grit CBN wheel. As with the M2 tool, the 600-grit wheel produces a sharper cutting edge, with far more teeth along the cutting edge.

A Note About Heat Treatment of Steel

All woodturning tools must be heat-treated in order to fully develop the microstructure of the steel to yield its desired characteristics of hardness, toughness, and resistance to wear. During heat treatment, tools are heated in a furnace to a precise temperature, then quenched to rapidly lower the temperature of the steel to make it hard. Cryogenic treatment is sometimes employed in the quenching process. Tools are then tempered to reduce stresses in the hardened steel, enhancing toughness and resistance to shock. No matter how good the steel, if tools are not heat-treated using accurately controlled processes, tools will not perform effectively. A full description of heat treatment processes is quite involved and too lengthy for inclusion in this article.

the vibration makes it more difficult to grind accurately. Smooth-running CBN wheels facilitate better grinds. Second, CBN wheels never need to be dressed, so their diameter never changes. For those who use jigs when grinding, the cutting angles on tools change every time a conventional wheel is dressed because the diameter of the wheel is reduced. Unless the jig is readjusted frequently, cutting angles are changing. With conventional wheels, your jig's grinds may not be nearly as repeatable and consistent as you think. With CBN wheels, the angles don't change. Third, CBN wheels produce far less dust than conventional wheels. Breathing the dust produced by dressing conventional wheels and by grinding tools on them can be a health hazard.

One other difference with CBN wheels is that they are readily available in much finer grits than conventional wheels, including 80, 180, 350, 600, and 1000 grits. When a tool is ground on an 80-grit conventional wheel, the scratch pattern on the bevel produced by the abrasive in the wheel creates a series of "teeth" along the cutting edge of the tool. These teeth are clearly visible under a microscope (*Photos 4–7*). If the same tool is ground on a 600-grit CBN wheel, the teeth are sharper and more uniform, and there are many more teeth across the cutting edge. The tips of the teeth do the cutting and therefore wear down as the tool cuts wood and gradually becomes dull. With many more teeth across the cutting edge, the tool sharpened on a very fine CBN wheel will not only be sharper, it will dull more slowly. That gives a fine-grit CBN wheel a big advantage over an 80-grit conventional wheel.

Now consider that with particle-metal tools, each tooth has hundreds of carbides within it that are finer, harder, and more evenly distributed. Conventional HSS tools also have many carbides within each tooth, but the carbides are larger and not as well distributed within the metal. Therefore, even though there is an advantage in grinding both conventional and particle-metal tools on fine grit CBN wheels, the particle-metal tool is the winner.

What grits do I use in my workshop? I have two 8" (200mm), 1725-rpm grinders with two CBN wheels on each: an 80- and 180-grit on one grinder, and a 350- and 600-grit on the other. I use the 80-grit for rough-shaping tools. It cuts fast and cool. I use the 180-grit primarily for general sharpening and to sharpen my negative-rake scrapers. The 180-grit wheel produces a burr that is just right for negative-rake scraping. I use my 350-grit wheel to sharpen gouges used for rough-shaping platters and bowls, and I use the 600-grit wheel for sharpening gouges used for finishing cuts, where a smooth surface with no tearout is essential. If I had only one grinder, I would choose 180- and 600-grit CBN wheels.

Conclusion

If you have M2 tools, continue to use them proudly. M2 has been the most successful steel for woodturning tools for many years. But when it's time to buy new tools, take advantage of developments in modern tool steels. And with CBN grinding wheels, you can get particle-metal tools every bit as sharp as conventional HSS tools, and they stay sharp longer. Invest in CBN grinding wheels as soon as your budget allows. And consider getting at least one very fine-grit CBN wheel to grind gouges used for finishing cuts. A dull tool will always produce tearout, always! The sharper the tool, the better it will perform. Fine-grit CBN wheels produce superior grinds. Modern woodturners should take advantage of evolving technologies in tool steels and grinders. ■

Tom Wirsing is a physicist who has had a lifelong interest in metallurgy and woodturning. He enjoys teaching woodturning and has taught at regional and national symposia, as well as at numerous AAW chapter events across the U.S. and Canada. Tom is a past president of the AAW. For more, visit thomaswirsing.com.

Insights on Very Deep Hollowing

Lyndal Anthony

One area of woodturning that has captured my interest is deep hollowing. I know from experience and research that many boring bars on the market can handle depths of up to 20" (51cm) and a few will go as much as 30", but I wanted to go deeper. I decided to investigate the science behind how this could be done in a safe manner.

I searched the Internet for information on very deep hollowing but came up empty. After posting my interests on the AAW forum, I was contacted by Dennis Gooding, an engineer who offered to help me design a boring bar big enough to hang over the toolrest four feet and yet be rigid enough to withstand the forces that a boring bar cutter would exert. There are as many boring bar designs as there are inventive turners, so here I don't intend to offer the definitive word on boring bars, but just to describe the nature of my findings.

Lyndal Anthony with his well-researched boring bar outfit made for very deep hollowing.

Tubing vs. solid bar stock

An important area of concern is the weight of the boring bar itself. With shorter bars, it makes sense to use solid steel, but as the length increases, the only real option supported by good engineering principles is to use tubing. Dennis explained that for a given weight, pipe/tubing is much stiffer than solid bars. Over long lengths, solid material will actually sag under its own weight. Mass is important and works as an advantage on shorter boring bars, but as bar length increases, the increased mass of solid material results in compromised stiffness—not to mention impractical handling. As an example, the largest boring bar I have built from tube steel is about 3" (8cm) in diameter and 14' (4.3m) long; it weighs more than 200 lbs. The same size bar in solid steel would weigh well over 700 lbs.

We know that bridges are designed to flex. If they are too stiff, they can crack and fail. But in woodturning, we don't want any flex, or deflection, of the cutter, as it can cause inconsistent cutting action and, ultimately, a catch. When working with pieces of this magnitude, a catch can be catastrophically dangerous.

The first boring bar I made was from solid steel 1¼" (32mm) in diameter and 6' (1.8m) long. It worked effectively up to about 30" deep but then started to flex too much. I next tried a solid boring bar that was 2" (5cm) in diameter and 11' (3.4m) long, but it started to flex at about 39" (99cm) deep. I also discovered that my toolpost was flexing, so I moved it to the center of the lathe. Ultimately, I need to use a more massive tool post and banjo.

Dennis and I agreed that to understand the required bar stiffness, we'd need some data on how much force is exerted on the cutter itself. Dennis designed a fixture to measure actual tool pressure exerted on the tip of the cutter and conducted tests to gather the data. He even invested in a data-gathering system comprising a precision electronic position-measuring instrument, an analog-to-digital converter, and a laptop computer. He plugged the data into a computer program he wrote to analyze boring bar design and tool pressure. This allowed him

Safety Note

This article covers tools and materials needed for hollowing to depths that commercial boring bars cannot achieve, in excess of 30" (76cm). The deeper you hollow, the greater the level of difficulty and risk of an accident. Turning very large, heavy pieces of wood can turn lethal in an instant. Know the limitations of your skill and equipment.

to measure and record in real time the instantaneous deflection of the cutter in response to cutting forces during an actual boring operation.

Figure 1 shows the calculated relative boring depth capabilities of seven example systems, each using a different bar material. In each example, the total length of the bar and the distance between supports has been optimized to achieve the maximum indicated hollowing depth. The graph also shows the stiffness of the bar in each example, characterized by the moment of inertia of the bar cross-section.

My goal was to bore 4' (1.2m) deep with as small a diameter bar as possible. Dennis's program suggested that the optimal solution was a boring bar made from nominal 2½"- (6cm-) diameter (3" actual) schedule 80 steel pipe. And sure enough, this size pipe didn't flex hanging 4' over the toolrest; the engineering suggests it would even offer sufficient stiffness up to 70" (1.8m) deep.

Effect of Bar Stiffness on Boring Depth

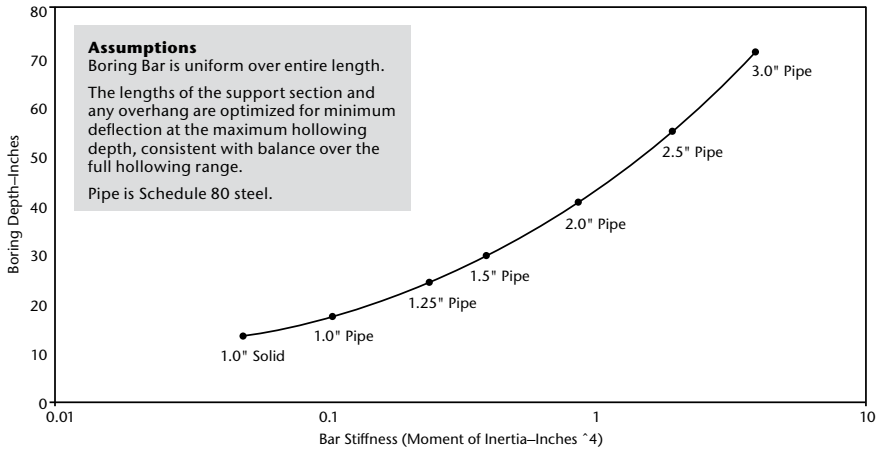


Figure 1. Relative expected performance for various boring bar materials. Actual performance will vary, depending on many factors such as type of cutter, wood species, operator skill, lathe speed, and more. Note that the "moment of inertia" of a bar depends on both the shape and size of the bar cross-section: For a round bar, its value is proportional to the fourth-power of the diameter; for a rectangular bar, its value is proportional to its width times the third power of its height.

Chart data courtesy of Dennis Gooding.

Other considerations

We also have to keep in mind the leverage that is imposed on a tool handle. A generally accepted ratio for handheld tools is for the handle to be six to eight times the length the cutter overhangs the toolrest. Dennis's computer model also indicated that for a given maximum tool overhang, there is an optimal length for the boring bar and optimal spacing between the toolrest and the outboard rest. Making the bar too long actually leads to increased tool deflection under load. To offset this effect, my boring bar is anchored at the very end by a shopmade, floor-standing captive toolrest that weighs 400 lbs.

It is also critical to use a steady rest for this type of deep hollowing. Mounting an oversized workpiece, with significant length and weight, using only a faceplate with screws or only a chuck absolutely will not suffice. The only way to even attempt hollowing something this long and heavy is to use a substantial steady rest (pictured on the tailstock end of the lathe in the *opening image*). This is necessary to anchor the unsupported end of the workpiece. The steady rest, as well as the floor-standing captive toolrest, has to be extremely robust in order to withstand the extra weight and spinning mass. Since taking photographs for this article, I have built a six-wheel steady rest with four 4" (10cm), 400 lb-capacity wheels on the bottom.

I am continuing to investigate alternative materials for boring bars, including composites that are stronger, stiffer, and lighter than steel but don't transmit vibrations like steel. ■

Before hollowing, the author turns the workpiece between centers to shape the outside of the vessel. Note the engine hoist used to help position the log section. Prior to actual turning, he uses a portable power planer to knock down the high spots and balance the piece better.

Untitled Vase, 2014, Soft maple, pyrography, water color paint, 45" (114cm) tall

Lyndal Anthony worked as a machinist before becoming an industrial/technology education teacher at the high school level. While he was already well versed in metalworking, he had to learn woodturning in order to teach his students to use the one wood lathe in his shop. After taking a one-day course on turning a wooden bowl, he was hooked and has since evolved his skills with the help of world-class woodturners and mentors. Contact Lyndal at lyndal.anthony@gmail.com.

Binh Pho

2018 POP Merit Award Recipient

Binh Pho setting up his *Shadow of the Turning* exhibition at York Performance Hall, Anderson University, 2015.

Photo: Anderson University: Dale Pickett Photography, Anderson, Indiana

Binh Pho passed away in August 2017, yet his influence and contributions to the woodturning field remain broad and far reaching—from contact with local woodturning clubs, to collectors and other artists, all the way through dealing with very high-end galleries. He was an extremely dedicated artist who saw no limits to what turned wood art could become; he even incorporated glass and bridged the gap between these two disparate art fields.

Most people probably don't know that the past ten or fifteen years of Binh's life were dedicated to the promotion and support of the AAW and the wood art field. Binh was presented with the AAW's Honorary Lifetime Achievement Award in 2017, and even during his acceptance speech at the AAW Symposium in Kansas City, he continued to make references to his vision for the field and its future. It is because of all of these traits and more that we have chosen to name Binh Pho the 2018 Professional Outreach Program (POP) Merit Award recipient.

Following are accounts from people in our field who knew Binh. I hope they offer a glimpse of the broad impact of Binh Pho and help explain this important posthumous award.
—Trent Bosch, POP Committee

Darrell Rader, Studio Assistant

My knowledge of Binh Pho comes from a unique perspective: I was his ever-willing assistant, the mouse in the shop few people knew about. I worked well over a thousand hours with Binh, turning, carving, and helping with an endless list of tasks. Not all work was in the shop; I helped him harvest wood, teach classes, set up and repack exhibitions, and much more. Everything we did came out of Binh's mind. Except for a very few situations, I was just a technician, but I loved every moment.

My days with Binh normally started at 8:30 a.m. and ended between 10:00 p.m. and midnight. One time it was 3:00 a.m. when I got home, and another work session ended at 5:00 a.m. I took a nap before driving home.

Binh was called a fountain of ideas. More correctly, he was a volcano of amazing, colorful, and delicate art creations. He could have filled years, perhaps a lifetime with just one day's visualizations.

Always months or years behind completing projects and almost always late for deadlines, Binh still took time to mentor anyone who needed his help. Everyone, professional or not, considered him their best friend simply because he treated people that way. Collaborations requiring only a few hours work for the other artist required many days for Binh to complete. He never gave any indication it was unfair, such was his delight in bringing others into the limelight.

Binh Pho mounting a log on the lathe with the help of studio assistant Darrell Rader, Maple Park, Illinois, 2008.

Photo: Courtesy of Darrell Rader

Few knew Binh could draw pictures to look like a photograph. One of the pictures in his book *Shadow of the Turning* is of a piece he didn't have time to create before the book's publication deadline. He quickly drew it! Yes, it is a picture of a picture and I challenge anyone to identify it in the book. The actual piece was completed by opening night for the exhibition in Mobile, Alabama.

His signature vessels were always evolving: adding an internal stabilizing ring, cutting them in two, adding a fabric hinge, casting in glass, then bronze, using his raw vessel shapes to cut out the feathers used on many of his later creations. His body of work was always evolving, as evidenced by pieces remaining in his shop after his death. He really wanted to do another book and major exhibition.

It would be difficult to estimate the number of woodturners who have transitioned into professional careers after seeing and trying the airbrush, use of color, and power carvers that Binh championed.

Sally Rogers, Sculptural Artist

Wood and the act of woodturning itself are visual metaphors for who Binh Pho was—solid, earthy, richly grained, always shaping his contours toward perfection, and always spinning at a great rate of speed. He was a flurry of activity, carving himself and his work into objects of great beauty and depth. He "turned" his friends, as well, allowing them to see the world through his eyes—a world made richer by his gentle presence, subtle humor, and kind heart. His wood and glass creations are unique and inspirational, but Binh himself was truly the greatest work of art. He made you think, hope, dream, believe.

Graeme Priddle, Artist

There are many words I could use to describe Binh Pho as an artist: creative, talented, original, narrative, supportive, collaborative, committed, and one of the best friends/mentors/teachers you could ever hope for. But I always come back to one word that sums up Binh for me—*prolific*. I recall one year when Binh was a featured artist in del Mano's booth at SOFA Chicago. He pointed out to me one of the other featured artists, whose artwork label indicated 375 (the number of pieces shown with the gallery). Then he pointed to one of his own labels, which had a number greater than 4,000.

Binh's dream was to be an artist like the old masters, having a studio buzzing with apprentices, ▸

Binh was a frequent collaborator with other artists. Here, he is working on *Phoenix Rising*, 2014, created with Derek Weidman.

Photo: Courtesy of Darrell Rader

and he did this. Whenever I visited with Binh and his wonderfully supportive family, there was a constant stream of friends/protégés—slaves, as we jokingly called ourselves, coming through his workshop to help with the incredible volume of artwork he was committed to producing. It was always fun and Binh was always willing to do anything to help his friends—to teach and mentor, to help in getting someone into a gallery or show, or to collaborate. There was always a backlog of other people's work stacked around his workshop waiting for "the hand of the master."

Binh had an incredible life journey he wanted to share with the world, not just through his artwork but with stories, books, and documentaries. He was a skilled master, not just at expressing his life in his art, but also at gathering people around him to help with the multi-leveled approach he took to expressing his life and dreams. Binh also was quick to acknowledge other masters, Fletcher Hartline and Frank Sudol to name just two, who helped him on his journey.

Steve Sinner, Artist

My friendship with Binh began in early 1999, when he invited me to spend a week in his studio, studying with Frank Sudol. It was obvious from the start that Binh was a special person. His integrity drove everything he did. Sharing and attribution were principles he lived. He never forgot those who led him along the path to success, and he did everything he could to help others seeking the same. In those early days, we spent much time talking about those principles as well as searching for the outer edges of our chosen field.

Binh's determination and ability to survive on far less sleep than most of us helped him achieve an amazing degree of accomplishment. His work revolutionized our field and even amazed the glass world with his very thin glass castings.

Of course, he had a lot of help, as he tended to gather many who aided his quest. As Frank Sudol said about his own homebuilding experience, "When you have a mission in life, the whole world will conspire to help you." And those who helped Binh reaped personal rewards and enrichment.

When I walk through any woodturning instant gallery today, I see innumerable examples of Binh's influence. And that is his reward.

> "When I walk through any woodturning instant gallery today, I see innumerable examples of Binh's influence. And that is his reward. —Steve Sinner

John Hill, Former AAW Auctioneer

I think Binh was always an artist, as opposed to someone *becoming* an artist. He told me his first lesson in woodturning was a class at Arrowmont taught by Rodger Jacobs, in which he learned the basics of bowl turning. Armed with basic skills, he quickly began to express his artistic talents in his turnings. He learned the techniques of thin-wall turning, piercing, and airbrush application of color from Frank Sudol. Then with these new ideas and skills, he developed his own artistic voice.

I like to ask artists not how they made a piece but why. Many can't answer that simple question, but to my knowledge, every piece Binh created expressed a memory from his past or told a story from mythology or something in his imagination. Each piece had a story to tell. The symbols that adorned his work—dragonflies, butterflies, peacock feathers, cranes, water and waves, the moon and stars, all were part of the story. Every piece was filled with emotion and feeling. Some makers just make another "widget" but not Binh.

Binh's art influenced hundreds if not a thousand other woodturners. He taught all over the world and left his mark like no one else has.

Paul and Sheri Robbins, Collectors

We acquired our first turned wood vessel created by Binh Pho in 2005. A few months later, we got a phone call from Binh, whom we'd never met, asking if he could borrow that piece to display in an upcoming exhibition of his work at the Long Beach Art Museum. We were honored and happy to oblige. We flew to Long Beach to attend the opening of that show, where we met Binh for the first time, and where our love for his work—and for him—began.

Since that first meeting, we have purchased/commissioned seven pieces from Binh for our home, and we also purchased two of his pieces, which we donated to museum collections. We have been collectors of wood art for twenty-five years. Our collection represents some of the most highly respected names in the field. Binh Pho is at the top of the list. His creativity, skill, enthusiasm for promoting the craft, prolific output, and eagerness to collaborate with other artists and mentor others all helped set him apart. He was unassuming and modest, yet he had a big, warm personality with a zest for life that was contagious when you were in his presence. He also had a big, generous heart. When fellow artists were in trouble, he went out of his way to help them.

Binh continued to evolve as an artist, constantly challenging himself to try new techniques—woodturning, painting, sandblasting, piercing, and even venturing into new media, marrying wood and glass. Each of his artworks tells a story or represents a fragment of a dream or a piece of his incredible personal narrative as a Vietnamese immigrant. He created art that radiated beauty, passion, and depth of feeling. The pieces' dynamic colors, imagery, and shapes compel viewers to engage with them, and they evoke deep emotional reactions.

Using an airbrush to add color is just one of many ways Binh inspired others, 2008.

Photo: Courtesy of Darrell Rader

Our friend, Binh Pho, will be deeply missed. His legacy will live on.

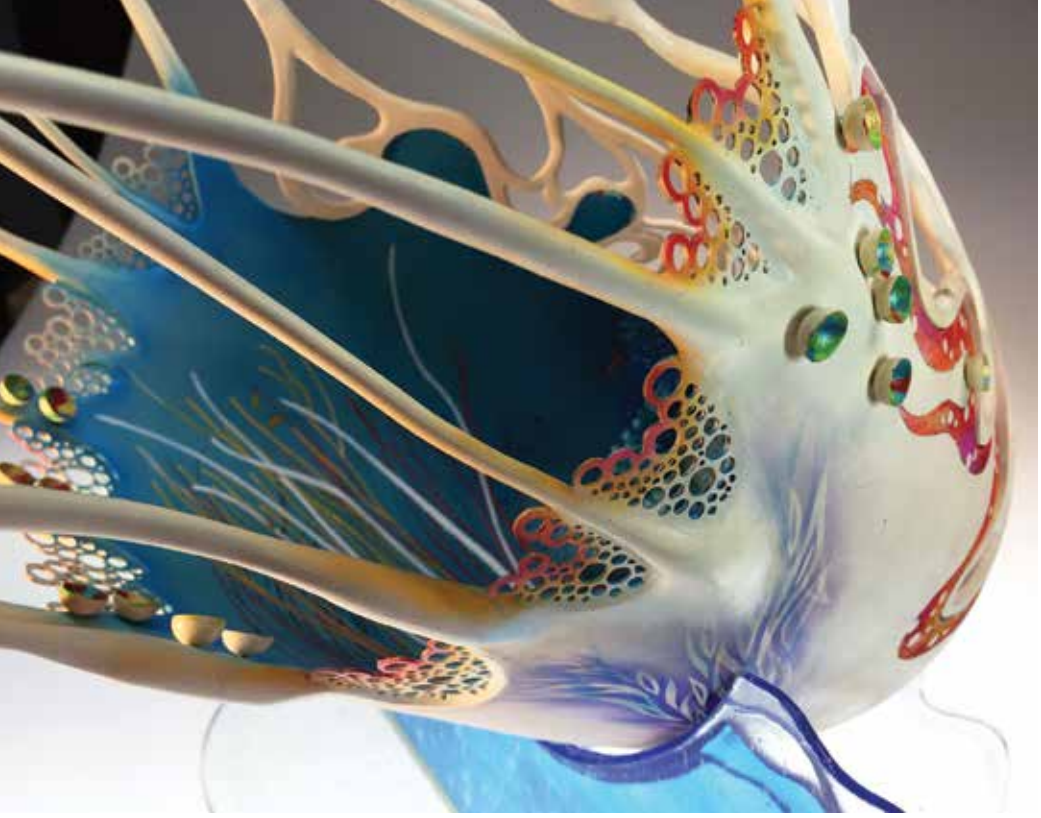
Bill May, Executive Director, Arrowmont School of Arts and Crafts

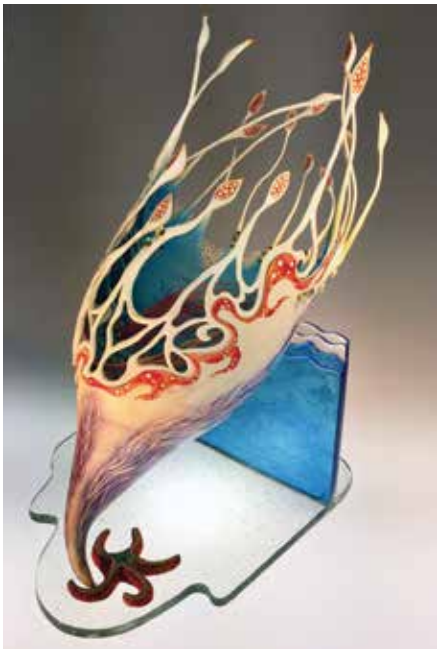
Those at Arrowmont School of Arts and Crafts had the experience of seeing Binh Pho as a beginning student and as a master teacher—developing his skills and later sharing generously what he continued to discover throughout his life.

Binh embodied qualities that distinguish true artists: his interest in developing technique was always in service of an artistic vision and, even as a master, he continued to have the curiosity of a student. His later work incorporated all of the techniques he learned—form, piercing, airbrushing, sculpture, and glass casting. His work represents culmination, a distillation rather than a conglomeration. More significantly, the work expresses a uniquely personal narrative that communicates insights, emotions, and values that are universal.

Binh was constant in acknowledging and crediting Arrowmont for the part it played in his career, but the satisfaction is in seeing the artistic legacy he created continue to inform and enrich students today. His body of work illustrates his talent and his passion. ▸

> **"Binh embodied qualities that distinguish true artists: his interest in developing technique was always in service of an artistic vision and, even as a master, he continued to have the curiosity of a student. —Bill May**





Binh Pho and Annette Barlow,
Drifting Away, 2017, Boxelder, fused glass, acrylic paint, compressed maple, 25" × 30" × 16" (64cm × 76cm × 41cm)

Photo: Binh Pho

Drifting Away, the last piece Binh completed, is a virtual jigsaw puzzle with many parts all joined as one. Annette Barlow painted the interior aquatic scene.

Gene Colley, Owner, Canyon Studios

As the owner of Canyon Studios, a woodturning school in Texas, I was fortunate to watch Binh's patience with new turners as well as those wanting to turn their hobby into something more. Binh was always specific in his instruction and his advice. Several of the students came to Binh's classes to see if they could develop into a professional artist. One in particular was able to develop her own style, inspired by Binh's work, and start to sell pieces at a new professional-level dollar amount. Had she lived closer to Chicago, I am sure Binh would have continued to mentor her growth and career. Binh was very aware of his influence in the wood art world and took that responsibility seriously.

Binh's artwork was influenced by the old masters as well as by his culture and life experiences, which would amaze most people. A weaker person would not have survived the years he spent trying to escape communist Vietnam.

Michael McMillan, Associate Curator, Fuller Craft Museum

It is my goal as a craft curator to showcase the accomplishments and effects of material culture; that is, to illustrate *how* and *why* people fashion objects of both utility and artistic purpose. Any opportunity to highlight the work of Binh Pho—such as when Fuller Craft Museum presented *Shadow of the Turning* in 2014—provides the opportunity to chronicle dialogues about material, biographical background, cultural heritage, and technical virtuosity, all simultaneously.

Binh's richly colored, painstakingly detailed vessels and sculptures reflect his mental makeup: one of extreme passion and tireless work ethic. Binh is well deserving of this year's POP Merit Award. Whether exhibiting work in the gallery, working collaboratively with other artists, or demonstrating at the lathe, Binh made contributions to the development of the "studio woodturner" at an unparalleled level.

As someone who covers the spectrum of craft—wood, fiber, jewelry, ceramics, and other media—I can attest that Binh's work has left an imprint on artists, gallerists, collectors, and curators, both inside and outside the field of woodturning. I had the privilege to know him professionally and personally, and his support of makers at the individual, local, and institutional levels brought tremendous benefits to those with a passion for the arts.

Albert LeCoff, Co-Founder, Executive Director Emeritus, The Center for Art in Wood

Binh Pho made it to the big time, while paying it forward through teaching and collaborating. His life, job, family, and art show his skill at multitasking. He personified capturing personal history and resilience and how to write, illustrate, and publish books. He credited veteran artists who inspired him, then embarked on a seamless artistic journey from small, colorful, airbrushed vessels to huge totems, wall pieces, and vessels.

When his *Shadow of the Turning: The Art of Binh Pho* exhibition traveled to The Center for Art in Wood in 2013, the broad public was enthralled with the work. It set new standards in scale and use of wood and glass. Binh had so many ideas, so much energy, so much love for his fellow artists. Did the man sleep?

From now on, when I squint at colorful, pierced work, Binh Pho's path, genius, and drive will live on forever.

JOURNAL ARCHIVE CONNECTION

Further reading on the work and influence of Binh Pho can be found in AAW's journal archives at woodturner.org.

- **"Binh Pho at the Mobile Museum of Art," by David M. Fry, October 2013 (vol 28, no 5, page 48)**
- **"Binh Pho: AAW Honorary Lifetime Member," by Kevin Wallace, June 2017 (vol 32, no 3, page 13)**
- **"Binh Pho Remembered," by Chloe Rahimzadeh, October 2017 (vol 32, no 5, page 12)**

Setting up *Shadow of the Turning*, Anderson University, 2015.

Photo: Anderson University: Dale Pickett Photography, Anderson, Indiana

Shadow of the Turning: The Art of Binh Pho exhibition installation at The Center for Art in Wood, 2013.

Photo: From the archives of The Center for Art in Wood

Members' Gallery

dia•log

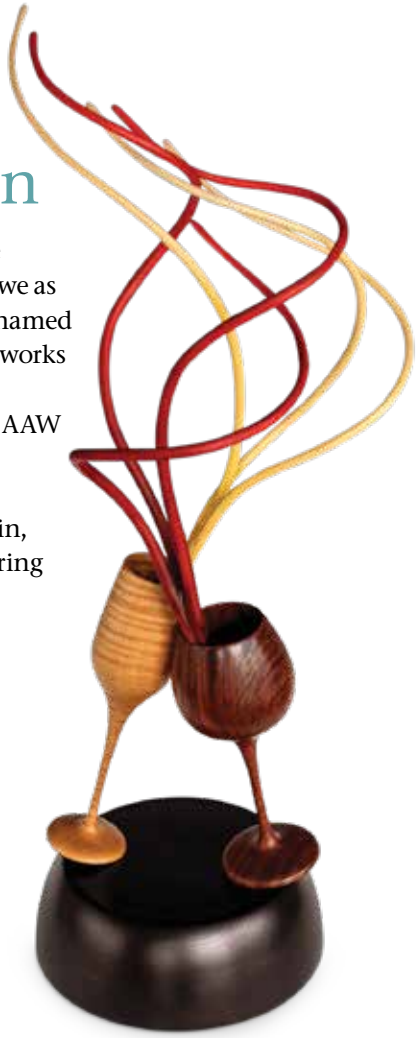
AAW's 2018 Juried Member Exhibition

Every year, the AAW hosts a themed, juried member exhibition. I'm honored that this year the theme I suggested was chosen. I offered the notion of dialogue because it feels like that is what we as community, national, and world citizens need now more than ever. The exhibition, playfully named *Dia•Log*, expands on the original impetus to celebrate our oft-chosen medium—wood. The artworks in *Dia•Log* offer wonderful interpretations of the theme. This spread offers a sampling, but the entire exhibition will be on view at the AAW Symposium in Portland, Oregon, and then at the AAW Gallery of Wood Art, Saint Paul, Minnesota, October 7 to December 30, 2018.

Jurors were Michael McMillan, writer and associate curator, Fuller Craft Museum; artist and turner Jim Christiansen, author of *Masters: Woodturning* (Lark Books, 2009); and Jeffrey Bernstein, collector and former president of the Collectors of Wood Art. Two artist awards will be given during the symposium: a Masters' Choice Award of $300 and a People's Choice Award of $200.

—Joshua Friend, Editor

Steve Loar/Holland Bowl Mill Collaboration, *Dialogue – The Mask*, 2018, Beech, maple, cherry, mixed media, 16" × 19" × 15" (41cm × 48cm × 38cm)



Jeanne Douphrate, *Celebrating Differences*, 2018, Curly maple, narra (padauk), mesquite, cherry, compressed cherry, compressed maple, 26½" × 11" × 10" (67cm × 28cm × 25cm)

Photo: Raleigh Meade

Bob Rotche, *Negotiations*, 2018, Cherry, mulberry, acrylic paint, 8" × 15" × 8" (20cm × 38cm × 20cm)

Dewey Garrett, *Complex Conversations*, 2018, Persimmon, yew, pau ferro, pear, dye, largest box is 1" × 3¼" × 2¾" (25mm × 8cm × 7cm)

(Left) **Mark L. Waninger,** *Quacklings*, 2018, Cocobolo, curly maple, bigleaf maple burl, holly, spalted maple, 5½" × 7" × 4½" (14cm × 18cm × 11cm)

(Right) **Derek Bencomo,** *The Feeling of Movement, 7th View,* 2018, Curly koa, 5" × 7" × 8" (13cm × 18cm × 20cm)

Pat and Karen Miller, *81 Ways to Say...,* 2018, Ginkgo, myrtlewood, brass, 5¼" × 9" × 4½" (13cm × 23cm × 11cm)

John Beaver, *Coexisting Wood and Bronze*, 2018, Cocobolo, Bronze, 14" × 14" × 7" (36cm × 36cm × 18cm)

Hal Metlitzky, *Yammer-log,* 2018, Various exotic and local woods, 13½" × 16" × 11" (34cm × 41cm × 28cm)

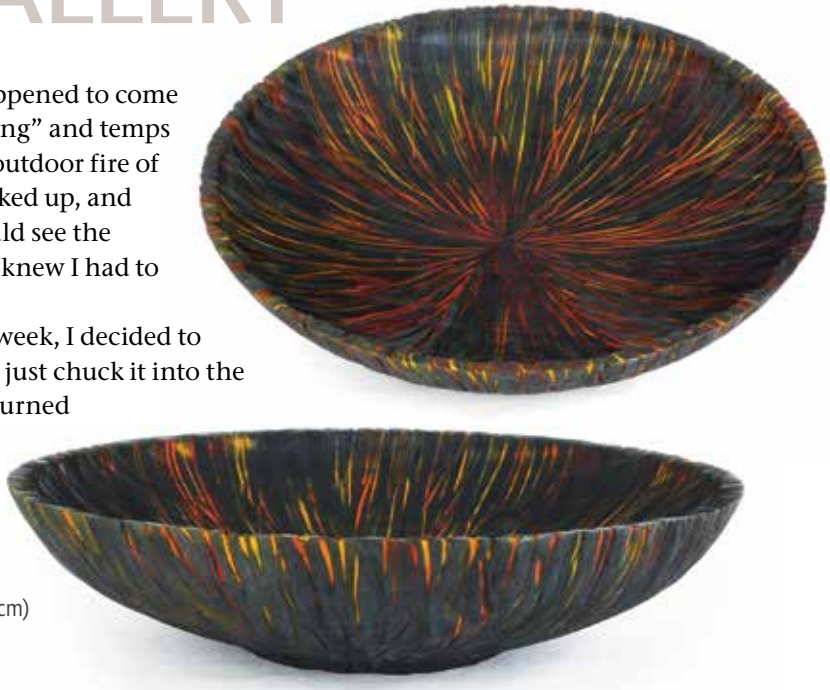
Grace Parliman, *Ma'alah (Layers),* 2018, Bubinga, morado, boxwood, maple, walnut, lapis lazuli, gilder's paste wax, 1¾" × 8" (4cm × 20cm)

Members' Gallery

Jeff Hornung, Missouri

Inspiration can come from almost anywhere; mine happened to come from a cookout on the patio. It was our third "false spring" and temps were just warm enough to burn hotdogs over our first outdoor fire of the season. As it was only a "false spring," the wind picked up, and as it blew, I happened to glance at a log in the fire. I could see the glowing heart of the wood in bold colorful streaks and knew I had to try to create something from that inspiration.

After thinking about how to go about this for over a week, I decided to do a sample piece, figuring if it didn't work out, I could just chuck it into the fire pit and burn more hotdogs. I turned, carved, and burned the piece, then applied dye via airbrush. The test piece was surprisingly good, so I made a larger version (pictured here) the next day.



Friday Night Fire Pit, 2018, Poplar, dye, 3" × 12½" (8cm × 32cm)

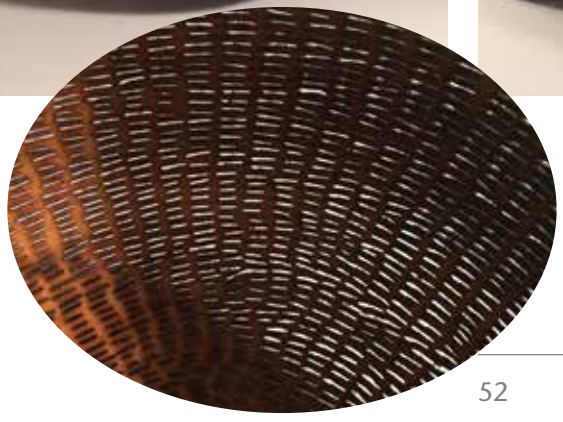
Peter Walen, Maine

Growing up in a small town in the western mountains of Maine, I was influenced a lot by both of my grandfathers—one with a love of woodworking and the other, a love of nature. My woodworking grandfather gave me a lathe, and that started it all. With a few mishaps and the determination to keep creating wooden objects, I started acquiring better tools and more knowledge.

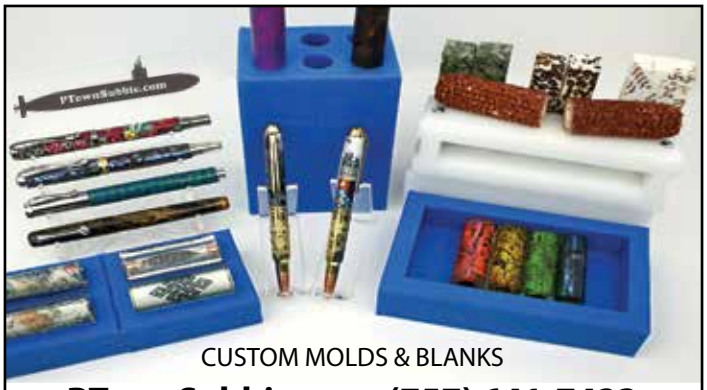
In 2005, I started making things to sell, mostly kitchenware. Joining an AAW chapter advanced my creativity at warp speed and helped me hone my skills. In 2014, I upgraded my lathe and built a better workshop.

I love expressing myself through wooden objects and am always looking for the feeling I get when I create something I like. I think of my lathe as a tool like a paintbrush, and wood is the medium. Manipulating wood with fire and color (off the lathe) really appeals to me as a means of embellishment.

Colorful Curly, 2015, Curly maple (turned green, torched, and cut), spray paint, 3" × 12" × 6½" (8cm × 30cm × 17cm)



Static Basket, 2016, Boxelder (turned green and burn-pierced), 3" × 6" (8cm × 15cm)



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Brent English-Owner of Robust Tools

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Keep the tool flat on the tool rest and level to the ground for fast stock removal and basic shaping cuts.

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Detail tool has two styles of tips, full sharp *(supplied as standard)* for creating precise vee lines and radius point for making small beads and coves *(optional)*.

Whether you're a beginner or an experienced turner, turn large bowls, pens or tiny miniatures, you'll find *Ultra·Shear* tools will eliminate the drudgery of sharpening and dramatically increase your confidence and success at the lathe. For more details and to see the tools in action, visit our website ***Woodpeck.com/Ultra-Shear***

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CINDY DROZDA
COLORADO

Space Station Saturn Box, 2011, Banksia seedpod, African blackwood, gold leaf, 11½" × 3½" (29cm × 9cm)

Space Station, 2002, Banksia seedpod, gold leaf, 6" × 3¾" (15cm × 10cm)

2018 SYMPOSIUM DEMONSTRATOR

Cindy Drozda will be a demonstrator at AAW's 2018 International Symposium in Portland, Oregon, where she will share her woodturning expertise. For more, visit woodturner.org.

I have worked with wood since age 7, when I built a playhouse from crates and re-used nails (with a little of my father's help). At age 19, I was lucky enough to discover, through my job at a player piano factory, that I could use my natural talent for working wood to make a living. This job began my exploration and encouraged me to follow my passions. I have been a professional woodworker for nearly forty years now, building cabinets and furniture, and turning.

Lidded containers have fascinated me since I was a child hiding secret treasures. Today, lidded vessels are my most creatively stimulating body of work. A jewel hidden inside symbolizes the treasure that life reveals when we make the effort to look deeper within.

Though I love turning wood, unusual materials like banksia spark my creativity. The effect is so eye-catching that it makes me smile. I delight in the transformation of a heavy, rough, furry banksia into a light and delicate form, and in a vessel or teapot full of holes thumbing its nose at the concept of function.

For more, visit cindydrozda.com.

Banksia Mushroom Box, 2011, Banksia seedpod, amber cabochon in 14K gold bezel, 3½" × 3½" (9cm × 9cm)

Photo: Tim Benko, Benko Photographics

For more on working with banksia seedpods, see Cindy Drozda's feature article on page 32 of this issue.