

THE BASICS OF WORKHOLDING • TURN A BEEHIVE ORNAMENT • EVOLUTION OF THE SIDE-GRIND GOUGE

AMERICAN WOODTURNER

Journal of the American Association of Woodturners

December 2019 vol 34, no 6 • woodturner.org

PETER BLOCH
EXPLORER IN
WOODTURNING

.....
2019 TURNING
TO THE FUTURE

.....
THE AIRBRUSH
DEMYSTIFIED

THE REMARKABLE TRADITIONS
OF JAPANESE WOODTURNING



Yann Marot

France

I have always been attracted to wood and all of its creative possibilities. After studying wood engineering for several years without much conviction, I discovered and fell in love with carving. This soon led me to the lathe, which inspired a whole new passion in me, so much so that immediately following my studies, I decided to become a woodturner. Above all, the diversity of approaches to woodturning—traditional, utilitarian, production, creative—has impressed and fascinated me.

Participating in the annual woodturning event sponsored by AFTAB (the French association for artistic woodturning, see aftab-asso.fr/en) has enabled me to work with and learn from many international and French professionals. I created my workshop in 2002 and for the first ten years focused on production work, filling orders of turned parts for cabinetmakers—a kind of work that requires great precision. Then I began to explore a more personal approach. In my creative work, I look for tight curves, simple shapes, and thin textures. I really believe that a curve can express an emotion. That's why I like the distortion of green wood after drying, a sort of second life.

I also love teaching and demonstrating and, in 2014, moved to Aiguines to teach at the Escoulen school of woodturning (escoulen.com/en). ■

*Dancing Vases, 2018, Fig, bleach,
11" x 4" (28cm x 10cm)*



*Under Fig Tree #4, 2019, Fig, bleach, largest:
4" x 10" x 8" (10cm x 25cm x 20cm)*





Ronde, 2015, Evergreen oak,
alcohol-based stain,
11" x 5" (28cm x 13cm)



Under Fig Tree #2, 2018, Fig, bleach, each: 4" x 7" x 6" (10cm x 18cm x 15cm)



Pebble Boxes, 2017, Spalted beech, elm burl,
each: 5½" x 5" x 4" (14cm x 13cm x 10cm)



Diable de Goutte,
2012, Ash, poplar burl,
largest: 11" x 4½"
(28cm x 11cm)

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

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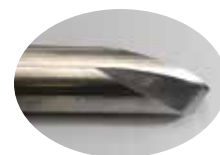
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Journal of the American Association of Woodturners

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EDITORIAL

**American
Woodturner** Joshua Friend
editor@woodturner.org

**Editorial
Advisors** Betty Scarpino
Terry Martin
Stuart Batty
Jean LeGwin

**Journal
Production** **Albarella Design**
Linnea Overbeck
Art Director
Production Management

**Woodturning
FUNDamentals** John Kelsey
editorkelsey@woodturner.org

EDITORIAL SUBMISSIONS

Send article ideas to: editor@woodturner.org

For tips on article submission and photography
requirements, visit tiny.cc/AWsubmissions*.

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engendering a welcoming environment for
all. To read AAW's full Diversity Statement,
visit tiny.cc/AAWDiversity*

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.

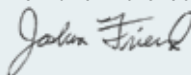
Editor's Note



American Woodturner is just one benefit of AAW membership. Another key publication is our quarterly *Woodturning FUNDamentals*—have you seen the recent November issue? If not, check it out at woodturner.org. It's full of fun projects that would make excellent gifts, as well as fundamental woodturning concepts.

Over the past two years, we've been fortunate to have John Kelsey

at the helm of *FUNDamentals*. John will be retiring as editor and will pass the mantle to Don McIvor beginning in 2020. On behalf of the membership, I'd like to offer my heartfelt thanks for John's significant work. His investigative style and clear, efficient pages have added huge value to the AAW archives and to every member, now and in the future.



—Joshua Friend

From the President



The season of giving

It's that time of year—when it is definitely better to give than to receive. Many of us spend eleven months

“self-giving” and as a result probably get more than we deserve. We never seem to have enough tools, and a good excuse for getting a few more is that the tools will help us make even better gifts this season. Sounds good, huh?

If you haven't been in your shop making pens, boxes, bowls, or kitchen and garden tools for friends, neighbors, and relatives, you better get to it. If you've seen Nick Cook demonstrate—either in a video online, at your local club, or at a symposium—you know he's the “king of the dibble” and other handy items that make great gifts. Don't forget, in addition to the joy of giving, you display your talents and enhance your image by making gifts of your turned work. You are probably the most talented person known; there is nothing you can't make and you are amazing.

Enough of the ego thing. The best place for a woodturner to shop for gifts is the AAW website. AAW membership, merchandise, and publications are excellent choices. We all know new turners who would love your gift of a membership in AAW. Every time they go online to look at *Woodturning FUNDamentals* or read a current or past issue of *American Woodturner*, they'll appreciate your gift. Or how about an AAW smock, hat, or

shirt for that fellow turner who mentored you. By the way, we have WIT (Women in Turning) smocks, shirts, and patches that are becoming the rage at chapter meetings and symposia. Now for the ultimate: combine the “giving season” with the “bucket list” and give someone a registration to next year's AAW Symposium in Louisville!

Please don't forget our member vendors and suppliers when giving this season. They are the best source for quality tools for the turner. They support our organization year round, so it's time to give back to them and return their generosity in the form of patronage. Besides, you can't go wrong. Every turner needs an extra bowl gouge or even an extra lathe. Or maybe a gift certificate?

The “giving season” also brings to mind year-end giving in the form of financial donations. Please consider supporting AAW's fundraising campaign, as the funds go toward our educational mission. More info can be found at tiny.cc/DonateAAW.

The season of thanks

It's also the season for giving thanks. Your Board and AAW staff really appreciate the hundreds of volunteers who make AAW a success. Whether it's helping at the annual Symposium, serving on a committee, ensuring chapter members benefit through AAW, or just sharing views or advice, volunteers make our organization a family event.

Many members relate AAW with *American Woodturner* and *Woodturning*

FUNDamentals. Our editors, Josh Friend and John Kelsey, always exceed our expectations and deliver a superlative product. John is retiring this year and will be much missed. Thanks, John and Josh.

Obviously, the organization couldn't exist without our talented and dedicated staff. Jane Charbonneau, Tib Shaw, Linda Ferber, Hannah Haas, Kim Rymer, and Phil McDonald are always focused on our members, often ignoring the clock. With our staff, nothing falls through the cracks.

David Heim is completing his term on the Board. Although his main focus is on communications and Turners without Borders, he has always been an advocate for the education of our members. He is a friend and will be missed. Fortunately, John Beechwood has been elected to the Board and, given the workload we will place on him, I expect his full head of hair will soon be comparable to mine.

We're finishing up an exciting year and looking forward to 2020. We'll see new technology that will much improve our ability to communicate with you, our members. Louisville will be a great Symposium with outstanding demonstrators, and we will continue to provide education and promotion of woodturning. We, the Board members, appreciate your support.

Looking forward,



Greg Schramek
President, AAW Board of Directors

STEP UP TO THE PLATE

SAVE THE DATE: STEP UP, ACCEPT THE CHALLENGE TO HAVE A BALL AT



AAW'S 34TH ANNUAL INTERNATIONAL SYMPOSIUM

Louisville, Kentucky • June 4-7, 2020

Photo: Andi Wolfe

STEP UP!

Step up, accept the challenge to up your game. You'll find experts from around the globe who will share their techniques and insights to help you bring your woodturning abilities to the next level. You'll find demonstrations targeted to your skill level and areas of interest from these incredible demonstrators:

Nick Agar	Michael Hosaluk
Michael Alguire	Janice Levi
Stuart Batty	Art Liestman
Simon Begg	Tom Lohman
Dixie Biggs	Pete Marken
Michael Blankenship	JoHannes Michelsen
Trent Bosch	Mark Palma
Bruce Campbell	Doug Schneider
Pat Carroll	Mark Sfirri
Jason Clark	Jennifer Shirley
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Rebecca DeGroot	Craig Timmerman
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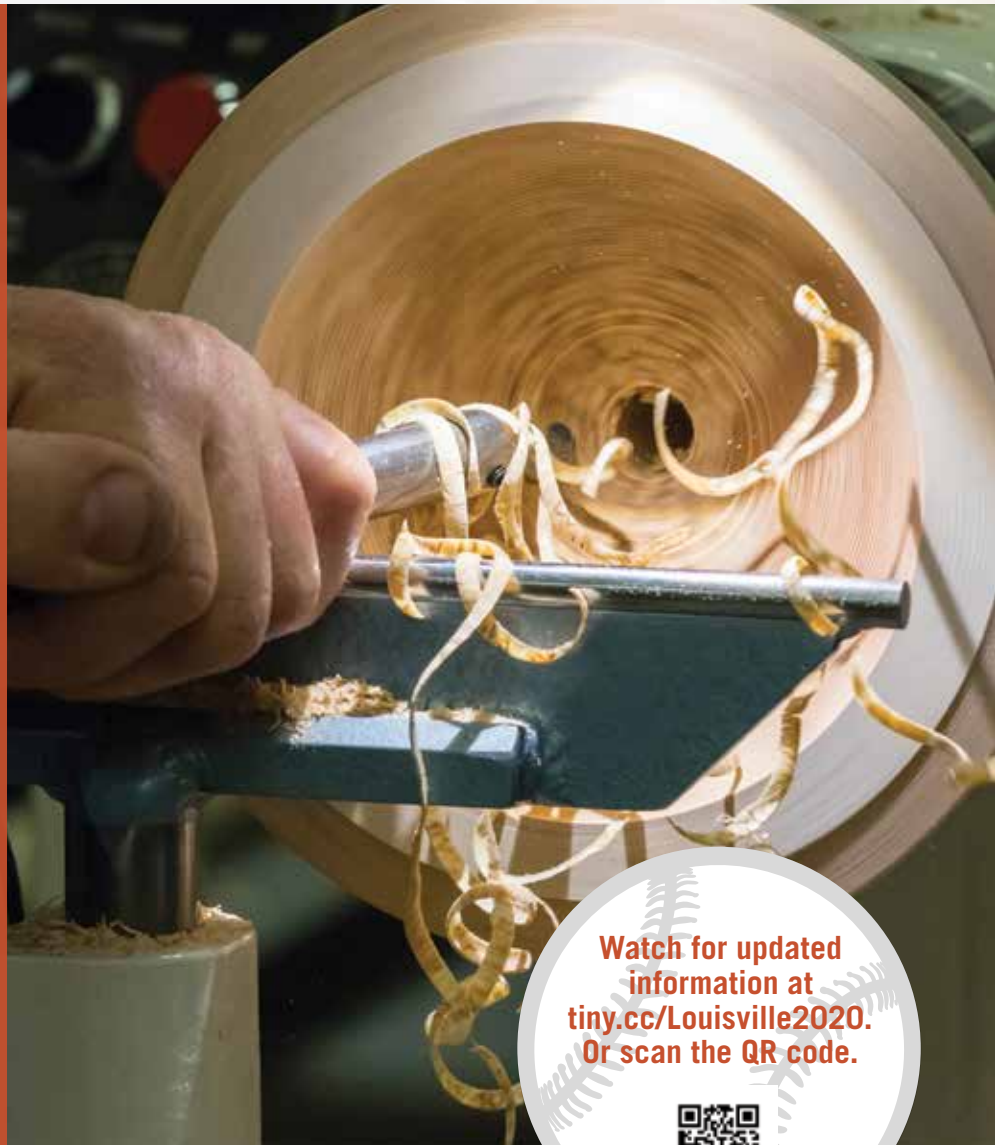
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Hotel reservations will open on December 8th.



Watch for updated
information at
tiny.cc/Louisville2020.
Or scan the QR code.



AAW Board of Directors Call for Nominees

The AAW offers much to its members, and we are looking for a few good people who can contribute something in return. Do you have the time, energy, and ideas to be a part of AAW's operations, as well as a willingness to help make it a better organization? Be a part of moving the AAW forward—run for a position on the AAW Board of Directors.

The AAW elects a volunteer nine-member board to represent the membership and move the organization forward. If you have been a member in good standing for the past three years, you are eligible. The nominating committee will select the six best candidates. From these six, members will elect three candidates to serve a three-year term, beginning in January 2021.

For information on the duties of board members, call any current Board member or visit the AAW website at tiny.cc/Board for details. ■

If you are interested in serving on the board, please email the following to the executive director (phil@woodturner.org), no later than May 1, 2020:

1. A statement of intent, including qualifications and reasons for applying
2. Letters of recommendation from two individuals who can attest to your organizational and leadership abilities
3. A high-resolution photograph of yourself

The nominating committee will review application materials and conduct phone interviews. Candidates will be presented in the August issue of *American Woodturner*, and voting will occur during the month of August. Election results will be announced in late 2020.

Apply for an AAW Grant

AAW Grants are available to individuals, chapters, schools, and non-profit organizations. Examples include but are not limited to outreach programs and/or events to encourage youth and under-represented populations (women, minority, disabled, etc.) to learn and pursue woodturning, support of existing or developing unique woodturning programs, educational workshops or class participation, professional development opportunities, chapter projects, etc. In addition to monetary awards, up to ten mini-lathe packages are available for award each year.

Regular AAW Grants are awarded on an annual basis. To be eligible, applications must be received by December 31 for grants given in the following year. However, Women in Turning (WIT) grants and others for under-represented populations, events, and exhibitions are awarded quarterly.

Find detailed grant descriptions and application information at tiny.cc/aawgrants. If you have questions, please contact the AAW office by calling 877-595-9094 or emailing memberservices@woodturner.org. ■



2020 POP Exhibition and Auction: Nature/Nurture Call for Entries

Application Period: December 1, 2019 to January 11, 2020

AAW's Professional Outreach Program (POP) is pleased to invite submissions to its 2020 exhibition and auction, which is themed *Nature/Nurture*. Some entries are by invitation, but the juried portion of the show is open to any AAW member and to full-time students in art, design, or industry-related degree programs, regardless of membership status.

Full details can be found on page 7 of the August 2019 edition of *American Woodturner* or on the AAW Calls for Entry page, tiny.cc/Calls. The online application can be found at tinyurl.com/2020POP. Contact Tib Shaw at gallery@woodturner.org. To see past exhibition catalogs, visit galleryofwoodart.org. ■

Call for Videographers— AAW Symposium 2020

The AAW seeks videographers for its 34th International Symposium in Louisville, Kentucky, June 4–7, 2020. Applicants must have experience with video camera equipment, possess technical competence, and be able to make decisions regarding what is being turned, camera position, shooting angle, etc. The application process will be open from December 15, 2019, through February 15, 2020. Videographers are required to help set up or tear down and do six rotations to receive a free Symposium registration. Selected videographers will be notified by March 2020. For more information or to apply, visit tiny.cc/CallVideo.

Craft School Scholarships

Deadline for application: January 15, 2020

The AAW is pleased to continue offering financial assistance for quality woodturning instruction. **New for 2020, all AAW members belonging to an AAW chapter are eligible to self-nominate by completing an online application form, found at tiny.cc/ChapterScholarship.**

Twenty-eight scholarships will be awarded to selected AAW chapter members to attend woodturning-related classes at one of two craft schools. We encourage our chapter officers to widely promote the scholarships and to use this as a recruiting opportunity for AAW membership. Scholarships represent another opportunity to promote the total experience available to members of local chapters who also choose to join AAW. Emails informing chapter officers about the 2020 scholarship program were initially sent in early November. The AAW Endowment Trust Fund (ETF), in combination with the two schools, provides funds for these scholarships.

Arrowmont

Fourteen scholarships will be awarded to Arrowmont School of Arts and Crafts, Gatlinburg, Tennessee. Tuition only; room, board, and travel expenses are the responsibility of the recipient. Selected

Masters classes taught at Arrowmont carry an additional \$125 tuition premium, which will be the responsibility of the scholarship recipient.

John C. Campbell

Fourteen scholarships will be awarded to John C. Campbell Folk School, Brasstown, North Carolina. Tuition only; room, board, and travel expenses are the responsibility of the recipient.

Chapter-based nominations

- Nominees must be current AAW members belonging to an AAW chapter and must self-nominate using the online application found at tiny.cc/ChapterScholarship.
- AAW guest members and those with lapsed or expired memberships are not eligible.
- If more members are nominated than the total number of available scholarships, a drawing will determine the winners.
- All awards will be for courses in 2020.
- **Deadline:** Individual members must complete the online self-nomination application no later than January 15, 2020. Winners will be notified by January 21, 2020. ■

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 2019, we will draw another name from our membership roster to give away a Powermatic 3520C 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. Free shipping is included within the continental USA; international winners will be responsible for shipping costs from the U.S.

2019 Donors

(Others may be added during the year.)

Vendors

- Backgate Industries (backgateindustries.com) Salt/Pepper Mill Kits
- David Ellsworth (ellsworthstudios.com) Set of four DVDs
- 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
- Glenn Lucas (glennlucaswoodturning.com) Series of 5 DVDs "Mastering Woodturning"
- The Walnut Log Studio and Supply (thewalnutlog.com) Jeff Hornung DVD
- Niles Bottle Stoppers (nilesbottlestoppers.com) Gift certificate
- Record Power Company (recordpower.co.uk) SC4 chuck package
- Rockler Woodworking and Hardware (rockler.com) Gift certificate
- Preservation Solutions (preservation-solutions.com) Gift certificate
- Powermatic/JET (jpwindustries.com/brands) Lathes

AAW Chapters/Symposia (each donating an event registration)

- Tennessee Association of Woodturners
- Totally Turning Woodturning Symposium

AAW's 2020 Themed Member Exhibition Step up to the Plate—Second Inning Call for Entries

Application period: January 1–March 15, 2020

Being that the 2020 AAW International Symposium will take place in Louisville, Kentucky, next year's themed member exhibition is *Step up to the Plate—Second Inning*. This was also the theme for the member exhibit in 2006, when the AAW held its 20th Symposium in Louisville. Sometimes a theme is so good, we just need to see a replay.

AAW members are invited to submit their work to this juried exhibition. Full details can be found on page 6 of the August 2019 edition of *American Woodturner* or on the AAW Calls for Entry page, tiny.cc/Calls. The online application can be found at tinyurl.com/Calls2020. Contact Tib Shaw at gallery@woodturner.org. To see past exhibition catalogs, visit galleryofwoodart.org. ■

Symposium Youth Program Marks 15th Year Larry Miller

The 2019 AAW Symposium held in Raleigh, North Carolina, marked the fifteenth year of the AAW Youth Turning Program. It began at the AAW Symposium in Overland Park, Kansas, 2005, with sixty-two youth registered to take classes from world-class instructors. Since then, nearly 700 youth have participated, and more than 100 have participated multiple times. Kids aged 10 to 18 can participate at the annual Symposium without charge, as long as they are sponsored by a registered adult.

History

Genesis of the program began in 2004 through the leadership and work of John Hill, who was an AAW Board member and chair of the Chapters and Membership committee. John was responding to a constant complaint expressed by AAW members and chapters that “AAW is just a bunch of retired people for the most part and were asking how can we get kids involved.”

John contacted the manager of Walter Meier Powermatic & JET (now JPW Industries), the U.S. importer of JET and Powermatic lathes. The company agreed to donate lathes and stands to support the program—and decided it would be more economical to give the lathes to the kids than to take them back and hold them until the next year. John also contacted Teknatool International, which agreed to supply chucks. Crown Tools offered to supply tools, and Woodcraft Supply furnished faceshields. Those initial connections became long-term relationships, resulting in donations from those vendors every year since.

The donated equipment is given to the youth participants through a drawing at the end of the Symposium each year. A total of 344 “lathe packages” have been given to youth participants, and an additional thirty packages have been awarded to Educational Opportunity Grant



Lead instructor Kip Christensen with attentive students.

Photo: Janet Collins

winners. Starting in 2014, the vendors also donated a package to a local chapter of Lighthouse for the Blind for use in teaching woodturning to the visually impaired.

Over the years, these vendors have been joined by others who have provided equipment and supplies for multiple years, most notably: Easy Wood Tools, Robust Tools, and Vince’s WoodNWonders. Several vendors, including Craft Supplies USA, KC Tools, Rockler, Penn State Industries, Cousineau Products, and Advanced Lathe Tools, have also provided project supplies and kits. The AAW and all who have participated in this program owe all of these vendors a great deal of thanks.

The first instructor John Hill recruited was Bonnie Klein, followed by Nick Cook. Between the two of them, they worked with the local club to set up the equipment in an enclosed room, sharpen tools, and get the room fully

operational. Bonnie took on the tasks of registration and lining up not only the instructors but also the volunteers needed to support the classes. Shortly after Bonnie and Nick started, another key player, Almeta Robertson, began helping with general youth room management. In 2007 (Portland, Oregon), I joined the program as an instructor and recall the first few years of my involvement, helping Bonnie and then Al and Sherry Hockenbery. We’d work late into the evening with local club members, cleaning machine oil off the chucks and lathes, sharpening tools, and making sure the room was ready for the first classes early Friday morning. It was a lot of work by a small group of people.

In 2009, I took over class registration and administration duties. In 2010, Joe Ruminski assumed the duties of recruiting and assigning instructors, and he was succeeded after the 2015 symposium by Kip Christensen. The other key player in the overall process is an AAW Board member who manages the relationship with the vendors. Because the AAW Board members change with election cycles, several have done it over the years, including Dale Larson and Kurt Hertzog. Jeff Brockett has been doing it since 2015.

Impact of the program

In 2012, I conducted a survey of all youth lathe winners to date. One question was



Students can expect focused attention from expert woodturning instructors as participants in the AAW Symposium Youth Program.

Photo: Andi Wolfe

whether winning a lathe had had a positive impact on their life; all of the respondents said yes, absolutely. A few anonymous comments from the survey further supports the benefit of this program:

“A few days after the event, one of the attendees commented to his mother that he wished he could turn back the clock and relive the symposium.”

“The program for the youth was wonderful, and it did just what it is supposed to do. I now have two grandchildren who are bugging their father to get started. I was impressed with all the volunteers who helped out.”

“I thought it was an exceptional program, of which you all should be proud. I will say that a good number of hours have gone into the lathes the boys won since they got home.”

Of the hundreds of participants, many are still actively turning. One in particular, Troy Jambers, who at the age of 13 won a lathe at the 2007 AAW Symposium and participated yearly through 2009, has made a career of woodturning. Troy’s mother Carole provided a letter and newspaper clippings describing how Troy had taught woodturning to his classmates and began selling his turned items. Now at age 25, Troy is not only active in woodturning, but also runs his own professional woodworking shop, Arrow J Woodworking (arrowjwoodworking.com). Troy says he remembers the AAW Youth Program with fondness and that it played a key role in fostering his interest in woodworking.

Another alumnus is Kailee Bosch (kaileebosch.com), who is currently enrolled at Colorado State University in Fort Collins, majoring in art sculpture with a strong focus on woodturning. Kailee has received significant recognition for her work, receiving one of the Instant Gallery POP Excellence awards at the AAW Symposium in Kansas City (2017), and in prior years two Youth and one Collegiate Excellence Awards. Kailee

participated in the AAW Youth Program from 2007 to 2012 and returned as an instructor for the 2017 and 2018 symposia.

I asked Kailee what role the Youth Program played in her woodturning development, and she replied, “While having my dad [Trent Bosch] as a well-known woodturner was a pretty prominent reason I was drawn to woodturning, I was similarly inspired and intrigued through participating in the Youth Program. Attending the symposiums and the Youth Program gave me a better sense of the woodturning community, and I was able to interact with others. I think without that, I might not have seen much of a future for myself in the field. I also feel like going from student to teacher in the program was pretty important for my development as an artist. It is such a powerful thing to be able to see something through, almost full circle, like I have done with the program. While the Youth Program motivated and inspired me to turn through the years, teaching allowed for a sense of giving back to the community, sharing my love of turning with others, and provided further growth in myself as both a person and an artist.”

Brother and sister Torrey and Katie Cookman have been multiple-year participants, including this year in Raleigh. Torrey won a lathe package in 2016 and had been sharing the equipment with Katie, but this year Katie won her own package. They were two of the most enthusiastic participants at the Raleigh Symposium and have become accomplished turners, both having received POP Instant Gallery Excellence awards in the Youth category.

Changing demographics

Although program participation has been down the last four years, averaging 36 kids each year compared to 55 each of the first eleven years, enrollment was up in 2019, with 37 participants compared to a program low of 26 in 2018. What I find even more interesting, however, is the gender mix. Girls averaged 31% of the

participants for the first eleven years of the program, but that percentage is increasing. For the last four symposia, girls averaged 39%, and at Raleigh they outnumbered the boys, comprising 57% of the participants.

Although the data set is too small to draw conclusions, there have been a couple of recent activities that may explain the change. For one, Linda Ferber, Program Director at AAW, actively seeks ways to encourage youth attendance at the annual Symposium and youth involvement in woodturning in general. In Raleigh, she invited a youth group to the Symposium for a one-day experience that included a tour of the Instant Gallery and tradeshow, as well as the opportunity to view a demonstration and try their hand at turning.

Another explanation is the emphasis on encouraging more women in woodturning, as exemplified by the Women in Turning (WIT) committee. The Youth Program has made a conscious effort to increase the number of women instructors. For most of the first thirteen years of the program, there was only one woman instructor, and for three of those years there were only men instructors. Although increasing the number of women instructors has been slow, progress is being made. In 2017, there were two women, and in 2019, there were three, including Andi Sullivan, Amy Costello, and a former youth participant, Katie Stofel. Continuing this trend, lead instructor Kip Christensen reports that for the Louisville Symposium in 2020, four of the five Youth Program instructors will be women turners.

2019, Raleigh

Over the three days of the Raleigh Symposium this year, there were nine ►



Blind turner and instructor Andi Sullivan explaining her lack of sight and how she teaches.

classes taught by seven instructors. The youth turning area also supported two outside groups: members of the local Wounded Warriors Project made a yoyo, and woodworking students from Cedar Ridge High School made a Christmas ornament and stand. Unfilled spots in each of these special classes were opened to the youth registrants.

The Raleigh Symposium marked the third year in which one rotation was reserved for the Lighthouse for the Blind program led by blind turner and instructor Andi Sullivan. With assistance from her husband, Dr. Allen Miller, Andi also taught two classes to youth participants on how to make pens, key rings, and kaleidoscopes. With twenty-five lathes available for her classes, there was so much interest in the kaleidoscope project that Andi was able to “fit” ten more kids in the class, and they all completed their own kaleidoscope. The students, parents, and volunteers all gave positive feedback regarding Andi’s positive attitude and teaching ability.



Photo: Larry Miller

Avery Gifford ended up being a happy lathe winner in 2019, thanks to her friend Casey Drees, who won but forfeited his lathe package.



Photo: Larry Miller

Jacob Phillip (left) collecting the lathe package he won at the Raleigh Symposium. At right is Jacob’s sponsor Bob Leri. Jacob hand wrote and personally delivered thank you notes to every participating vendor at the Symposium.



Photo: Scott Smith

From right to left, participants Jaxon and Marlee Strickland and cousin Frankie Slaton-Smith. Can you guess who won the lathe package? Marlee’s frown turned to a smile when Jaxon agreed to share with her.



Photo: Andi Wolfe

Some of the happy participants from the 2019 Youth Program.

As part of the Youth Program, names from all eligible participants are drawn to receive one of fifteen lathe packages. Needless to say, anticipation and excitement run high, not only from the youth, but also from their families and friends. The winners in 2019 were as follows:

Evan Butcher	Julie Piotrowski
Katie Cookman	Jarrod Ray, Jr.
Michael Crescenti, Jr.	Chip Raynor
Nathan Douphrate	Liam Reinhardt
Casey Drees*	Daniel Short
Avery Gifford	Thomas Slaten
Malia Larochelle	Jaxon Strickland
Jacob Philip	Lydia Terdik

* Casey Drees won a lathe package but because his family already owns woodturning equipment, he declined it so his friend Avery Gifford (drawn as an alternate) could win it.

Thank you

On behalf of the Youth Program, I’d like to acknowledge and thank all who have played a role in making AAW’s Youth Program a hit. The program today

supports the original objective of John Hill more than fifteen years ago—getting more young people involved in woodturning.

I’d like to offer my thanks to all the vendors who have provided (and continue to provide) equipment and supplies. Over the program’s fifteen years, I’ve conservatively estimated their collective contribution to be worth more than \$400,000 in retail value.

With up to twenty-five students attending as many as nine classes, we strive to have one experienced adult woodturner for every two students, resulting in the need for dozens of volunteers. These volunteers, many of whom help in multiple classes, not only pay the full Symposium registration fee, but also forego attending demonstrations to help out in the youth room. We owe them our sincere thanks.

Thanks also to the local volunteers who assist with setting up the lathes ahead of the Symposium, preparing the turning area for the youth, and repackaging the lathes and other equipment for transit to the winners and EOG recipients. This could not have been accomplished without strong support from local club members, Andy Gunning, local Symposium lead, who coordinated setup of all the lathes ahead of time, and Brian Johnson and Tucker Garrison, co-leads for the local team, responsible for setup and deconstruction of the youth turning area, as well as repackaging the equipment for the winners.

Other behind-the-scenes volunteers deserve our thanks, too. In 2019, national volunteer coordinator Ana Lappegard was instrumental in recruiting dozens of volunteers, and Judy Miller spent all three days of the Symposium offering critical support in the youth area. And finally, thanks to this year’s instructors: Kip Christensen, Paul Carter, Steve Cook, Amy Costello, Katie Stofel, Andi Sullivan, and Allen Miller. ■

Larry Miller has been involved with the AAW Symposium Youth Program for thirteen years, the first three as an instructor and the past ten as coordinator.



In addition to being a member of the AAW, I am also a member of the National Arbor Day Foundation. I recently received a mailing from the Foundation, asking for contributions to their Tree City USA® program. I hadn't intended to donate, but one line in their enclosed literature changed my mind: "In the hands of skilled woodturners, a limb or even a defect in a piece of a trunk, can be transformed into works of art." My check is in the mail, as I believe their simple statement eloquently describes the ethos of woodturning and the AAW.

—Jonathan Lichter, New York

The Cumberland Woodturners of Crossville, Tennessee, have honored Les Black and Rod Smith with Stalwart Awards in recognition of their extraordinary support of our chapter.

During his eleven years of club membership, Les has served as club librarian and treasurer and is one of our four designated mentors. All of our meetings, hands-on workshops, and guest demonstrations are held at Les's workshop, where he generously shares his lathes, tools, and expertise with the club.

A Cumberland Woodturners member since 2004, Rod has served as president and treasurer and is our videographer, webmaster, and a designated mentor.

Les and Rod are outstanding ambassadors for our chapter, the AAW, and the art and craft of



Rod Smith (left) and Les Black, Stalwart members of the Cumberland Woodturners.

woodturning. They coach turners at our monthly workshops, serve on our board, and support our community outreach projects. They also volunteer their time and equipment to provide demonstrations at community events. In countless ways, Les and Rod are the grease and the glue of our chapter. It is our great pleasure to honor them with these Stalwart Awards, which they so richly deserve.

—Gail Hagenbach, President, Cumberland Woodturners

Each year, the Southwest Association of Turners (SWAT) symposium gladly exhibits Beads of Courage boxes turned by various club members. The 2019 symposium displayed 285 boxes. Of those, eighty-one were turned by members of the Brazos Valley Woodturners (BVWT), Waco, Texas.

Following the symposium, BVWT members delivered the boxes to McLane Children's Hospital in Temple, Texas. In addition, the Corpus Christi club, Coastal Bend Woodturners, designated their Beads of Courage boxes to also be donated to McLane, bringing the total number of boxes to 132.

—Janice Levi, Brazos Valley Woodturners



Kelly Wagner, McLane Children's Hospital Director of Activities, accepts donated Beads of Courage boxes from BVWT members Ken Mays and Norm Burgess. Also in attendance were Bill Brock, Fred Scango, Mike Smith, Matthew Perrine, Bob Johnson, and Roger Squires.

An old turning friend asked me about finding information on the making and using of hook tools. He thinks that Raúl Peña, from Texas, may have written an article for the journal some time in the past. Do you have a system that would let you do a search of the archives that might be beneficial?

—S. Gary Roberts, Texas

Editor's Response:

Yes! We have a great search function on the AAW website, woodturner.org. It's called *Explore!* and you can find it under the "Read" menu tab on the main webpage. I did a quick search and found the article you are looking for. A simple click brings you right to the article itself. You do have to be an AAW member logged into your account for this to work. If you have any trouble logging in

or creating an online account, AAW staff are there to help. Call them in Saint Paul toll free, 877-595-9094.



SPW Shares Woodturning at County Fair Booth

In September, the South Plains Woodturners (SPW) of Lubbock, Texas, participated in the Panhandle-South Plains Fair. The Fair management has a long history of supporting local nonprofits, and we were provided a spacious indoor booth with air-conditioning and electricity at no charge for the eight-day event.

Ray Kallman's December 2013 AAW article, "How to Stage Public Demonstrations" (vol 28, no 6) got us motivated to attempt this show and provided useful information, including a what-to-take checklist. Our booth included a multi-media center, an information center, and comfort/convenience items for fair-goers. We set up a TV screen that displayed woodturning videos. Front and center was an information area

that included a sign-up form for people to receive our free email newsletter. QR codes were employed to aid guests in donating online to our building fund and providing contact info. Donations to our building fund were accepted in exchange for turned items, such as spin tops, coffee scoops, pens, and ball-and-cup toys.

We gave away lots of business cards, flyers, and posters. Signs advertising our website, southplainswoodturners.org, were hung all around so they'd be captured in photos. AAW staff also sent us a stack of literature that our guests snapped up. A total of twenty-three club members manned the booth, and we grew our prospect list to close to 200 names. On the last day of the fair, we signed our contract for the same spot in 2020.

—Kent Crowell, South Plains Woodturners



Jim Harris (left) and Coy Hunt dole out smiles and woodturning information during the exhibit and demonstration.



President and Education Chair Jim Bob Burgoon shows a captivated audience how woodturning is done.

FSW Members Teach STEM Students

Over four-and-a-half weeks, the First State Woodturners (FSW) of New Castle, Delaware, taught woodturning to 120 Science, Technology, Engineering, and Mathematics (STEM) students at nearby Mount Pleasant High School. At the end of the program, more than eighty students had turned a wooden bowl.

When FSW received an AAW grant to purchase two lathes, we encountered the problem of where to store them. By our good fortune, we were invited to use the STEM classroom at Mount Pleasant High School to store our lathes and hold demonstrations. After one of our meetings at the school, STEM teacher J. Heather Handler asked if we could develop and teach a unit on woodturning.

After holding planning sessions and consulting AAW's *Teacher Resource and Project Guide*, we agreed that a bowl would be the best initial project. Classes began with a discussion of the history of woodturning, the parts of the lathe, basic tools, wood structure, and personal safety. FSW members

then demonstrated turning a wooden bowl. We modified the turning process to allow for the use of multiple lathe and chuck combinations and the need to mount and remount bowls. A recess instead of a tenon added safety and repeatability, and students initially mounted their blanks on a faceplate to ensure a safe hold.

Students received valuable one-on-one instruction. Chapter instructors provided additional lathes, tools, chucks, smocks, wood, and equipment as needed. The STEM program purchased a slow-speed grinder and sharpening jigs.

When word spread about the success of our program, district administrators, teachers, and parents came to watch

our sessions. Many visitors reminisced about their shop classes when they were in school and wished they could jump in and start turning. After the unit was completed, students continued to return to the STEM classroom to turn until the last day of school.

The Brandywine School District awarded certificates of appreciation to the FSW instructors: Tom Sloan, Eric Krum, Steve Childers, Mike Adams, Jack Donovan, Margaret DeMarco, Joe Nestlerode, David Beehler, and Don Pivonka. We are looking forward to continuing our work with Mrs. Handler and the Mount Pleasant High School STEM program next year.

—Tom Sloan, First State Woodturners



STEM classroom instruction, led by FSW President Tom Sloan.



Mount Pleasant High School students pose with their completed bowls and FSW instructors.

Student EOG Recipient Builds Lathe

Niles Wertz

In April 2019, I received a \$1,000 grant from the AAW to help fund the expansion of my turning shop and the fabrication of a custom lathe. While in high school, I produced and sold many turned items, as both a hobby and a source of income. But by my senior year, I had outgrown my 1941 lathe and was looking to streamline production and turn larger pieces. I began to design a larger lathe that was both affordable and could handle large turnings.

With the money from the AAW grant, I purchased high-quality materials and components and began fabricating the lathe. Over a few months, I spent hundreds of hours welding, machining, and assembling the custom lathe.

Learning across trades

This project exposed me to various trades and taught me valuable lessons in design, structure, and fabrication. For example, I was lucky enough to

have access to a metal shop and its knowledgeable owner, who taught me to weld, use a metal lathe, and wire a three-phase system. The time I spent making the lathe was both fun and educational. I felt a great sense of pride in completing this project, which has helped me develop skills both in and out of woodturning.

My new lathe is exactly what I needed to grow my woodturning business. The powerful variable speed motor allows me to turn and sand efficiently all different-sized bowls. So far, I have turned many small pieces, plus bowls and plates up to 21" (53cm) in diameter. The lathe's design allows me to move around the work efficiently and even core large bowl blanks.

It has been wonderful to have the support of the AAW and the woodturning community as a young woodturner. My experiences in designing and building this lathe have been a huge stepping stone for



Student EOG recipient Niles Wertz poses with his custom lathe, made possible by AAW funds.

both my woodturning business and my time at college. I now attend Cal Poly, San Luis Obispo (California Polytechnic State University), as a freshman in architecture.

Thank you to the AAW and its members for this opportunity and for supporting the education and development of young woodturners. ■

To learn more about AAW's grants program, visit tiny.cc/aawgrants.

Niles Wertz is from Mill Valley, California. For more, visit nileswertz.com.

A valuable learning experience



Larger work accommodated on Niles' custom lathe.

Tips

Easy spindle lock



I love my Laguna lathe, but the spring-loaded spindle lock was driving me crazy whenever I tried to thread a blank onto the woodworm screw. I needed both hands to rotate the blank, but each time I repositioned my hands, the spindle lock would disengage. Then I'd have to reset the lock while holding pressure on the blank to prevent the lock button from popping out again.

Using the indexing lock to hold the spindle stationary could damage the index wheel, and I was hesitant to modify the lathe by bolting something on to engage and hold the spindle lock button.

My solution was simple: move the banjo next to the headstock and use the end of the toolrest to hold the lock button in place until I had the blank tightened on the woodworm screw. It worked like a charm, and I found I wouldn't forget and turn the lathe on with the spindle locked, as I would have to reposition the toolrest before turning. I also use this method to lock the spindle for stationary sanding.

—Barry Green, Alberta, Canada

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

Molded PVC tool covers

Tool transport is always a problem with sharp tools. Common protective options include an expensive leather roll or cut-off glove fingers. I decided to make tool covers from scraps of polyvinyl chloride (PVC) pipe. I knew PVC would provide ample protection—I just needed a way to mold it to the profile of my tools.

To reshape the PVC, I had to soften it by heating it up. I found that a torch is not a safe method, as the pipe caught fire. Then I tried a heat gun and found it to be perfect.

Choose a diameter of pipe close to the tool shaft size, heat the plastic, and mold it by placing the tool in it while the pipe is still flexible. To close the end of the pipe so the tool tip won't push through, clamp the end in a vise. For flat-shafted tools like skews and parting tools, soften the plastic, insert the tool, and flatten the pipe to the shape of the tool using a vise or clamp. There will be some spring back, so clamping is important. If the tool gets stuck in the shaped PVC, warm the sleeve just enough to get the tool out and lightly re-clamp the pipe to retain the shape.

—Gerald Lawrence, Mississippi



Adjustable dust hose positioner

My woodturning shop is set up in a small basement room, 13' × 7½' (4m × 2.3m), without a dedicated dust control system. When sanding a bowl on the lathe, I use a Shop-Vac® to extract the dust but have found it challenging to position the hose in just the right place. I have tried using bungee cords to position the hose, and attached it to various objects such as the lathe bed, toolrest, or a task light to achieve the proper angle. These efforts are time-consuming and never worked well.

I finally constructed a wooden hose stand that mounts to the lathe bed. I cut four holes in an upright for inserting the hose at multiple heights. Two wing nuts on the base allow for adjustments, one to move the unit along the lathe bed and adjust the overall angle and the other to change the angle of the upright.

With these two adjustments, I can position my vacuum hose properly for any size bowl.

—Dex Hallwood, Vancouver, Canada



Extend reach of jumbo jaw grippers

If you find that the standard half-inch-high rubber gripper pads on your jumbo jaws are too short to hold your work, here's a simple solution to make an adjustable set of grippers that reach out farther.

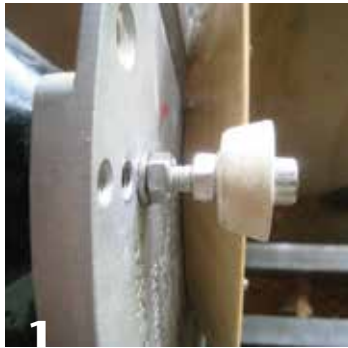
I purchased a set of socket head cap screws 1½" (38mm) long with threads

that match those in my Cole jaws. I also got two washers and two nuts to go with each cap screw. For the protective bumpers, I chose the tapered rubber feet commonly used on the bottom of wooden chair and stool legs. After drilling a hole in the rubber feet the same diameter as the cap screws, I

installed a foot on each cap screw, with the larger diameter of the foot against the screw head. Fit a washer and a nut to the cap screw and take them up for a snug fit against the foot to hold it in position. Now fit another nut and washer to the cap screw and install it in the jaws (*Photo 1*).

Wind the assembly in until the rubber foot is against the rim of the workpiece, then tighten the nut down against the jaw to secure it at that height. Once all the new screws have been installed and the chuck is tightened, the work should be both gripped and pulled against the jumbo jaw plates (*Photo 2*).

—Michael Hamilton-Clark, British Columbia, Canada



Note: Not visible is the platter's extended foot, which makes firm contact with the jumbo jaw plates when the chuck is tightened. Always ensure the workpiece makes firm contact against the jaw plates and are not just held by the bumpers alone.

Wire rack tool storage

I found a tool storage solution that is very inexpensive and does not take up much room near my lathe—readily available wire shelves. I mounted a wire shelf turned on edge, with its front lip at the bottom to hold the tool handles and its back lip at the top to capture the points of the tools.

Wire shelving can be customized to accommodate different-sized tools. At left in the photo is a wider section used to hold longer tool handles.

—Richard Chaddock, Maryland



Lathe bed mat

I often turn green (wet) wood, which has a tendency to rust the lathe bed. I found that by placing a mat down, the wet shavings can't rust the bed, and attaching



the mat to either the headstock or tailstock with a magnet allows me to move the tool-rest around without knocking it off. The mat I use is a toolbox liner, which also works well as a protective pad when reverse-mounting a bowl on a vacuum chuck.

—Ric Erkes, North Carolina

Egg crate as organizer

When I am working on small projects with multiple fitted pieces, such as birdhouses, I use a common packaging item—an egg carton—to help keep all the pieces together and organized. During assembly, I use half of the carton to position individual parts opposite the main piece so I don't get the sizes and colors of wood mixed up. Later, I use the egg carton to stabilize the work after the parts are glued and finished. If the egg carton gets stained with the finish, you can recycle it or use it as fire starter in your fire pit. You'll likely have a new one in your groceries soon. ■

—Robin McIntyre, Massachusetts



Calendar of Events

February issue deadline: December 15

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

Canada

July 17–19, 2020, Saskatchewan Woodturners Symposium, Regina Trades and Skills Centre, Regina. Sponsored by the South Saskatchewan Woodturning Guild, symposium to feature an instant gallery, wine and cheese, banquet, lunches, auction, and demonstrations. Demonstrators to include Jean-François Escoulen, Nick Agar, Jason Breach, Michael Hosaluk, and others. Early registration: \$320 CND until March 31 (starting April 1, \$350 CND). Deadline for registration: June 1, 2020. For more, visit southsaskwoodturners.ca.

Alaska

April 4, 5, 2020, Alaska Woodturners Association Symposium, Glass Sash and Door Supply, Anchorage. Regional symposium featuring demonstrations and instant gallery. Demonstrators to include Sam Angelo, Stuart Batty, and two local turners. Classes available before and after event: Batty Intermediate, April 2-3 (\$300); Batty Advanced, March 30 to April 1 (\$450); Angelo Intermediate, April 6-8 (\$450); Angelo Advanced, April 9-10 (\$300). For more, visit akwoodturners.org/Symposium.php.

Florida

February 7–9, 2020, The Florida Woodturning Symposium, Lake Yale Baptist Conference Center, Leesburg. Event offers onsite accommodations with meals included, silent auction, raffles, vendors, and workshops. Demonstrators to include Nick Agar, J. Paul Fennell, Judy Ditmer, Keith Gotschall, Frank Penta, Jack Shelton, Steve Cook, and Jon Hollingshead. Workshops to be led by Dixie Biggs, Rudolph Lopez, Don Geiger, Lee Sky, and Dave Farrell. For more, visit floridawoodturningsymposium.com.

Hawai'i

March 6–27, 2020, Big Island Woodturners 22nd Annual Woodturning Exhibit, Wailoa Center, Hilo. An exhibition of local work; reception March 6; Saturday demonstrations (on March 7, 14, and 21). Come see Hawai'i's finest. For more, visit bigislandwoodturners.org.

Illinois

July 24–26, 2020, Turn-On! Chicago Symposium, new location: Pheasant Run Resort, St. Charles. Featured demonstrators to include David Ellsworth, Michael Hosaluk, Cynthia Gibson, Eric Lofstrom, Chris Ramsey, and Avelino Samuel. Event includes a tradeshow, instant gallery, banquet, auction, hands-on pens for troops activity, people's choice award, and more. Registration will open by January 1, 2020. For more, visit: turnonchicago.com or email Al Miotke at abmiotke@comcast.net.

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. Remaining in 2019: *Continuum* (annual member exhibition), September 8 to December 29. On continuous display at the Gallery of Wood Art is the "Touch This!" family-friendly education room. For more, visit galleryofwoodart.org or email Tib Shaw at tib@woodturner.org.

New York

March 29, 30, 2020, Totally Turning Symposium, Saratoga Springs City Center, Saratoga Springs.

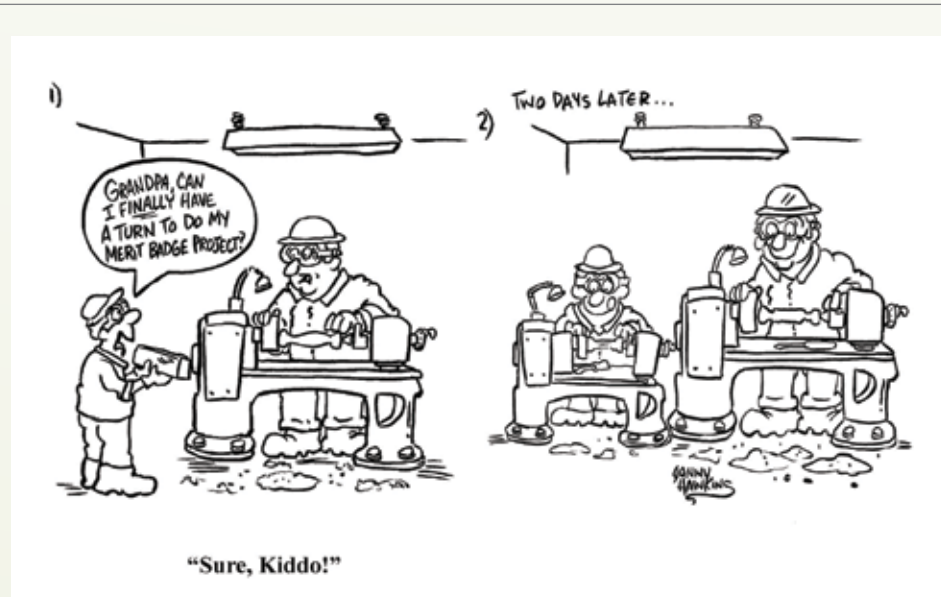
Presented by the Adirondack Woodturners, the 2020 symposium to feature Art Liestman, Hans Weissflog, Michael Blankenship, Rudolph Lopez, Derek Weidman, Kurt Hertzog, Joe Fleming, Rick Angus, Lynda Zibbideo, Louis Boucher, and others. For more, visit totallyturning.com.

Tennessee

January 24, 25, 2020, Tennessee Association of Woodturners' 32nd Annual Woodturning Symposium, Marriott Hotel and Convention Center, Franklin. Featured demonstrators to include Cindy Drozda, Eric Lofstrom, Mark St. Leger, and Derek Weidman. One of the longest-running and most successful regional symposia in the U.S., the 2020 symposium will feature a tradeshow, instant gallery, people's choice awards, and Saturday night banquet with auction. For info, visit tnwoodturners.org or email symposium@tnwoodturners.org. Vendors, contact Grant Hitt at vendorinfo@tnwoodturners.org.

Washington

March 21, 2020, Northwest Washington Woodturners' 11th annual all-day demo: *A Day with Nick Agar*, Anacortes First Baptist Church, Anacortes. Nick Agar will demonstrate the many techniques of turning, texturing, and coloring for which he is internationally known, including his *Viking Sunset Bowl*. For more, visit nwwwt.org/AgarDemo.pdf. Additional questions, email info@nwwwt.org or call Phil Kezele at 206-372-5123.



EVOLUTION OF THE SIDE-GRIND GOUGE

David Ellsworth

Scrapers—we all seem to have grown up using them. They were reasonably safe, and a teacher needed no special training to show kids how to use them. Poke, poke, sand, sand, sand. I used them as well, until I got tired of sanding. Then in 1977, I made a change. I heard that my woodturning hero, Bob Stocksdale, used a gouge, so I paid him a visit in Berkeley, California. It was a little intimidating, me being the new kid in town, in from Colorado with a pocket full of scrapers and a load of early hollow forms. However, one look at Bob using his gouge and the lightning struck: whittling, in motion! Why had I not thought of it before?

Inspiration and key design changes

I immediately began experimenting with a gouge similar to Bob's but found it too thin to handle the more rugged and irregular forms I was making at the time. That all changed with my first exposure to a side-grind bowl gouge during my first trip to England in 1979. There I met Richard Raffan (England), Liam O'Neill (Ireland), Brother Ciaran Forbes (Ireland), and Mick O'Donnell (Scotland). Each had been experimenting with the idea of a gouge with a long side edge that departed from the traditional British style (*Photo 1*). All of these new gouges were designed around $\frac{5}{8}$ "- (16mm-) diameter tool steel, and each turner

had his own idea of the "proper" amount of edge and shape, and how to use this new tool.

Liam's design had the longest edge at about two inches—no bandages included—and after many trips to the United States demonstrating his skills, the tool rightfully earned the "Irish grind" moniker (*Photo 2*).

My part in all this was to figure out a way to improve on the versatility of this new tool design. The side-grind design I use today is still considered a non-traditional gouge design, even though I have been using and teaching with it for thirty-seven years (*Photos 3, 4* and *Figure 1*). My design changes included a broader bevel for a more stable edge, a parabolic instead of a V-shaped flute, ▶

Predecessors/inspiration



1 The traditional grind profile on a large bowl gouge as it would have been seen in the mid-1970s. This profile remains in common use today.

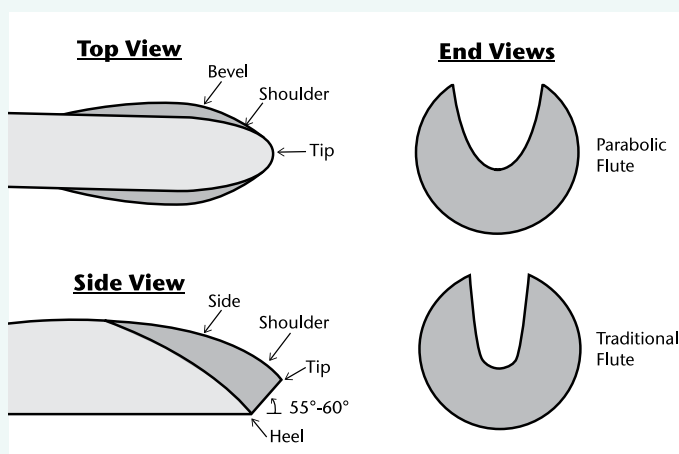


2 Liam O'Neill's grind includes swept back wings and radically ground sides. With his frequent visits to the U.S., his gouge profile became known as the Irish grind.

Subtle changes, significant results



(*Photos 3 and 4*) Side and top views of the author's version of the side-grind gouge (the Ellsworth Signature Gouge), inspired by variations he had seen in the U.K.



(*Figure 1*) The author's design—good for everything from refined, delicate cuts in seasoned wood to rapid waste removal in green timbers, incorporates a wider, parabolic flute to effectively clear chips and long, slightly convex wings.

a wider flute to discharge the shavings, and a sixty-degree angle on the tip instead of the traditional forty-five degrees.

Increased versatility

The combination of design changes resulted in a tool capable of a broader range of cuts, including the shear-scrape, a term Del Stubbs coined in the mid-1980s. The shear-scraping cut involves closing the flute until the lower blade makes contact with the wood, like a true scraper, then dropping the handle to about forty-five degrees to elevate the edge on the wood (*Photo 5*). Elevating the edge reduces the drag of the traditional scraping cut by more than fifty percent and produces a refined surface where one can begin sanding at around 220 grit.

But whatever improvements the tool offered, I was still getting some tearout in the facegrain areas on the outside of bowls and vessels on opposing sides of the forms. Cut, cut, sand, sand, sand. Then one day, I found myself smoothing the surface of a hollow form in the shear-scraping position by going back and forth in both directions. The phone rang, and when I returned to the bowl, I saw that the torn areas in the facegrain were gone! What had happened? I hand-rotated the form while presenting the tool to the wood. I watched the edge traversing both directions and discovered that the pushing cuts worked fine because the lower area of the edge was lifting off the surface as the cuts were made. But when pulling the edge along the surface, the upper area of the blade was clearly dragging on the

fibers, thus causing tearout. Natural solution, go the other direction. This resulted in pushing the edge downhill from the equator toward the base on a vessel form, or rim-to-base on an open bowl. I later learned that this was in perfect contradiction to the traditional way of cutting because I was going into the grain instead of along it. But the results spoke for themselves. No more tearout!

The most important design change for the side-grind gouge has been the shape of the flute. All the traditional gouges in the 1980s had a flute shape that had two straight side walls that intersected the radius curve at the bottom of the flute. They all worked fine for their respective purposes because these gouges were designed to cut wood at the end of the tool, not the side. But when converting

Effects of flute shape



5 The author's parabolic flute shape allows for a continuous convex cutting edge, important for successful shear-scraping.



6 Attempts at using a traditional, steep-walled flute for the side-grind gouge produced a tool that lacked a uniform curve around the length of the cutting edge. The dip at the front of the tool yielded poor shear cuts.

JOURNAL ARCHIVE CONNECTION

EXPLORE!

To learn more about shear-scraping, check out Mike Mahoney's June 2017 *AW* article, "A Closer Look at Shear-Scraping" (vol 32, no 3). Log on at woodturner.org and use the Explore! search tool.



One tool, multiple cuts without bevel support



7 A roughing cut pre-shapes this bowl form, moving from base to rim.



8 The tool is presented in scraping mode, tool handle almost horizontal, to shape a tenon.



9 A slicing cut shapes the bowl's exterior, first from base to rim, then in reverse direction. This is followed by shear-scraping from rim to base prior to sanding.

these tools to the side-grind design, the intersection of the straight side walls with the curve at the bottom of the flute created a slight dip in the edge on both sides and immediately back from the tip of the tool (*Photo 6*). Sure enough, this dip caused a glitch in the surface of a form when using the shear-scraping cut. And because the dip was an interruption to the natural curve of the edge, it also made it difficult to enter the rim of a bowl without getting a catch.

Order of cuts

The order of cuts I use when shaping either an open bowl or a hollow form are unique to this tool. I begin by removing all excess material with the roughing cut using the shoulder of the gouge and working from the base of the form toward the largest diameter (*Photo 7*). Next, I form a tenon and use the gouge as a scraper to flatten the bottom in case that surface might be glued to a backing block and/or become the base of the final form (*Photo 8*). I pre-shape the form's outside profile with the slicing cut, again using the shoulder of the gouge and working from the base toward the equator (*Photo 9*). Then I finalize the shape using the same slicing cut—but now in the opposite direction, from the equator to the base, or foot, of the form. This is done to minimize or eliminate any torn fibers in the surface. And finally, I complete the surface with a backward shear-scraping cut (moving from rim to base) before I begin to sand.

I find that I can use this order of cuts to shape all bowl and vessel forms of any size and any material—using only one gouge. And for these shaping cuts, the requirement that the bevel remain in contact with the wood to support the edge throughout the cut is no longer gospel.

Interior finishing cut

Of the five primary cuts the side-grind gouge will make (roughing, slicing, scraping, shear-scraping, and interior finishing cuts), the only one that does

Interior finishing cut: horizontal with bevel support



10 Enter the rim cut in the classic interior roughing position: horizontal tool presentation, the flute tilted right 45 degrees, and the bevel on the wood.



11 For the finishing position, keep the bevel against the wood, rotate the tool CCW until the flute is pointing straight up, then rub the bevel throughout the cut to the bottom. Note: Rotating the flute CCW past 12 o'clock will put too much edge into the wood and create a severe catch.

require using the bevel to support the cut is the finishing cut on the inside of an open bowl (*Photos 10, 11*). The other four cuts are made without the aid of the bevel, as they are supported by the tool-rest. But the interior finishing cut evokes the traditional mantra: Ride the bevel, ride the bevel—or start another bowl.

Two factors allow the side-grind gouge to be presented differently than traditional gouge presentation inside a bowl. The first is the minimal amount of the tool edge in contact with the wood—only $\frac{1}{32}$ " to $\frac{1}{8}$ " (0.8mm to 3mm). The second is the angle at which the edge enters the wood—pointed straight up into the wood (a traditional no-no) at the point of contact instead of at an angle. These two factors, combined with bevel support and a horizontal tool presentation, make for a safe cut with a superior finish.

Final thoughts

The end result of all these design changes is efficiency, much less death-gripping the tool, and everyone's favorite—less sanding. Combine these factors with fluid body movement and the result can be wonderfully curving forms. With practice, the tool becomes an extension of the entire body, like painting with a brush, where the energy for the cuts

comes from the whole body instead of just the arms and hands. The tool bolsters the concept that there is always more than one way to turn a bowl.

I point out these details in the design of this tool because I have witnessed the frustration of my students when they convert from a traditional bowl gouge to a new design. In the midst of their aggravation, few realize that they are not the origin of the problems they immediately experience. The side-grind gouge has a distinct design and it takes time to recognize the tool's differences, not to mention practice to achieve the confidence to succeed with it.

It is vitally important to recognize that every tool we use today has a history. That history started with a need and then arose from the endless determination and experimentation of numerous people, including Jerry Glaser, Mike Mahoney, Glenn Lucas, and many others who nurtured a desire to expand a tool's versatility. The result is a tool that lets us express endless new ideas in the objects we make. ■

David Ellsworth has run the Ellsworth School of Woodturning in his home and studio (now in Weaverville, North Carolina) since 1990. He has been a happily unemployed studio woodturner since 1974 and is AAW member #1.

The Basics of WORKHOLDING

Dennis Belcher

At the heart of woodturning is how to hold a workpiece on the lathe. For a beginner, this can be a complicated, confusing question. A recent woodturning catalog offered 205 different holding devices. What makes it even more confusing is that there are multiple ways to hold a workpiece for the same operation, and many projects require a sequence of different holding methods. Yet another source of confusion comes from the evolution of holding methods; consulting older woodturning books will result in different answers than current day practices.

To find your way through this maze, it is good to understand the basic concepts of workholding on the lathe. I think of holding methods in terms of four categories—squeeze it, expand in it, push on it, and screw it—which

encompass all holding methods. For any given workpiece, think about each of the four categories and whether a holding device, or method, is a safe way to hold your blank.

I find it helpful to write out the steps when I know I'll need multiple holding methods for a project. When determining the sequence, start with the holding method for the last procedure and work through ways to get there. For example, to hollow the inside of a bowl mounted in a scroll chuck, a tenon or recess is needed to hold the blank with the chuck. How can you mount the blank to create that tenon or recess? There are several possible answers, but the point is to start at the final holding method and work backwards. Thinking in terms of squeezing, expanding, pushing, or screwing will help you visualize the options.

Squeeze it Four-jaw chucks

The scroll chuck, or four-jaw chuck, is the most commonly used device in the squeeze category. When used in compression mode, the chuck jaws squeeze down on a tenon to hold the workpiece. Chuck bodies come in different sizes, with a wide variety of jaw sizes and types (*Photo 1*). Some chuck jaws are serrated and straight-sided, and others are smooth and angled for a dovetailed tenon (*Photos 2, 3*). Generally, jaws are interchangeable on chucks made by the same manufacturer.

Different chuck jaws are designed for different uses. For example, large, 4"- (10cm-) diameter jaws excel at holding big blanks for coring because the larger diameter of the tenon provides more strength. Smaller jaws are suitable for

The ubiquitous four-jaw chuck



1

The most common holding method in the squeeze category is the scroll chuck. Pictured are chucks of different sizes with various styles of interchangeable jaw sets.

Squeeze it



2

A secure hold in a scroll chuck requires that the top of the jaws be in full contact with the tenon shoulder, which must be cut clean and crisp. The shape of the tenon must match the angle of the jaws, straight or dovetailed, and the tenon must not make contact with the bottom of the jaws. *Note: one jaw removed for illustration purposes.*



3

Jaw size



4



5

Compare: Using a jaw size smaller than the intended diameter of the form's base affords more design options. The small jaws allow greater access to the wood that will become the base, or foot. *Safety Note: the tenon needs to be strong enough for safe turning; use larger jaws for a heavy green blank and smaller jaws when finish-turning.*

Jumbo jaws



6

Jumbo jaws hold a bowl by squeezing the rim with rubber bumpers. These jaws replace the normal jaws on a scroll chuck. Bring up the tailstock with a live center to improve the hold, and turn at low speed.

more delicate work. Jumbo jaws are made to hold a bowl by the rim so the bottom, or foot, can be completed.

The size of your chuck should also be a function of the size of your lathe. The mass of a large chuck on a small lathe means the motor will be strained at startup. You can run a small chuck on a large lathe, but a large chuck on a small lathe is a bad combination.

New turners frequently allow their chuck jaw size to determine the size of the completed form's base. But this practice generally dictates proportions that are not ideal; it can result in pieces that are squat and bottom-heavy. One way to avoid this design flaw is to use a tenon size and jaws that are smaller than the intended base. *Photos 4 and 5* show the same bowl blank on the same chuck, one with 4" jaws and one with 2" (5cm) jaws. For each case, can you visualize how you would complete the bottom?

The largest of the holding devices in the squeeze category is a chuck outfitted with jumbo jaws. These jaws are designed to hold a bowl so its bottom can be completed. As the chuck is tightened, rubber bumpers compress and hold the outside of the rim (*Photo 6*), though it is also possible for the bumpers to expand inside the rim, depending on the

bowl's shape. There is a greater fly-off risk with this type of mounting; it is best to bring up the tailstock for added support and turn at a slow lathe speed.

Collet chucks

A collet is another "squeezing" type of chuck. It exerts a clamping force on the workpiece when it is tightened by means of a tapered outer collar. Collet chucks excel at holding small-diameter blanks or tenons.

Collets offer limited adjustment of capacity. That is why typically they are sold in sets, rather than individually (*Photo 7*). However, collets

have two advantages for holding small-diameter blanks: they provide a strong hold on the workpiece and will not mar the wood (*Photo 8*). A variation of a collet chuck is the dedicated collet with drawbar, also shown in *Photo 8*. In this case, the drawbar runs through the headstock spindle and pulls the tapered collet tight. The taper causes the jaws to contract, holding the workpiece firmly. This holding method is used frequently when making bottle stoppers.

Drill chucks

Drill chucks are another example of holding devices in the "squeeze" ►

Collet chuck



7

A collet chuck set with jaws ranging in size from 1/4" to 3/4" (6mm to 19mm). A dedicated 3/8" (9.5mm) collet with drawbar is pictured in the foreground.



8

Collet chucks have a collar and set of jaws. Here a bottle stopper is held in a 1/2" collet.

Drill chuck



9



10

Drill chucks can also be used to hold small objects while turning. A drawbar running through the lathe headstock helps to secure the drill chuck in the spindle.

Expansion mode



11

Chuck jaws are expanded into a recess at the bottom of a bowl blank. This mounting method reduces waste wood, as no tenon is required. *Note: one jaw removed for illustration purposes.*

category (Photos 9, 10). A drill chuck has an advantage over a dedicated collet in its wider capacity. A disadvantage of drill chucks is that they leave compression marks on the wood. Like collet chucks, drill chucks should be used only for small workpieces.

Expand in it Scroll chucks

Scroll chucks can also be used in expansion mode, which means the jaws expand inside a recess in the workpiece (Photo 11). Expansion mode has the advantage of greater repeatability; a piece can be chucked, removed from the jaws, and then re-chucked and will usually still run true. This rarely happens when using a scroll chuck in compression mode.

A second advantage of expansion mode is that it uses less wood. The recess needed for chucking ultimately becomes part of the base, so no wood is wasted. When a chuck is used in compression mode, the tenon being held in the chuck typically becomes waste if it is not to be included in the base/foot design. Losing $\frac{1}{2}$ " (13mm) of wood from a piece of 2" stock is significant.

Push on it Between centers

A traditional way of holding wood on the lathe is between centers (Photos 12, 13). The work is pinned between the headstock and tailstock, with pressure exerted from the tailstock end. The headstock and tailstock points have evolved to today's improved drive and live centers. Drive centers are inserted into the headstock and transmit rotational force to the blank. Live centers are inserted into the tailstock. Ball bearings in the live center allow it to rotate freely. The combination of the two centers allows a blank to be held securely on the lathe and yet rotate.

Drive centers vary in size and type (Photo 14). When turning large, green

Between centers



12

The most common way to mount spindles for turning is between centers.



13

Between centers is a common holding method when beginning a bowl, as it allows the turner to make adjustments in grain alignment prior to finalizing the tenon position.

Drive and live centers



14

Drive centers are available in a range of sizes and configurations to meet various needs.



15

A sampling of the wide variety of tailstock live centers and points available.

blanks, a drive with a larger cross-section provides more “bite” in the wood. This minimizes the problem of a drive center “drilling” a hole into the wood and spinning freely. A two-prong drive center allows greater adjustment of the blank and still produces a good bite into the wood. Drive centers with a small cross section excel at multiaxis work.

Live centers also are available in a wide variety of configurations (*Photo 15*). The variety of turning forms has given rise to specialized configurations of live centers. Live centers can come as a kit that offers specialized points for different types of work. Some live centers have the option of an adapter that allows a scroll chuck to be threaded onto the tailstock. The live center allows the chuck to rotate freely, which can be useful when reverse-mounting a form. Mounting the piece on the tailstock while still in the chuck ensures concentricity is maintained.

Jam chucks

The “push on it” category also includes jam chucks. *Photos 16 and 17* show how a shopmade jam chuck can be used to reverse-mount a bowl to allow the bottom to be completed. The foam-covered disk is threaded onto the headstock, the bowl is centered on the foam disk, and the live center in the tailstock is brought up to push the bowl against the foam disk. The foam protects the rim of the bowl from damage. This method is an alternative to the use of jumbo jaws, though here the tailstock must remain in place during the entire process, leaving a nub that can be carved away after turning. Turning should be done at slow speeds with this type of mounting.

A very common type of jam chucking is the use of a wasteblock custom-turned to accept the work at hand. Very often, turners will shape a spigot so a project can be

Jam chuck



16 Shopmade jam chucks. One (left) is mounted by means of a faceplate and the other with a nut epoxied in a block at the back of the disk. Both are covered with closed cell foam.



17 A bowl is reverse-mounted by pushing it against the jam chuck with tailstock pressure.

Specially turned wasteblock



18 A wasteblock held in a scroll chuck is profiled to match the opening of this vase. The tailstock pushes on the form for added security. With the right friction-fit for smaller forms, it is possible to remove the tailstock for final passes on the base.

friction-fit for reverse-mounting (*Photo 18*). This works well for small vases and endgrain boxes. Another variation, without friction-fitting, is for a bowl to be placed over an appropriately shaped wasteblock and held in place with tailstock pressure, allowing access to turn the base.

Another form of jam chuck, shown in *Photo 19*, is useful for mounting projects that involve a through-hole. In this application, a block of wood has been threaded and screwed onto the headstock spindle, and a second piece of wood has been threaded and

Through-hole mounting



19 Two threaded jam chucks hold this pepper mill blank for turning. One block is threaded on the headstock and a second threaded into a live center adapter. This is one method of driving a form with a through-hole, such as this pepper mill blank.

mounted on a live center adapter. Each jam block is shaped to match the hole in the middle of this small pepper mill. The tailstock is advanced to apply the needed force to both hold and turn the pepper mill blank. Using wooden jam blocks means that if my tool goes off the blank, it will contact wood, not metal.

Vacuum chucking

Another form of jam chucking is vacuum chucking. A pump is used to draw air through the lathe spindle to create a vacuum that holds the ►

workpiece against a specialized chuck (*Photos 20-22*). The size of the vacuum chuck determines the amount of holding power. As the diameter of the chuck increases, the holding power of the vacuum also increases.

Vacuum pumps are classified according to the amount of vacuum they can create and the volume of air they can move (*Photo 23*). The amount of vacuum is denoted by how many inches of mercury the pump will lift (inHG), and flow is measured in cubic feet per minute (CFM).

Vacuum pumps used in woodturning are not able to achieve a perfect

vacuum, so the flow rate of your pump is important. Wood is porous, so some air will pass through it. Regardless of the extent of the vacuum, if the flow rate of the pump is too low, air moving through the wood will keep the vacuum below the level needed to turn safely. Be sure to compare flow rate as well as inches of vacuum when considering the purchase of a vacuum system. Use the tailstock for support as long as possible during turning.

A rule of thumb is that your vacuum gauge should register at least 20 inches for safe workholding. As with all rules of thumb, use common sense. Airflow

through the wood can be minimized simply by rubbing wood dust over the workpiece. The flow of air will draw the dust into open wood pores, closing the airways and improving the vacuum. A second way to stop air from being pulled through the wood is to put masking tape over the porous areas of the workpiece.

Screw it

Faceplates

Faceplates are second only to between centers in the amount of security they offer. They were the holding method of choice before

Vacuum chucking



20

A variety of vacuum chucks. The varied diameters and lengths are handy for a range of forms. The top of each chuck is covered with closed cell foam and plastic wrap. The plastic keeps the foam from leaving black marks where the chuck contacts your form.



21

A strong vacuum hold allows full access to the bottom of a workpiece. The open grain and wormholes in this blank necessitated the use of masking tape to minimize the airflow through the wood.



22

Vacuum pump system



23

A vacuum pump system includes a pump, gauge, valves, fittings, and hose.

Faceplates



24

Faceplates come in a variety of sizes. Use large plates on large pieces, small plates on small pieces. Use larger screws where appropriate.



25

Faceplates require a flat surface on the wood to make full contact with the blank. A hand plane was used to flatten this blank in the center.

today's scroll chucks and still retain the advantage of being one the most solid holding methods available.

The holding power of a faceplate is dependent on the strength and length of the screws (*Photo 24*). Common drywall screws are prone to break and should not be used. A better choice is sheet-metal screws. The critical element is the shear strength of the screw you select. Use longer, thicker screws for larger faceplates and workpieces.

When using a faceplate of any type, ensure that the entire surface of the plate is in contact with the wood (*Photo 25*). Note that when a screw is forced into wood, there will be a bulge of dislodged wood around the screw, which can push the faceplate up and cause a gap, compromising holding power. Pre-drilling pilot holes will help reduce this concern.

Screw chucks

Screw chucks, or woodworms, are another holding method in the "screw it" category (*Photo 26*). Common types of screw chucks can be threaded directly onto the headstock spindle, inserted in the taper of the spindle, or used in conjunction with a scroll chuck, as shown in *Photo 27*. An appropriately sized pilot hole is drilled in the turning blank, which is then threaded onto the screw chuck.

The holding power of this method comes from both the screw itself and fully mating the blank with the face of the screw chuck. The holding power can be so great that it can be difficult to remove a blank from the screw chuck when the turning is completed. Waxing the threads and/or using a spacer plate diminishes the problem. Large screw chucks excel at holding large, green blanks. As always, bringing up the tailstock to provide additional support is a recommended practice.

Screw chucks



26
A variety of screw chucks.



27
A woodworm screw is held in a scroll chuck. A properly sized hole is pre-drilled at the center of the blank, and the blank is screwed on until there is full contact between the top of the chuck jaws and the wood. Tailstock pressure should also be used when possible for added support.

Final thoughts

Developing a mental library of holding methods is critical to developing your skill as a woodturner. If the choices seem overwhelming, think in terms of each of the four categories of holding methods and work through the possibilities.

One final thought on holding methods: not all pieces of wood can be safely mounted and turned. Sometimes, the wisest decision a woodturner makes is the decision not to turn a specific blank. There is always more wood. ■

Dennis Belcher retired from a career of 30+ years in the investment world to his lifelong passion of working with wood. A member of the Wilmington Area Woodturners Association (North Carolina), Dennis demonstrates for clubs and participates in juried art shows. For more, contact Dennis at dennis.m.belcher@gmail.com or visit his website, dennisbelcher.com.

JOURNAL ARCHIVE CONNECTION

EXPLORE!

AAW's online archives offer many articles on various commercial and shopmade workholding solutions. For further reading, log on at woodturner.org and use the Explore! search tool. Here is a sampling of *American Woodturner* articles you will find:

- "It's All in the Jaws," by Richard Raffan, December 2010 (vol 25, no 6)
- "Mastering the Four-Jaw Scroll Chuck," by Dick Gerard and Stan Wellborn, February 2010 (vol 25, no 1)
- "Meet Your Needs with Custom Soft Jaws," by Mike Peace, June 2019 (vol 34, no 3)
- "Nut Chucks for Small Turnings" (Tip), by Phil Cottell, October 2015 (vol 30, no 5)
- "Creating Vacuum Chucks from Thin Air," by Rich Sherry and Bill Small, Summer 2004 (vol 19, no 2)
- "Understanding and Improving Vacuum Chucking Systems," by John I. Giem, February 2011 (vol 26, no 1)
- "Shopmade Wooden Collets for a Scroll Chuck," by Colin Hovland, August 2017 (vol 32, no 4)
- "Wedge Mandrel," by Charlie Wortman, April 2018 (vol 33, no 2)
- "Automotive Gizmo Makes Low Cost Chuck," by Andy Cohen, Winter 2000 (vol 15, no 4)



SKILL-BUILDING PROJECT

Turn a BEEHIVE ORNAMENT

Walt Wager



Every year, I try to come up with a unique holiday ornament. In 2018, my wife suggested I turn a beehive ornament. Beekeeping has become a serious concern in our county in Florida, as bees are under attack from several dangers, such as pesticides and mites. Bees are so important to our agricultural community that they deserve a special place in our consciousness. The beehive ornaments have been very popular in my holiday sales, and they are relatively easy to make.

Although today's beehives are essentially wood boxes, in the past they were made of woven straw coils formed into an upside-down, basket-like structure called a skep. Skeps are seldom used today because the wood box hive is so much more efficient. Yet the skep remains an iconic image of the beehive.

Rough-turn the blank

Start with a blank 2" (5cm) square and 4" (10cm) long. The first step is

to rough-turn part of the blank and then form a chucking tenon. In this case, my initial workholding method was to capture the square blank in the chuck jaws and bring up the live center for added support (*Photo 1*). *Note: When chucking a square blank, always use the tailstock live center to prevent it from being pulled out of the chuck during turning.* An alternate initial holding method is to mount the blank between centers. Rough the tailstock end of the blank to round and form a tenon sized for your chuck (*Photos 2, 3*).

Reverse the blank and secure the tenon in the chuck, as shown in *Photo 4*. Using a proper tenon (as opposed to proceeding with the square blank chucked in the jaws) provides lateral support for the blank, so it can be drilled and turned without the live center in place. Still, it is always safer to use the live center when possible for the greatest amount of support. Finish roughing the blank to round, and square up the end of the blank



Rough blank, form tenon



Mount a blank and form a tenon. Starting with the workpiece mounted between centers would also work, rather than using a chuck.

Remount, square up end



Remount the piece, now holding the tenon in the chuck jaws. Face off the end using a parting tool or spindle gouge.



Mark and drill



Drill a hole to aid in hollowing. Masking tape on the drill bit provides a visual guide to confirm drilling depth.

using a spindle gouge or parting tool, as shown in *Photo 5*.

Drill, shape, and hollow

Draw a line $1\frac{1}{2}$ " (38mm) from the end to indicate drilling depth. Using a $\frac{1}{2}$ " (13mm) drill bit mounted in a drill chuck in your tailstock, bore a hole $1\frac{1}{2}$ " deep (*Photo 6*); this hole will aid in hollowing the beehive later.

Now draw another line $1\frac{3}{4}$ " (4cm) from the end to indicate the top of the beehive. Using a bedan or parting tool, reduce the diameter of the blank from the tailstock end to the $1\frac{1}{2}$ " mark to $1\frac{1}{2}$ " diameter (*Photo 7*). Don't reduce the diameter of the rest of the blank, as it will later become the base of the beehive.

Using a parting tool, form a groove just to the left of the $1\frac{3}{4}$ " mark, defining the length of the beehive. Leave at least $\frac{3}{4}$ " (19mm) diameter to support the beehive while you hollow the inside (*Photo 8*).

Start shaping the outside of the beehive. I like to use a small spindle gouge, cutting from the largest diameter downhill to the smallest diameter—in this case, from right to left, as shown in *Photo 9*. The rough-turned outer profile will aid in determining wall thickness when you are hollowing.

Move the toolrest to the end of the beehive and set the height so that the point of a $\frac{3}{8}$ " (9.5mm) spindle gouge ►

Shape outer profile

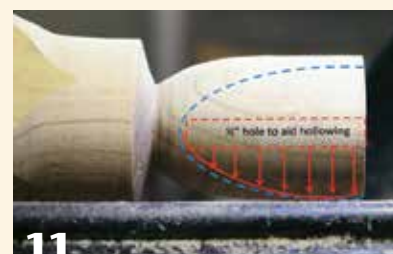


An additional line indicates overall height of the beehive. Make a parting cut here but leave enough material for support during hollowing.



Shape the outside of the beehive.

Hollow the beehive



The author hollows the endgrain form using a spindle gouge, pulling the tool from center hole left to the outer wall.

will be cutting at the centerline of the hole when the gouge handle is parallel to the lathe bed. To hollow the beehive, rotate the flute of the spindle gouge to the left so that it faces the 10 o'clock position. Pull the tool from the center hole toward the outside rim of the beehive, as shown in *Photo 10*. *Photo 11* shows the direction of the hollowing cuts, from the center hole outward. As you hollow deeper,

pull the gouge along the inside edge to remove the chips and to cut the walls to an even thickness (*Photo 12*).

The final wall thickness should be $\frac{1}{8}$ " to $\frac{3}{16}$ " (3mm to 5mm); don't make the outer wall too thin because later you will form beads on the exterior surface that will go $\frac{1}{16}$ " (1.5mm) deep.

You can now use the spindle gouge to shape the top a bit more before parting it off, as shown in *Photo 13*. You will have a chance to finish the top in a later step.

rounding the top of the beehive (*Photo 16*). A creative alternative, if you have the tools and skills, is to thread the bottom of the beehive to the top, rather than gluing it. This would create a beehive box such as the one shown in this article's *opening image*.

Make a line about $\frac{1}{8}$ " past the glue joint to indicate where the bottom of the ornament is going to be.

The next few steps involve turning and finishing the beads. Shown in *Photo 17* is a commercially available beading tool. While this is a handy way to make nice, even beads, it isn't necessary. You can also use a shop-made point tool to form the beads (*Photo 18*).

When you have finished forming the beads on the outside of the beehive, sand between the beads with the edge of a piece of 220-grit sandpaper.

JOURNAL ARCHIVE CONNECTION

EXPLORE!

In his June 2015 *AW* article, "Shopmade Beading Tool" (vol 30, no 3), Bob Patros shows how to make your own beading tool from an old spindle gouge.



Reverse-mount, form beads

Use a parting tool to form a tenon about $\frac{1}{8}$ " deep on the waste wood that remains in the chuck. Then glue the beehive to the tenon (*Photos 14, 15*). When the glue has set, use a spindle gouge to finish

Remount on jam chuck



13 Part off the shaped beehive.



14 Make a jam chuck of the wasteblock remaining in the chuck. Glue the beehive onto the tenon of the jam chuck. A portion of the wasteblock will become the bottom of the beehive.



Form beehive beads



16 Finish shaping the very top of the beehive using a spindle gouge.



17 Form beads to achieve the look of a traditional skep. There are various tools that can accomplish this task.



Drill an entrance hole into the hive just above the base using a 1/4" twist bit (*Photo 19*). This is also a good time to drill a small hole in the top of the beehive for an eye screw. For this ornament, I used a black ink marker to emphasize the base of the hive before parting it off (*Photo 20*). Sand the bottom and apply the finish of your choice. I prefer a lacquer sanding sealer, which I can buff using a buffing wheel.

Turn the bees

You can purchase ready-made bees from a craft supply store, but I have found that customers buying these ornaments prefer my shop-turned bees. Start with a length of 3/4"-square scrap wood. Mount the blank in spigot jaws and support it using the tailstock live center. Turn the blank down to a 3/8" cylinder. You could

also simply use a 3/8"-diameter dowel secured by gluing it into an appropriately sized hole in a wasteblock.

Turn a series of bee body shapes using a small spindle gouge. This is basically a series of beads (*Photo 21*). The head and thorax of a finished bee will be about 5/8" (16mm) long, with the head being 1/8" long and the thorax 1/2" long.

I use India ink markers to color the heads and thoraxes of the bees, as shown in *Photo 22*. After coloring the bees, apply a fixative spray so you can paint wings over the colored bodies later.

Cut the turned bees in half using a scroll saw, thin-kerf bandsaw, or a thin-kerf Japanese pull saw. *Safety Note: When cutting round pieces on a scroll saw or bandsaw, be sure to hold the work securely in a V-block or other jig.* Then crosscut the bees apart and use a

sanding stick (made by gluing sandpaper to a craft stick) to smooth the cut ends. Use the same color markers to touch up the cut ends.

To add wings to the bees, use a small brush to dab a touch of pearlescent paint to the thorax (*Photo 23*). Glue the bees to the surface of the hive using silicone or craft glue (*Photo 24*).

Your completed beehive ornament will make a great gift any time of year. They always remind me of the importance of honeybees as pollinators for our vegetables, fruits, and flowers. ■

Walt Wager has been an active member of the AAW since 2002. He teaches woodturning at Camelot's Woodworking Studio in Tallahassee, Florida. View Walt's work on his website, waltwager.com, or contact him at waltwager@gmail.com.

Drill and part off



19
Drill an "entrance hole" near the base of the beehive.



20
The author added black ink to accentuate the base prior to parting off the form.

Turn and color bees



23
A length of scrap can be shaped to emulate a series of bee bodies. The author adds color, cuts them apart, and paints on wings.

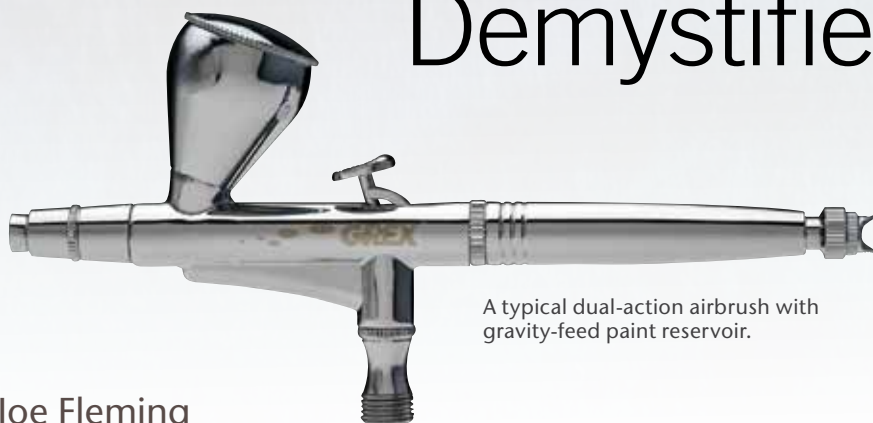
Completed beehive ornament



24
Complete your ornament by gluing the bees onto the beehive and adding an eye screw at the top.

The Airbrush

Demystified



A typical dual-action airbrush with gravity-feed paint reservoir.

Joe Fleming

Why airbrush?

Many turners wonder why anyone would want to add surface enhancements to their work. This is a fair question and one with many answers, depending on the type of piece being made. There are good reasons not to color a turned work. If I am making a utilitarian piece, I rarely color or carve because the simplicity of the wood works with the functionality of the piece. And if I am using exotic or highly figured wood, I let the wood stand on its own, without additional enhancement. However, in other circumstances, adding color is fun and allows for endless creative expression.

If I decide to color a turned piece, I want to control the effect to the maximum benefit of the final work. The airbrush is my main choice of coloring tool. For one, the airbrush media available today is of superb quality. Plus, I can control the intensity, placement, and penetration of the colors much more effectively than I could with a rag or bristle brush.

What is an airbrush?

An airbrush is a mini spray gun—the smaller sibling to spray guns used

by automotive and wood finishers. Airbrushes use the Venturi effect to draw a spray material (liquid paint, dye, ink, or other finish) into an airstream, atomize the colorant into tiny drops, and direct it out the front of the device.

Airbrushes can be classified into two broad groups: single action and dual action. A typical can of spray paint is a single-action airbrush; you get paint and air with a single trigger motion. Single-action devices offer limited control of paint flow, either full on or off. Dual-action airbrushes, on the other hand, activate air and paint flow separately, and this gives you much more control of the painting process. *Figures 1 and 2* show the anatomy of an airbrush and how it works.

What you'll need

In order to airbrush, you'll need only four fundamental items:

- An airbrush with air hose
- Airbrush-quality paint, ink, or dye
- A regulated air source (compressor), providing 20 to 25 psi
- Something to color

Some accessories add to the effects you can accomplish and the ease of

use, but are not strictly necessary. These include an airbrush holder, masking materials, lacquer or other surface finish, stencils and/or pre-fab designs, and drafting supplies.

Shopping for an airbrush

You'll have many choices when shopping for airbrushes. You can expect to pay \$400 to \$600 for a complete system, including airbrush paint. The cost of professional-grade airbrushes ranges from \$120 to \$600 (for the airbrush only), though you can get a serviceable model for less than \$200. There are some decent hobby-grade brushes in the \$60 to \$140 range. Hoses, paint, and other accessories will typically add another \$100 to \$150.

I suggest buying quality equipment. Less expensive airbrushes tend to have lots of plastic and large fluid nozzles. This means they don't perform detail work very well. They also have fewer features. Avoid knock-off brands you might find at discount stores. Their machining is inferior, and their tolerances and finish are generally poor. A \$30 airbrush is worth \$30—if you are lucky; it might work for a while, but the performance will deteriorate and the brush will become a maintenance headache.

Following are features I value the most in an airbrush, in order of importance:

- Dual-action rather than single-action. This is a firm requirement for me.
- Teflon seals. The rubber seals used on most cheaply made airbrushes will fail due to the solvents required.
- The right needle/nozzle size. Use a 0.3mm needle/nozzle to start. Avoid airbrushes with larger combinations because they cannot handle detail work. A smaller needle/nozzle will cause you to struggle with some paints and finishes, which may be too viscous.
- Top-gravity-feed rather than siphon/bottle/side-gravity feed. The latter versions have disadvantages for woodturners: they require more colorant than is needed in order to operate, the siphon tubes are difficult to clean,

the friction-fitting siphon cups and bottles don't always stay put (it's a big mess if one falls off), and the cups get in the way for the style of painting we do (they block the line of sight and bump into the work being colored).

- Needle travel-limiting adjustment (a knob on the back of the handle).
- A crown needle cover rather than a cone needle cover.

Shopping for an air compressor

What about air sources? There are really two choices: a dedicated airbrush compressor or a shop air compressor.

If you buy an airbrush compressor, avoid the little rectangular compressors that cost less than \$100. They are designed for fingernail manicurists and cake decorators and do not push out a sufficient volume of air for a quality airbrush. Get a compressor that puts out 0.6 to 0.7 cfm or more at about 50 to 60 psi. This will give you a good range of capability when spraying materials of varying viscosities. A suitable air compressor will run \$150 to \$300. One warning: some cheaper compressors (\$70 to \$80) may offer desirable specs but have a poor piston design that leads to "puffs" of air that show up as successive dots of paint when attempting fine lines.

If you are connecting to a general shop compressor, add a regulator/water trap to your airbrushing workstation and connect the main compressor hose to this secondary regulator. Dial the secondary regulator to about 25 psi to start.

Understanding colorants

Before diving into the coloring process, here are a few important terms and their definitions:

Dye. A colorant usually mixed in a solvent such as mineral spirits, oil, water, or alcohol. The dyes used in woodworking, very similar to those used for dyeing cloth and other materials, are transparent, as they bring about color changes in wood without obscuring the wood's ►

Anatomy of a dual-action airbrush

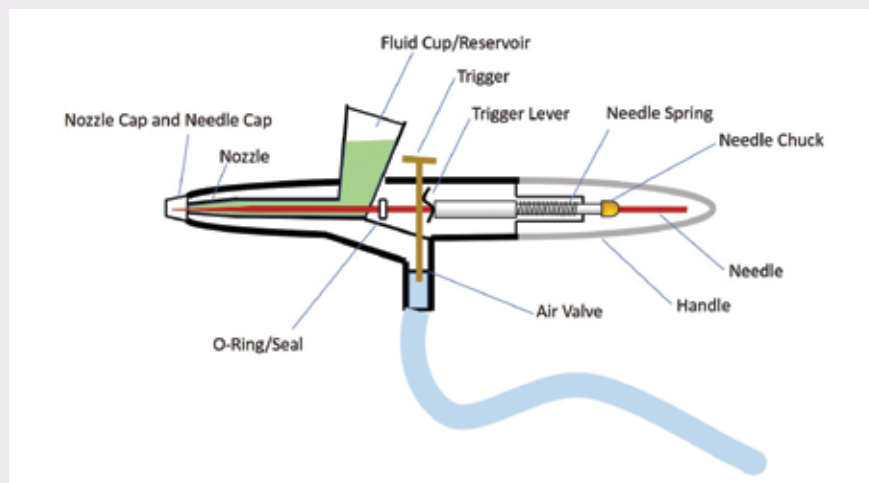


Figure 1. The parts of a typical dual-action airbrush.

How an airbrush works

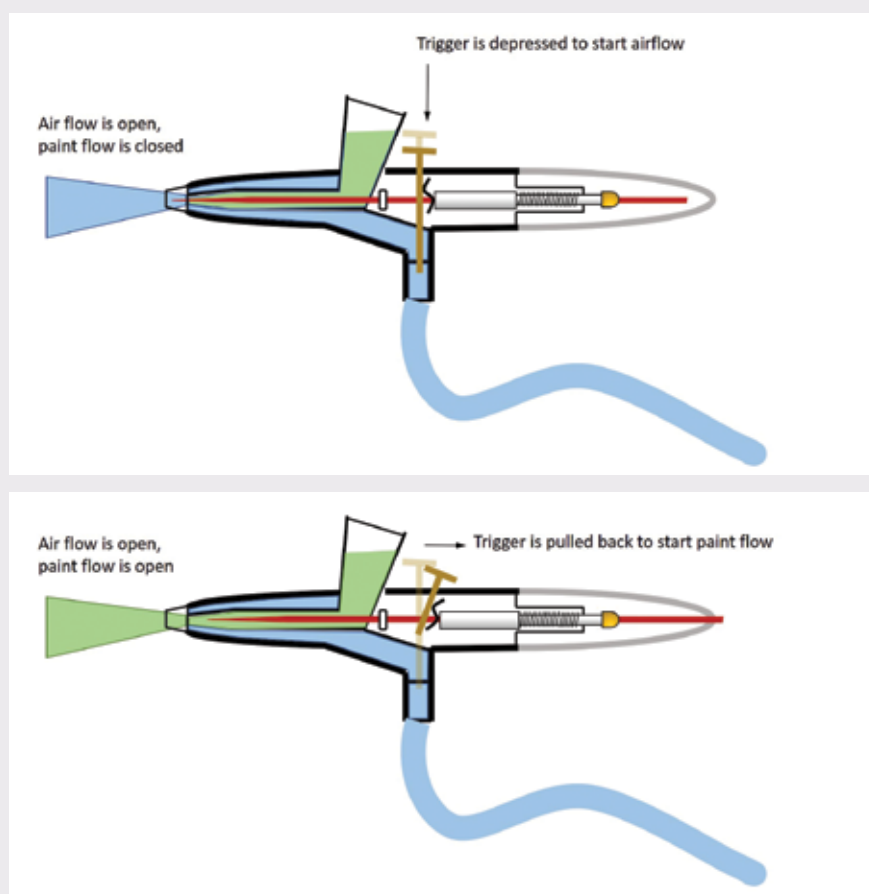


Figure 2. A dual-action airbrush allows you to control air and paint flow separately, a distinct advantage over single-action spray devices.

Common issues with dye on wood



1



2

Examples of undesired color shift. Blue dye resulted in teal (top), and red dye led to orange (bottom) due to the unbleached wood's natural color blending with the dyes. Also evident is the "white ring of death," a faint band of white that results from inconsistent absorption of the dye into the wood grain.

Bleach first, then dye



3

A maple vessel that was bleached before dye application. Note how much truer the blue color is than in *Photo 1*.

figure. Unlike the pigments in stain or paint, which are colored solids ground into small particles, dye pigments are typically soluble salts or metals. Once mixed with their solvent, dye crystals dissociate into individual molecules, which are vastly smaller than paint or stain pigment particles. Thus, dyes can get into spaces where solid pigments cannot.

Stain (transparent paint). Stains are really nothing more than very thin oil- or water-based paints. Whereas dye stains typically comprise only dye and a carrier, stains are comprised of pigment, a carrier, and a binder. Using a thin varnish (oil-based) or acrylic (water-based) as a binder, ground particles of natural and synthetic minerals are added to make stains. Stains should be stirred often to ensure an even dispersion of pigment because the particles tend to settle on the bottom.

Paint. Like stain, paint comprises pigment solids, a liquid carrier, and a liquid binder. But paints have more solids per fluid ounce, so they appear more opaque. Not all liquid acrylic paints work in an airbrush; avoid fluid acrylics made for traditional painting and, especially, craft paints, as they are far too viscous (thick) for use in an airbrush and will not flow or atomize properly. Airbrush paint should pour like cream, not like ketchup.

Coloring overview—dye

Dye is a completely transparent medium. You can think of dye as colored filters for a camera lens. If you hold up blue and red filters together, you will see purple. So when I use dyes, I usually select complementary colors and overlap the dyed areas to blend them.

When using dyes, one challenge is that the color of the wood will blend with the dye and cause a color shift. If you look at the majority of dyed pieces on the public blog sites, you will almost never see a true blue or a true red piece. They are almost always a tone of teal or orange, which may not be what was expected from the dye application. Wood tends to have yellow and red in it (poplar has green). Another consideration—and a benefit of airbrushing—is that wipe-on dye will penetrate and darken endgrain much more readily than sidegrain. When this happens, you will have a white-ish zone where the sidegrain is located. You can see both of these issues in *Photos 1 and 2*.

Two actions help prevent the white ring effect: seal the wood prior to dyeing it and apply the dye via airbrush rather than wiping to eliminate the contact wicking effect in endgrain.

When I plan to dye a piece, I usually bleach it with two-part wood bleach. I apply the bleach three to five times to get the wood's color out. You should experiment with the bleach to see how effective it is on various wood species. In my experience, maple, ash, walnut, cherry, and redwood all bleach well. Woods with green in them, such as poplar and some eucalyptus varieties, do not bleach well. The bleaching process renders truer colors, as shown in *Photo 3*.

I refer to my dyeing process as the "Don Derry Finishing Technique," as Don taught me how to build this type of finish. I've documented it on my website, airbrushingwood.com. Don learned the techniques finishing electric guitars. Here is the process I use to apply dye, and the results are shown in *Photos 4 and 5*:

JOURNAL ARCHIVE CONNECTION

EXPLORE!

To learn about bleaching wood, check out these articles in the *American Woodturner* archives. Log on at woodturner.org and use the Explore! search tool.

- "Decorative Bleaching," by Betty Scarpino, June 1996 (vol 11, no 2)
- "Make Your Own Wood Bleach," by Gary Guenther, February 2013 (vol 28, no 1)



1. Sand to 180 or 220, but no finer.
2. Wet the surface to raise the grain, then re-sand with the last grit.
3. Bleach three to five times.
4. Seal with vinyl sanding sealer or lacquer.
5. Sand back the sealer.
6. Airbrush dye, taking care not to soak the surface and get runs.
7. Seal with a light lacquer spray (too heavy an application could cause runs or reactivate the dye and cause it to run).
8. Apply additional lacquer coats to achieve build and desired gloss effect.

Coloring overview— stain/paint

When I paint specific images on a form, I focus on completing the piece

using transparent paint (stain) and masking techniques. Since stain is really just transparent paint, if you apply enough of it, the color will become opaque as the solid pigments build upon each other. You can see the grain through the paint if you have not over-applied it, as shown in *Photo 6*.

When using transparent paint, I am less concerned about the color of the wood itself because the paint can obscure the wood if I build up enough layers. In the birch piece shown in *Photo 7*, I used transparent black, purple, blue, and gray, which allow the grain to show through. Keep in mind that with transparent paints, light colors will often be obscured by dark

colors. You can use this insight to layer colors effectively.

Photo 8 shows a work on which I used several colors of acrylic, fabric, and interference paints, as well as carving, to achieve the illusion of being in a ballpark.

When I airbrush transparent paints, my process begins just as it does with airbrushing dyes. The first five steps are the same, then I take the following steps:

1. Lay out the areas to be painted, and apply frisket film to mask desired areas.
2. Cut frisket with a craft knife and lift frisket sections to expose target areas for painting (*Photos 9, 10*).
3. Airbrush transparent paint. ►

An array of airbrushed colors



4

The author's figured maple vessels, which have been bleached, sealed, dyed via airbrush, and lacquered.



5

Figured maple disks airbrushed with dye (each with three blended colors) and gloss lacquer.



Transparent paints



6

A red oak platter, carved, burned, and painted using yellow, red, purple, blue, and gray transparent paints (stains).

Opacity



7

As muted as the grain pattern is in this birch plate, you can still see it through the transparent acrylic colors. An exception is the white areas, done with opaque paint that hides the grain pretty well.

Multiple airbrush paints



8

Acrylic, fabric, and interference paints were airbrushed on this ash bowl.

4. Remove all masking.
5. Seal with a light lacquer spray (too heavy an application could cause runs or reactivate the paint and cause it to run).
6. Apply additional lacquer coats to achieve build and desired gloss effect.

Using an airbrush

Detailed instruction on how to use an airbrush is well beyond the scope of this article. I have listed several resources at the end of this article for further reading. But I offer these basic tips to get you going:

- Use only airbrush paint. All other fluid paints will cause problems, as they are either too thick, too chunky, or both.
- Never return unused paint or dye to the source bottle, as it is very poor practice to assume the color in the airbrush is pure. Doing so can cause two irreversible problems. You can introduce different colors into the bottle if you have been using your airbrush with more than one color. And pieces of dried acrylic paint that accumulates in the airbrush will not re-liquify if it is transferred back into the bottle. Those dried chunks will eventually be poured back into the airbrush, causing a nozzle clog.
- For paint, start with only about five drops in the cup. Add more if you need it, but always five drops at a time. For dye, use only about ten drops at a time. You can always add more colorant to the airbrush, but excess will be wasted because you shouldn't return unused liquid back into the bottle.
- Practice your airbrush skills. When I sit down to paint, I always perform warm-up drills on scrap paper before painting my project. This allows me to get my airbrush fingers working and to work out any technical difficulties with the paint or equipment prior to painting my project.
- Experiment on scrap wood with different coloring techniques, color combinations, masking sequences, etc.
- When painting, allow the paint to dry before spraying the next color. Impatience will lead to smears and muddy colors. Use a hairdryer to accelerate drying if you must. Keep in mind

that paint on frisket will dry much more slowly than paint on wood.

- Most importantly, learn to clean your airbrush. When I diagnose others' airbrush problems, the most frequent cause of difficulties is poor cleaning. Just as sharpening is a critical skill to learn to be an effective woodturner, airbrush cleaning is an essential skill if you are going to use an airbrush.

Summary

An airbrush can add a significant artistic component to your arsenal of tools. You can create so many different effects with an airbrush—from broad colors to fine detail. It allows you to precisely control the amount of color you are applying to a specific area and to blend colors to make seamless gradients. ■

Joe Fleming is a software engineering manager in San Diego, California. He has been a woodturner for about twenty years and a passionate airbrush user for about sixteen years. Joe now teaches airbrushing to woodworkers. In 2014, he acquired David Nittmann's airbrush business and sells airbrushing equipment and paint. For more, visit airbrushingwood.com.

Masking with frisket



Clear frisket film, applied under the blue painter's tape, is strategically cut and peeled back to expose only the area to receive paint.



You read the article—now see the video!

Joe Fleming has created a video illustrating some of the key points on airbrushing, including how to clean an airbrush properly. To see the video, visit tiny.cc/airbrush or scan the QR code with your mobile device.



For Further Reading

- *Airbrushing* (Artist's Library series #09), by Peter West, Walter Foster Publishing, Inc., 1986
- *Don's Airbrush Tips*, by Donald Wheeler, CreateSpace Independent Publishing Platform, 2014
- *All About Techniques in Airbrush* (All About Techniques Series), by Parramon's Editorial Team, B.E.S. Publishing, 2005
- *Airbrush: The Complete Studio Handbook*, by Radu Vero, Watson-Guptill, 1997

A Gallery of Airbrushed Works

Round and brown, a standard of beauty, was set down with reverence and strict adherence in the early days of woodturning. Colors were found in the wide range of timbers: ebony for black, holly for white, padauk for red, and pink ivory and purpleheart for the exotic colors their names imply. But even this diverse selection of naturally occurring colors was not enough for some of the rebels of those early days. Shimmering fire engine

red, mossy greens, turquoises into sky blues. The wood blossomed, so to speak, like flowers.

This was not a graceful introduction; polychromed wood was a war waged in woodturning. David Ellsworth, a treasured innovator and pillar of the field, was asked to pull his colorful *Solstice* series out of galleries. This deterred no one. Merryll Saylan has always found it appropriate in her long career to use any color she saw fit. Giles Gilson and

Don Derry used colors more comfortably found on automobiles than on wood. Frank Sudol and Binh Pho actually went to airbrushing conventions very early on to acquire what was akin to arcane knowledge to the woodturning field. Forbidden almost, but not for long. They paved the road for the rest of us, and along it planted the seeds of the bright blue timbered tree.

—Derek Weidman

Dan Zobel, Pennsylvania

Airbrushing techniques allow me to add interesting detail to my turned works. I was inspired to learn this process by Binh Pho and Derek Weidman. The idea of directional airbrush spraying, something Binh used frequently, allows forms to be viewed as different colors as they rotate. Derek introduced me to airbrushing during a class I assisted him with at Arrowmont. It helps when learning new processes to have strong influences and friends.



Holey Bowl (Purple/Orange), 2019, Ash, 4½" x 7" (11cm x 18cm)

Gene Colley, Texas

I had always wanted to put my thoughts and ideas on canvas but never felt I had the talent. Years ago, when I saw Binh's first demo at the Utah Symposium, I was hooked. I studied Binh's work and then took classes with him for years, doing my best to master the skill of airbrushing. For *Time in a Bottle*, I used frisket to mask my pencil drawing. The piece was included in the AAW's *Turning 30* member exhibition in 2016. ▶



Time in a Bottle, 2016, Boxelder maple, paint, gold leaf, 4" x 6¾" (10cm x 17cm)

Donna Zils Banfield, New Hampshire



Soul Series is a body of work that contains all the elements of making that I find immensely satisfying. Using an airbrush allows me to blend and shade colors in a way not possible by hand-painting.

It Satisfied My Soul No. 19, 2018, Silver maple (pyro-engraved, textured, and pierced), acrylic paint, 3" x 9½" (8cm x 24cm)

Gallery continued

Derek Weidman, Pennsylvania

For a sculpture as large as *Remember Me*, I had a number of reasons to use an airbrush. One aspect of airbrushing that is difficult to replicate with other paint application techniques is the uniformity and efficiency of a simple color shift. I torch my sculptures after they are turned, which, along with grain, physical structure, and tool marks, emphasizes a sophisticated pattern of light and dark. The last thing I want to do is cover any of that up. But an airbrush equipped with transparent paints makes it possible to supply even washes, while building up very little paint. This allows me to retain those bare textural details and make subtle color shifts where needed.

Color does not need to be neon green or bright orange to be effective. With an airbrush, more subtle tones like browns, ochres, and grays can add a great deal of variety and richness.



Remember Me, 2019, Holly, maple, ash, steel, wood bleach, acrylic paint, not including base: 42" x 36" x 32" (107cm x 91cm x 81cm)

Photo: Rob Blankenship

John Lucas, Tennessee

A graphic artist where I used to work gave me an airbrush he no longer needed. At first, I just wanted to be able to fade colors or blend them into each other. Then I started to use stencils to create patterns with the airbrush, and it wasn't long before I began playing with masking techniques to control shapes. I was fortunate to be Binh Pho's assistant at a workshop he was teaching, and this took my airbrushing to another level. Later, trying to create the illusion of objects in space opened up even more possibilities I had not even considered. I can see how airbrushing could provide a lifetime of learning and playing.

Approaching Sector 9, 2018, Yellow poplar, birdseye maple, 5½" x 15" (14cm x 38cm)



Joe Meirhaeghe, Illinois

This vessel was made from a piece of very plain-grained maple. I decided to give it some contrast and character using basic airbrushing techniques.

Untitled, 2019, Maple, pearled acrylic and black paints, 8" x 3⅞" (20cm x 10cm)

Joey Richardson, England

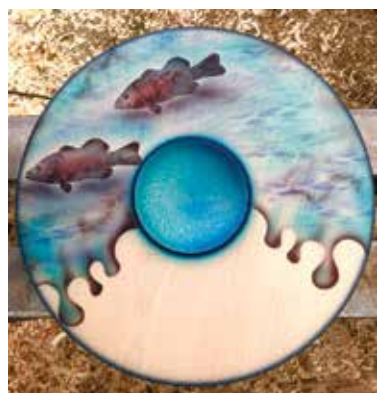
In 2005, I was fortunate to be awarded a bursary award from the Worshipful Company of Turners of London. This afforded me the opportunity to travel to the United States, attend an AAW International Symposium, and take a class with Binh Pho, who was the master of airbrushing on turned wood forms. I still use the Iwata airbrush I bought from Binh, mainly with Golden transparent colors.



Estimate, 2016, Sycamore from HM The Queen's Sandringham estate, acrylic paint, 12" x 12" x 10" (30cm x 30cm x 25cm)

Nick Agar, Georgia

I got into airbrushing about twelve years ago, while decorating a deeply textured piece that required a gentle and subtle color application. Control and gradation of color were only possible with a spray gun, and an airbrush did the job perfectly. I was certainly inspired by the airbrushed work of Ron Fleming and Binh Pho. Now airbrushing is a huge part of my work and teaching, and it is becoming very popular among wood artists.



Untitled Platter, 2018, Maple, dye, stencils, lacquer 2½" x 14" (6cm x 36cm)



Steve Sinner, Iowa

I made *Along the Trail* for AAW's *Walk in the Woods* exhibition (San Jose, 2012). After masking the vessel and dividing it into squares, I peeled and lightly airbrushed each square with various random transparent colors. Then I airbrushed the entire vessel with transparent green paint and added ink lines to delineate the squares. A signature gold leaf rim completed the work. ■

Along the Trail, 2012, Sugar maple, acrylic paint, India ink, gold leaf, spar urethane, 16¼" x 6⅜" (41cm x 16cm)

Michael Kehs, Pennsylvania

I use an airbrush to further the overall appeal of a piece. I don't usually paint scenes or images, but use the airbrush to add color and shading. An airbrush allows me to blend colors more evenly and with more control than with a traditional artist's brush. I took a class years ago with Binh Pho, where I learned to use an Iwata airbrush, which is great for applying dyes to figured woods. An airbrush also excels in creating and matching old finishes and color tints when I repair antique wooden objects.



Searching for Peace, 2016, Buckeye burl, holly, acrylic paint, 26" x 18" x 12" (66cm x 46cm x 30cm)

Young Turning Talent Recognized

2019 Turning to the Future

The AAW is pleased to recognize the outstanding work of the 2019 finalists and winners of the Turning to the Future student woodturning competition, awarded at the Association of Woodworking & Furnishings Suppliers' biennial AWFS® Fair in July.

Open to all high school and post-secondary students in wood-related programs, this year's competition drew students from eleven states. The finalists' work showed that turning is alive and well in towns as tiny as St. Ansgar, Iowa (population 1,150), and as large as metropolitan Denver, Colorado. Choosing the winners was a challenge for professional turners Stuart Batty and Christian Briseperre, who were impressed by the overall quality and originality of the work.

The AWFS® Fair, held by the Association of Woodworking & Furnishings Suppliers at the Las Vegas Convention Center, is a major industry tradeshow for the home and commercial furnishings industry, featuring suppliers to the commercial furniture and cabinet manufacturing industries, and to custom woodworkers. The AWFS® sponsors the Turning to the Future booth, and the exhibition Fresh Wood, which showcases a stunning array of student work, primarily furniture.

The AAW's presence at the Fair also included crowd-drawing demonstrations by professional turner Stuart Batty, providing additional exposure for the craft of turning and for the AAW and local chapters. This year marks the third Turning to the Future competition, and plans are underway for 2021. For more, visit awfsfair.org.

Prizes

Grand, first-, and second-place prizes were given in the high school and post-secondary categories. The grand prize winner received a JET 1221SP Midi-Lathe and \$500; first-place winners received \$500; and second-place winners received \$100. All finalists received a one-year AAW membership and complimentary registration to attend an AAW Symposium.

Special thanks

Special thanks to AAW Program Director Linda Ferber and Curator

Tib Shaw, who organized and managed the event, and to lathe prize donors Christian and Jeri Briseperre of Woodworker's Emporium, who also provided and set up the demonstration lathe. And, of course, thanks also to the teachers behind these excellent student turners: Roy Castillo, Keith Yow, Craig Christiansen, Kip Christensen, Mike McGarry, Seri Robinson, Michael Roper, Anna Thornton, and Cris Violette. ■

—Tib Shaw, AAW Arts Administrator/Curator

Competition Finalists

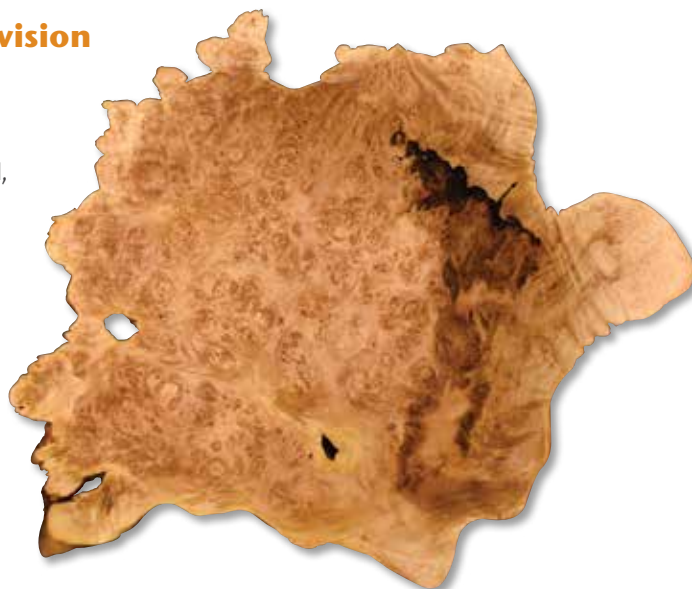
Congratulations to all of the competition finalists:

- Elena Cantu Pirelli, San Jacinto High School, San Jacinto, California
- Mitchell Dart, Cedar Ridge High School, Hillsborough, North Carolina
- Alec Ellis, Red Rocks Community College, Lakewood, Colorado
- Justin Fiaschetti, Boston University, Boston, Massachusetts
- Joel Gonnerman, St. Ansgar High School, St. Ansgar, Iowa
- Todd Hallemann, Oregon State University, Corvallis, Oregon
- Charlie Hamilton, Mills E. Godwin High School, Richmond, Virginia
- Joyce Kunz, Brigham Young University, Provo, Utah
- Vivek Patel, Mustang High School, Mustang, Oklahoma
- Noah Robitshek, Traverse City Central, Traverse City, Michigan
- Madeline Welin, Olympia High School, Olympia, Washington

High School Division

Grand Prize
Charlie Hamilton,
Mills E. Godwin High School,
Richmond, Virginia
Oregon Beauty, Maple burl,
4" x 14" x 15"
(10cm x 36cm x 38cm)

Photo: Earl Hurlburt II



Post-Secondary Division



Grand Prize

Joyce Kunz, Brigham Young University, Provo, Utah
Ray of Light, Figured poplar, 2½" × 5" (6cm × 13cm)

Photo: Tib Shaw/AAW



Second-Place Prize

Justin Fiaschetti, Boston University,
Boston, Massachusetts

Tornado Bowl, Sapele, teak, holly,
yellowheart, walnut, maple, lacewood,
katalox, cherry, zebrawood, sassafras,
poplar, 6" × 10" (15cm × 25cm)

Photo: Alan Harp/AWFS



First-Place Prize

Alec Ellis, Red Rocks Community College, Lakewood, Colorado
Walnut Cathedral, Walnut, 4" × 10¼" × 15½" (10cm × 26cm × 39cm)

Photo: Tib Shaw/AAW



First-Place Prize

Joel Gonnerman, St. Ansgar High School, St. Ansgar, Iowa
African Diamonds, Walnut, zebrawood, wenge,
13" × 12" (33cm × 30cm)

Photo: Alan Harp/AWFS



Second-Place Prize

Noah Robitshek,
Traverse City Central,
Traverse City, Michigan
Wooden Windows, Maple,
7" × 5½" (18cm × 14cm)

Photo: Tib Shaw/AAW



In the Japanese village of Hirutani, Masakiyo Ogura poses in front of his family shrine. Ogura-san represents the fifty-eighth generation in a woodturning family.

Fifty-Eight Generations of Woodturners

Terry Martin

Photos by Terry Martin.

In the village of Hirutani

We are sitting on cushions on the tatami-matted floor of a traditional Japanese house in the village of Hirutani. Outside the valley rises, steep-sided, and the wind sighs gently in the trees that crowd around the tiny homes. Masakiyo Ogura pours green tea for my wife Yuriko and me, leans across the table to place them before us, then sits back and smiles broadly. “I am the fifty-eighth generation of a woodturning family,” he says.

For nearly thirty years, I have traveled all over the world and listened to the life stories of many turners, but I had never heard a statement to match this one. Yuriko and I had traveled to meet Ogura-san at his home in search of the “birth-place of Japanese turning” in central Japan. The origins of the Ogura clan are deeply linked to ancient Japanese

history and tradition, and he proudly told us of his own ancestry. He also told us that archives confirm his woodturning family goes back at least 1,170 years. It takes a moment to process such information, almost certainly the oldest confirmed and continuous turning lineage in the world. At my request, Ogura-san knelt proudly for a photo in front of the shrine to his ancestors, while a photograph of his grandfather looked sternly down upon us.

As we had driven into the village of Hirutani earlier in the day, it seemed typical of many mountain villages in Japan—no stores, no post office, not much of anything other than a few picturesque houses. The mountainous countryside of Japan is filled with declining villages like this, as the young people flock to the bright city lights. Ogura-san told us that only three people

live in Hirutani now, but imagine our astonishment when he said that his tiny village was once a community of 23,000 woodturning households. A “turning household” in Japan today can include three or four turners, so I wondered just how many turners had lived in the village. I also thought that if it was true, had there ever been any other place in the world with so many woodturners?

The archives

When we finished our tea, we went to the nearby shrine where the woodturning archives are kept. Behind a screen of trees, we found a typically elegant building with wide swooping eaves and a beautifully tended garden. Near the entrance we saw a monumental moss-covered stone at least six feet wide that looked like it had been there for hundreds of years. Inscribed deeply into the stone



Portrait of Ogura-san's grandfather, who was part of a long lineage of woodturners.

was the word *rokuro*, meaning “lathe.” I was deeply moved by this venerable monument to the craft I love.

Inside the building we found a glass case that contained many fragile scrolls. This was the registry of turning families and the oldest was dated 935. We were amazed that these precious documents had survived so long in a land prone to earthquakes and fires in the ubiquitous wooden buildings. Our host explained that 1,300 years ago, turning was first officially given imperial approval. He then showed us some examples of wooden tablets with the imperial crest and family names that turning households were able to display at their door.

Considering how much wood the 23,000 turning households in Hirutani alone must have used, it was necessary to find new forests to cut. That is why woodturners led an itinerant lifestyle, moving to new forests and working onsite. They needed official permission to travel across local borders and to cut trees, and this explains why the records were created. It is fortunate that the documentation survived because without them the Ogura lineage would



The entrance to this Hirutani shrine containing the woodturning archives is marked by a stone monument with the word *rokuro*, or “lathe,” inscribed.

never have been confirmed. The itinerant nature of this work is also how woodturning spread to many other regions of Japan and explains why today all Japanese turners acknowledge this region as the birthplace of their craft.

Turning romanticized

Hanging on a wall inside the shrine was a scroll depicting a turner working in front of an imposing figure. Yuriko translated the writing on the scroll and at the top is written, “The original god of woodturning, Prince Koretaka.” On each side of this script are two imperial family crests. The writing at the bottom



The ancient registry of turning families on display in the shrine.

left translates, “Made at *tsutsui jinja*.” When I asked Ogura-san where this was and who Prince Koretaka was, he smiled and said, “You will see.”

The turner and his assistant in the scroll are very idealized, both wearing heavy silk *kimono* more suited to court life than the messy business of turning wood. But the rest of the image is close to reality: the female assistant does the hard work, the turner has his tools lined up, a set of small cups is already made, and he is turning another cup, which is attached to the end of the shaft. The wood was probably hammered onto pins set in the shaft, a mounting method you can still see Japanese turners using today. The only thing missing is the toolrest, possibly because the artist didn't understand its function.

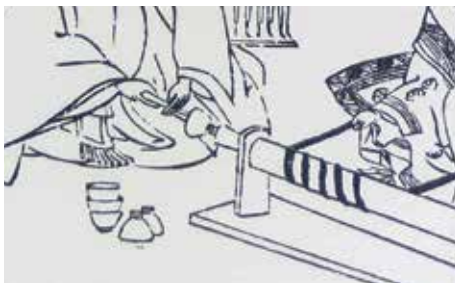
To put this idealized Koretaka scroll into perspective, a few days earlier in the nearby turning center of Yamanaka, we had visited the only woodturning school in Japan, where we found a small display of turning artifacts. There we saw a faded photograph taken last century that gives a more realistic perspective on the Japanese turner's life. The photo is blurry, but it is possible to see that most of what is happening is the same as in the Hirutani scroll. The lathe is identical, a spare tool lies at hand beside the turner, and the positions of the people are the same. The only differences are that the turner is making a large bowl and in the photo the toolrest is very evident. Often the ▶



Wooden tablets with the names of woodturning families who were officially registered.



A scroll depicting Prince Koretaka watching a turner at work. The turner's mounting method, workpiece hammered onto pins in the lathe's spindle shaft, is still used today in Japan.



assistant was the turner's wife and in this case the woman is not young, but she must have been very strong—or very tired! There is of course no sign of expensive silk *kimono*, only loose-fitting work clothes.

One lathe on display at Yamanaka was in such good condition that it could be used even now. It was identical to the one in the Koretaka scroll, a pull-pull lathe where the turner's assistant sat beside the lathe, feet braced against the frame, and alternately pulled



A 20th century photo of how Japanese used to turn.



A well-preserved reciprocating lathe on display at the turning center of Yamanaka.



A bowl blank tapped onto pins so the interior could be hollowed.

each handle so the shaft rotated back and forth. As with all types of reciprocating lathes, such as pole lathes, the turner cut only as the wood rotated down towards the tool. Another lathe had a bowl blank set on pins in the shaft, further confirmation of what was probably happening in the scroll we saw in Hirutani. When I first saw such lathes, I wondered why they were so small. Perhaps if you were a traveling turner in mountains where only trails exist, you had to carry your lathe on

your back, so it had to be as light as possible.

The last turner in Hirutani

Because of the dispersion of turning, the Ogura clan has spread to many other regions in Japan, and there are still over 100 turning families with that name. Masakiyo Ogura holds an influential position as the mayor of Higashi Oomi, the region that contains much of this turning history, and although he is not a woodturner, he is the acknowledged head of the family. However, with only three people left in the village, I asked him if that meant there were no turners left in Hirutani. "Not yet," he said, "and now we will visit one."

We left the shrine and followed the narrow valley road until we came to a small workshop beside a stream that tumbled down the valley. There we met Seiji Kitano, the only remaining turner in Hirutani. I thought his life in the declining village must be lonely, but like all Japanese craftspeople, he showed a strong sense of dignity and pride. He was proud to show us his workshop where he was finishing the bases of a set of cups. Kitano-san was one of the very few Japanese turners I have ever seen who work standing up.

Into the deep mountains

After our goodbyes, we drove farther up the winding mountain road, which narrowed and twisted as we penetrated the dark forest. It was a reminder that, despite the big city lights, 68% of Japan is still covered in forests. It also felt like a journey into the past—the occasional villages became smaller and smaller as all signs of modern Japan fell behind us. Finally we reached the end of the road at the tiny village of Kimigahatake, with only thirty houses and just eighteen inhabitants. It was a beautiful place but, sadly, many of the houses were falling into ruin. There we met Shoji Tanaka, who, like Kitano-san in Hirutani, is the last turner in his village, where there were once 6,000

turning households. Apparently, there was a centuries-old rivalry between these two villages, so it is ironic that these two men are the last remaining turners. When they are gone, an ancient turning tradition will have ended.

Although he lives alone, Tanaka-san also seemed perfectly content with his solitary turning life. He specializes in platters made from beautifully figured wood and proudly showed us how he works. His technique reflected the ancient end-on seating position, although he sat on a stool. His long tool-rest sits between widely spaced supports because he often turns very large platters. I also admired his heavy tool handles, which might seem overdone but serve to counterbalance the long overhang of the tool common in all Japanese turning.

When Tanaka-san showed us his store of turning blanks stacked for controlled drying (*see front cover*), he told us that he makes thousands of platters every year. Most Western turners today can barely imagine such output, but it is something Japanese turners take for granted. In his small gallery, Tanaka-san served us tea and we admired his range of work. I couldn't resist buying a platter made of the best figured maple I had ever seen.

A short walk from the village led us to a patch of forest where, according to an inscription on a small stone tablet in the ground, 1,000 turning households once stood. The trees were still relatively small and it will be many hundreds of years before they reach maturity. It was a solemn sight.

A little farther up the path, on a stone plinth beyond a ceremonial gate, we found a statue of a seated figure. This was Prince Koretaka, and it was time to learn why he is considered the god of woodturning. In 858, Prince Koretaka was one of the potential heirs to the imperial throne, but his brother became emperor instead. In fear for his life, Koretaka fled the capital Kyoto and moved into the mountains. It is recorded that he finally settled in the region we were visiting.



Seiji Kitano, the only remaining woodturner in the village of Hirutani.



In an era before the introduction of porcelain to Japan, turned and lacquered wooden vessels had been highly valued in the imperial capital, and reportedly Prince Koretaka saw the economic potential of the local forest resources. His principal advisor, Fujiwara Sanehide, set about promoting woodturning and he decided to change his family name to Ogura, after the name of a local valley. This was the beginning of the family that still exists today. The two communities we had visited, Hirutani and Kimigahatake, were the result of this imperial sponsorship.

Journey's end

We followed the path upwards. It narrowed and wound through increasingly ancient trees, and the silence deepened. Finally, the path opened onto a grove of gigantic trees with a scattering of beautiful temples and shrines among them. It

was the most peaceful and serene place I have ever visited in Japan and we stood in awe. This temple complex, *tsutsui jinja*, is venerated as the heart of the birthplace of Japanese woodturning.

Here and there, ornate signs were discreetly placed and Yuriko translated what they said. One of them particularly impressed me. Erected by an association of metal turners in the Tokyo region in 1975, it acknowledged the debt of all turners to this region. It is the first time I have ever seen such recognition of the woodturning origins of the industrial mainstay, the metal lathe.

Reflections on our journey

It was hard to leave that peaceful grove, but as we drove back to Hirutani, I reflected on all that we had learned. It would be easy to tell this story just as it was presented to us—a neatly packaged explanation of a unique history. ►



Shoji Tanaka, the last remaining turner in the ancient village of Kimigahatake, specializes in platters.





A statue of Prince Koretaka, considered in Japanese tradition to be the god of woodturning.

But legends often blur the truth and, particularly for a foreigner, the truth in Japan can be obscure. For example, what I had taken for an ancient monument at the shrine in Hirutani, with the word for “lathe” inscribed on it, was not what I had thought. The word carved below *rokuro* was *mannenhitsu*, which means “fountain pen,” so obviously the stone was not as ancient as it looked. Yuriko later established that it was erected in 1973 by a famous Japanese fountain pen company. From the early 20th century, their pens were made out of turned wood and to acknowledge this history, they commissioned the monument. I thought of the thousands of turners in the West who devote their time to turning pens. Perhaps many of them think it is a relatively new idea, but the Japanese were doing it a hundred years ago. And why not? Traditional brushes

I am sure there are more professional turners in Japan than in any other country.

used for writing have had turned handles for over a thousand years.

“The birthplace of Japanese turning” sounds impressive, but what does it mean? I already knew that woodturning had come to Japan from China during the years from 400 to 600, so obviously it had a strong presence long before Prince Koretaka. One probable reason for this version of turning history was the rising sense of national pride in the 19th century. So much of Japanese material culture came from China that it was felt necessary to “nationalize” it, so an idealized narrative of simple village life and hard-working Japanese artisans was linked to crafts such as woodturning. The story of Prince Koretaka fit well with this narrative, so he was enshrined as the originator of Japanese turning. In many ways, this is not very different from the contemporary dialog surrounding turning in the United States, where it is very rare to hear any discussion of the fact that American turning is a craft with 100% European origins.

Back in Hirutani

While Ogura-san prepared tea for us again in his house, I thought about the



Tsutsui jinja, a small complex outside the village of Kimigahatake, is considered the birthplace of Japanese woodturning.



A dedication and acknowledgement of origin, from the metal turners of Tokyo.

declining state of woodturning across Japan. Because each turning region operates independently, I have never been able to determine how many turners are active in Japan today, but it must be in the tens of thousands. It is still an important industry and I am sure there are more professional turners in Japan than in any other country. But turning is increasingly dependent on an aging population of men with no younger generation to replace them. In this quick-fix era, a traditional seven-year apprenticeship is not an attractive prospect.

Tradition and history are very important, but I was starting to feel they may be failing the once-thriving industry of woodturning in Japan. I asked Ogura-san how he felt about the state of woodturning in his region, and he told us that he had organized a Festival of Craftspeople in 2017 to try to arrest the decline. But as he described the event, it was clear that it only emphasized the past. I wondered if they were open to new ideas to stimulate interest, so I asked him if they had ever thought of encouraging amateurs to take up turning. “Amateurs?” he said with surprise. “Never!”

One of many utilitarian turned items in Japan, this wooden saucer was made by the Living National Treasure, Ryoza Kawakita.



There is a fundamental appreciation of aesthetics in Japan that extends to all things, so in almost every Japanese household you will find many beautifully turned objects.

Taken aback, I paused to pick up my cup of steaming tea. I felt it was time to change the subject, so when I looked down at the wooden saucer that the cup was presented on, I asked Ogura-san who made it. "They were made by Ryoza Kawakita, the Living National Treasure of woodturning," he said. I was impressed that we were using saucers made by the revered national keeper of woodturning mastery, and I respectfully replaced my cup. I needed to remember that it is this very reverence for tradition and skill that has maintained the Japanese craft of woodturning for so long.

The future

In the West, one of the most common topics of discussion among turners is how sales are declining, so you might ask yourself who is buying the production of so many thousands of turners in Japan. In discount stores in Japan it is possible to buy cheap imported wooden bowls, but many Japanese still choose

to buy well-made Japanese bowls that will cost them many times more. This is because there is a fundamental appreciation of aesthetics in Japan that extends to all things, so in almost every Japanese household you will find many beautifully turned objects. This will not change any time soon, so I believe the decline of professional turning in Japan will be slower than it was in the West.

There is a small number of younger Japanese turners who are willing to take their work to the world, and they may have some of the answers. I found an example of this in the gallery where I sell most of my work in Australia, Bungendore Wood Works. When I was last there, I noticed some unmistakably Japanese bowls. I picked one up and looked underneath, and there was the name: *Ogura!* Sometimes a story does have a perfect ending. ■

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

An Unexpected Family History

I communicate well enough in Japanese, but I can't always overcome the reluctance of Japanese craftsmen to open up to outsiders. That takes a deeper understanding of Japanese culture, and on this trip I was helped by my wife, Yuriko Nagata. When we met in Japan in 1978, neither of us knew that I would spend most of my life as a woodturner. Even more unlikely, only a few years ago Yuriko discovered that her own family had a forgotten history of woodturning.

The town of Yamanaka on the main island of Honshu is a famous center of woodturning, and in the town center there is a large granite statue of a distinguished man wearing a kimono. His name was Kumakichi Araya, and Yuriko discovered that he was her great-grandfather.

Yuriko's ancestor is famous because he was the first in Japan to make bicycle wheels. First he turned them out of wood, but later he made them from metal and this is how he founded the Araya bicycle company, still a world leader in bicycle technology.

When we visited Ogura-san, Yuriko quietly mentioned that she had a family connection with woodturning. She told him about her great-grandfather, and Ogura-san suddenly lowered his head and gently took her hand in his. It was a rare Japanese gesture of profound respect that reflected how important the weight of history is in Japanese turning.



The author's wife, Yuriko Nagata, in front of the statue of her great-grandfather, Kumakichi Araya.

MEMBERS' GALLERY

Toni Ransfield, Alabama

I began working with polymer clay in 1991 and making pens in 2007. I soon joined the online forum of the International Association of Penturners (penturners.org), where several members helped me learn better ways to finish my pens. It was then that I bought my first lathe. I previously sanded and finished all my pens by hand. The lathe was certainly intimidating, but with patience and time, I learned how to apply a finish with cyanoacrylate (CA) glue. In 2011, I was accepted into the Pen Makers Guild (penmakersguild.com).

Polymer clay turns beautifully on the lathe, as long as you use very sharp tools and avoid heating the material too much. I am an award-winning polymer clay artist and have demonstrated my pen-making techniques at two AAW Symposia (Atlanta in 2016 and Raleigh in 2019), as well as at regional symposia.

To see more of Toni's work, visit exclusivedesignz.com. She also offers polymer pen blanks for sale at claypenblanks.com.



Red and Blue Roses with Hummingbirds, 2018, Polymer clay, millefiori canes, polymer clay veneers

Purple Roses with Yellow Swallowtail Butterflies, 2018, Polymer clay, millefiori canes, polymer clay veneers



Aurora Borealis Dragon Scales Fountain Pen, 2016, Polymer clay, gold leaf, embossing powders, inks



Claude Dupuis, New Hampshire

Whenever I demonstrate segmented turning, I begin with the most important element, form.

I tell people, "If you remember only one thing about this demonstration, let it be the importance of form." One can learn to cut and glue up perfect joints, but what good would that be without a pleasing form? I begin segmented projects with a drawing, and even with all the software programs

available, I prefer to draw by hand, using graph paper and French curves.

The polyester diamonds in *Blue Diamond* were custom cast with blue tint, then cut to shape. There are eighty-eight diamonds in four sizes, laid out in a spiral pattern to suggest movement in the piece. It became obvious during construction that I needed to find a way to illuminate the vase from within, so I designed the pedestal to house a light that shines from below.



Blue Diamond, 2018, Curly hard maple, black-dyed veneer, maple veneer, polyester casting resin, pigment concentrate, 19 $\frac{3}{4}$ " x 9" (50cm x 23cm)

The author's clamping press is useful for gluing on additional segment rings as the form takes shape.

This vase won "Best in Turned Wood" at the 2019 League of New Hampshire Craftsmen exhibit, *Arts, Crafts, and Design*.

Mike Nathal, Ohio

I have been turning since about 2011. *Angled Vase* combines my love of hollow forms with a new interest in multiaxis turning. The concept for this piece was to create a vase with a neck that appeared to be drooping over, or perhaps bent like a metal pipe. The form also reminds me of a musical note. The piece was turned on three different tenons (two axes), and I had to do significant carving to arrive at the final shape.



The form and its two axes are sketched onto the wood, and tenons are turned. The author hollows the main body of the vase from the bottom prior to gluing on a concealing base and carving the angled neck.



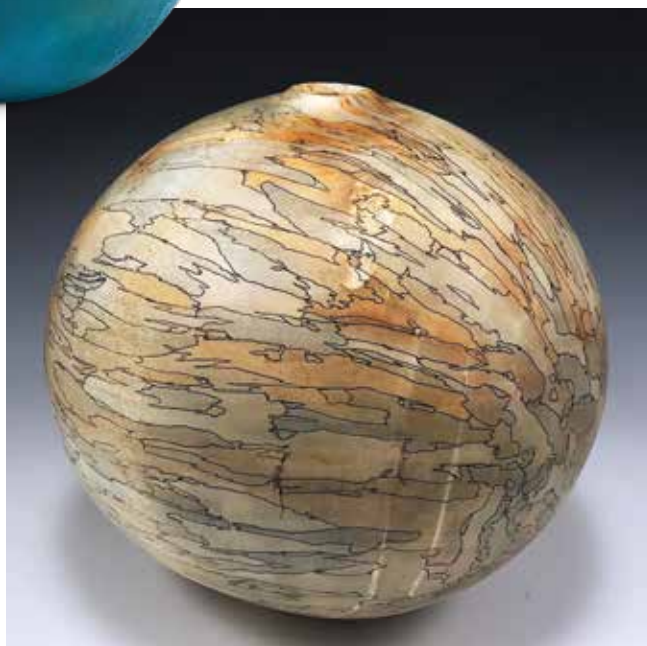
Angled Vase, 2018,
Maple, 9" x 3" x 4"
(23cm x 8cm x 10cm)

Archipelago, 2019, Boxelder maple,
bleach, aniline dye, 4½" x 5" x 4½"
(11cm x 13cm x 11cm)



Faulted Boxelder Vessel, 2019,
Boxelder maple, 7"
(18cm) diameter

The author's use of *Faulted* refers to "faux spalted," a process of bleaching the wood, adding new color, and then hand-drawing "spalting lines" on the piece.



Greg Gallegos, Michigan

I was first introduced to woodturning in high school shop class. After school, I focused more on print media, drawing, and painting before returning to the lathe in 2000. I spent several years learning and practicing before I felt comfortable enough to sell my work, and now I have been turning full time for the last ten years.

My goal is to create pieces that make people feel a sense of calm and connection, as though the work were made just for them. I am inspired by the wood itself, primarily green wood that allows me to play with the material's natural movement. I also enjoy using colors and texture to create a strong sense of contrast and drama.



Carved Red Oak Bowl, 2018, Red oak, 3¾" x 5½"
(10cm x 14cm)



Final inspection of a lampshade before parting it off the lathe.

PETER BLOCH



Explorer in Woodturning

Peg Lopata

Photos courtesy of Peter Bloch.

Peter Bloch, a self-taught woodturner in New London, New Hampshire, is like an explorer seeking out the nature of wood. His greatest discovery is seemingly incongruous—that wood can be made translucent. The luminosity of light shining through his turned wood lampshades challenges ideas about the properties of wood. His shades have such sheerness that they bring to mind veils, skirts of chiffon, or the setting sun through clouds.

The journey begins

Bloch, 66, is a master woodturner. He's been working with wood for more than forty years, and it is his entire source of income. Growing up, however, he had no interest in arts or crafts. Says Bloch, "A seventh-grade woodworking class made almost no impression on me." But while at Hampshire College (Amherst, Massachusetts), he led a group of students on a visit to a small factory that made wood toys. "I remember picking up two flat pieces of birch plywood and tapping them together and being

instantly and inexplicably drawn to the material," he explains. "Two years later, I went to the original Woodcraft store in Woburn, Massachusetts, and bought a gouge and mallet. Combining that with my chainsaw, I started making large abstract sculptures as a way to unwind from the rigors of graduate school."

Bloch says it didn't take long for him to sense that sculptures fell in the realm of the art world, which he saw as riddled with codes, rituals, and jargon. It didn't suit him. "I was not comfortable conversing in 'art-talk,'" he explains. So he switched to making functional objects that, as he says, "retained some organic, sculptural shapes." Working with woodturner Gordon Keeler both inspired and helped Bloch figure out how to get his creations to customers. He found a network of colleagues in the New Hampshire League of Craftsmen, one of the nation's oldest craft organizations. Says Bloch, "New Hampshire's a great place for a craftsperson to get nurtured."

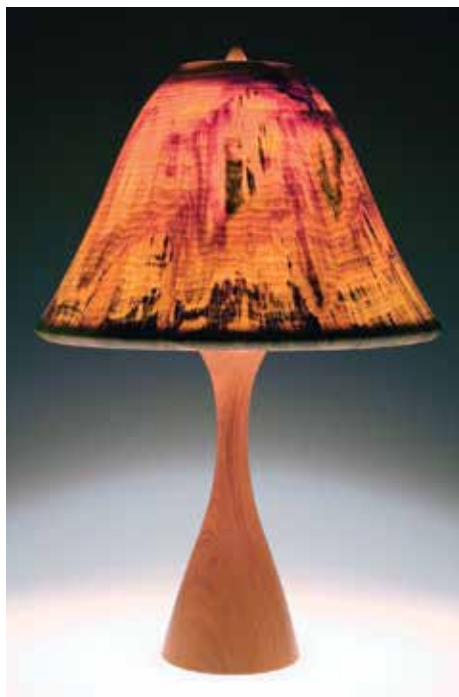
Bloch also found terrific support in the AAW: "I went to the AAW's fifth

national Symposium and was blown away by the creativity of such people as Stoney Lamar and Michael Peterson. I was so motivated, I founded the Granite State Woodturners as a chapter of the AAW, and the triennial New England Woodturning Symposium. Through my involvement with the AAW, I found better equipment and tools and was inspired by turners who weren't satisfied with traditional forms, techniques, tools, and functions of woodturning."

In those early days, Bloch made hand mirrors, jewelry boxes, pencil cups, and clocks, selling his items through the League of New Hampshire Craftsmen shops. He also worked as a carpenter, ran a restaurant, and did other jobs, all while acquiring more equipment and improving his designs.

An ah-ha moment

The moment of discovery came while Bloch was working on a cherry burl vessel that he wanted to turn very thin. With a light bulb touching the outside of the vessel, he could discern



Coolie-hat-shaped shade of aspen on a “pilsner” base of mahogany, 2001, 29" × 16" (74cm × 41cm)



Aspen shade on “Sheaf of Wheat” mahogany base, 1999, 30" × 15" (76cm × 38cm)



Two of nineteen wall sconces Bloch made for the New London Inn (New Hampshire).



A 2012 commission: single-light chandelier over a dining table, 13" × 16" (33cm × 41cm), and kitchen counter pendants, each 10" × 10" (25cm × 25cm)

a barely perceptible glow and began thinking about the translucence of wood. Like other explorers, Bloch was guided by his own inner motivations, unfettered by others' expectations. Being self-taught has advantages. “No one ever said to me, ‘You can’t make lampshades from wood,’” he explains. “I often think that I would not have come up with the idea of the wood lampshade if I’d been formally trained. I wonder if I would’ve been more rule-bound and succumbed to the notion that making a lampshade out of turned wood was a ridiculous idea.”

After some five years of experimenting on the lathe, Bloch created translucent wood lampshades. Vermont woodturner JoHannes Michelsen helped Bloch realize he was onto something unique and saleable. Michelsen knew something about making wood translucent, as he’d been using thin-turning techniques to make functional wood hats. Support from the AAW and inspiration from David Ellsworth were also helpful.

But will it sell?

Of course, turning a craft into a successful business of about seventy percent commission work is more than just making a discovery. Bloch figured out how to make his creations profitable. “Since this particular niche of woodturning is something I came up with, and the objects are not only beautiful and unique but completely functional, I could price my work in a way that has been profitable,” explains Bloch. “Now I’m at a point of longevity and reputation where most of my shades are sold to clients who already own my lamps. That feels like a great testimonial to the aesthetics, durability, and functionality of the work.” Today, most of Bloch’s shades are designed for specific clients and spaces.

Expert crafting alone is not enough to make a living, however. Bloch is business-savvy, too. He handles almost all aspects of his business on his own, except when he’s working collaboratively. Tasks include photography, promotion, book-keeping, packing, shipping, and communication with clients. He feels fortunate

he has been able to do all of this himself and maintain tighter control of profits.

Joining forces

Creatively speaking, it’s a different story—Bloch enjoys sharing control more and more. Despite having avoided collaborating for the first half of his career, he now works with woodworkers, carvers, potters, and basket weavers and finds collaborations a creative exploration. Says Bloch, “Collaborative projects provide a shared experience and creation with another artist. I feel a special connection to the twenty or so people I have collaborated with over the years.” Working with others creates something else as well. He explains, “The collaborations enhance the beauty and level of visual interest. The shades look so great on bases made by other artists,” although Bloch does make most of the bases for his floor and table lamps himself.

Initially, collaborating came about because Bloch needed to find a method of supporting his lampshades. Hanging shades, often found in sets of two or ▶



(Left) *Branches*, a collaborative commission with blacksmith David Little, 2019

(Right) Aspen shade on a "pilsner" floor lamp base of mahogany, 2003, 60" x 19" (152cm x 48cm)

more, led to his work with long-time friend Dave Little. Bloch serves as the primary designer, completing drawings and working with clients, while Little is the engineer. For architectural installations, Bloch makes virtual models in Photoshop, so the client can confirm that the design is absolutely right before they make and install the fixture. "We have worked out a system for getting from A to Z on each project," he says.

Little and Bloch have done more than fifty projects together and their work as a duo now accounts for forty percent of Bloch's workload. Bloch notes, "I love working with David on installation pieces. He's a genius at figuring out how to make my ideas actually work! It's an exciting moment when we are onsite with a new installation and the light switch is flipped. Instantly, all the dreaming, planning, making, combining, and transporting are over. That is the moment of magic."

The wood

Bloch's lampshades are made from aspen, though he initially spent five years experimenting with different kinds of wood. He discovered that

this particular species, considered junk by loggers and foresters, makes a remarkably translucent lampshade, whereas other species don't provide the glowing transparency he is after. He explains, "In an unrelated serendipitous moment, I ended up making a bowl from aspen, and I could tell instantly it was many more times translucent than anything else I tried. From that point on, every shade I made was from aspen."

Aspen is also plentiful locally: "Many assume I get my trees shipped from Colorado," Bloch explains, "but I happen to live in a zone of New England where aspens grow to sizes that are almost unheard of anywhere else. Though the very first shades I made were from trees on my own land, now I get whole logs delivered; it's less physical work. I often get beautiful, healthy logs 25" to 30" (64cm to 76cm) in diameter." Bloch keeps the logs for many months, allowing the spalting process to naturally decorate the wood with beautiful streaks and other character marks. Sometimes he can offer a more personalized product by using wood from trees that grew on a client's own property.

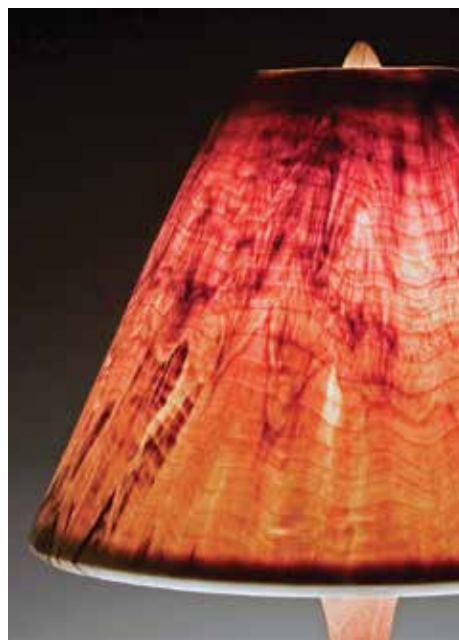
From log to lamp

To begin the transformation process from log to lamp, Bloch cuts the tree into 20"- (51cm-) long sections from 14"- to 24"- (36cm- to 61cm-) diameter logs. Then he uses a chainsaw to cut off the corners to make a rough octagonal cone shape. Since logs are not usually exactly round, Bloch uses circular plywood templates to mark both ends. The wider end of the shade is aligned with the widest diameter of the log, while the narrower end is centered on the log's pith. "By using this method," says Bloch, "the annual rings run more or less horizontally across the shades."

For the largest lampshades, the rough cone weighs as much as 200 pounds and must be lifted onto the lathe with a winch, trolley, and rail system attached to his workshop's ceiling. Bloch explains, "I start the turning process between centers, getting the surfaces down past the rough facets and the two ends perpendicular to the lathe axis. At this point, I attach a heavy-duty faceplate to the small end of the shade using long screws." In addition to the faceplate, Bloch uses tailstock



Table torchiere lamp with aspen shade on mahogany base, 1996, 32" x 16" (81cm x 41cm)



The tree's growth rings run horizontally around this lampshade due to intentional alignment on the lathe in endgrain orientation.

support to reduce vibration during turning.

Bloch's lathe is a special-ordered Oneway with an unusually short bed that allows him to stand in front of the open end of the shade. He notes, "The shape and contour of each shade are improvised as the work progresses." He considers the grain patterns that are revealed during initial shaping.

After he has perfected the outside profile, Bloch works on the inside. He explains, "With so much wood to

remove, this is a slow, arduous process. When the sidewall gets to about ½" (13mm) thick, I direct a bright light on the outer surface, which shows through as a dull red color on the inside. As the piece continues to spin, I carefully carve away more wood, and the color of the transmitted light changes to orange, then dark yellow. When the walls are approaching their final thickness—about ¼" (2.5mm)—the crucial tool I use for hollowing is an armbrace system made by Dennis

Stewart. With this tool, I can get an amazingly precise shear-slicing scrape that shaves off just thousandths of an inch at a time."

Bloch doesn't target an exact thickness for each shade. "They are all," he says "about a tenth of an inch thick, but some are a few hundredths thicker or thinner, resulting in some shades being more reddish and others more yellowish or bright orange." Consistent wall thickness is not necessarily the goal, as different areas of wood grain allow varying amounts of light to pass through. Instead, Bloch's goal is to achieve a consistent level of translucence throughout a lampshade.

Though all the shades are made from aspen, they all turn out a slightly different color due to the age of the logs, fungus, which gives a darker color, and insect activity, which creates pinprick holes. Every log ages differently, and this is one reason making lamps has kept Bloch happy in his workshop for so many years.

Final steps

After the turning is completed, Bloch uses compressed air to blow out some of the remaining moisture in the wood. "I sand the surfaces inside and out to 600-grit abrasive," he says. "Finally, I use a fine-tooth saw to cut through the thin wall at the narrow ►



A freshly cut log with centered pith and concentric growth rings. Spalting and other natural characteristics in the wood result in interesting features in a lampshade.



Log chunks prepared for the lathe. These two blanks will become a matched pair of chandelier shades.



Peter Bloch uses an overhead winch to help position heavy blanks on the lathe.

Lamp Bases

Bloch admits that making lamp bases is not nearly as exciting and rewarding as making shades, but says, "I always see my entire creative endeavor as a single whole." So it's not surprising he approaches making the bases with as much sense of exploration as making the shades, both in design and materials.

"I've learned that the design process is mostly about paring down the visual concept to its essence. I often start with an idea that has more elements, forms, or profiles and start eliminating them so I can get to the 'heart and soul' of the design," says Bloch. He tries to keep the forms simple and elegant with, as he says, "the kind of curves found in nature."

Bloch has used many different kinds of wood for his lamp bases. After using mahogany almost exclusively for many years, he now employs a wide variety of domestic and exotic species including birdseye and spalted maple, camphorwood burl, banksia seedpods, wenge, and claro walnut, as well as local aspen. With wood choice, he says, "I am looking for one or both of two things.



A collaboration floor lamp with aspen shade and mahogany base carved by furniture maker Ted Blachly, 2012, 64" x 21" (163cm x 53cm)



Aspen shade with a base of yellow birch crotch flame, 2013, 34" x 17" (86cm x 43cm)



Heavily spalted aspen shade on a base of banksia seedpod, 2006, 25" x 14" (64cm x 36cm)

Sometimes I want the base to be a color and grain pattern that is only supportive of the look of the shade. Mahogany is a great example of that, with its warm burnt-orange color and lack of pronounced grain pattern. Other times, I want the base to be a more dramatic

point of interest, so then the trick is finding a wood and shape that is complementary to the shade."

To make the longer floor lamp bases, Bloch employs an extension bed on his lathe that allows him to turn columns over six feet long.



Roughing the outside shape of a lampshade using a large bowl gouge. The turning begins with the piece mounted between centers and is later attached to a large faceplate for hollowing.



Bloch approaches final wall thickness of about 1/16" by shear-scraping with a Stewart armbrace tool outfitted with a teardrop cutter.

end [to part the shade off] and set the shade aside to dry completely, which takes only a day or two." He then sands the shade again and prepares it for mounting on a base.

Bloch applies three coats of a polymerizing rubbed-oil finish, which he explains is like "a synthetic version of tung oil. It works and looks like a beautiful natural oil finish, but because it is made from synthetic components, it polymerizes 100 percent, meaning it won't degrade over time like all of the natural oils do."

Finally, Bloch tests his shades under extreme conditions, using a bulb of triple the maximum wattage he recommends for a shade. "In fact," he explains, "these shades are not subject to significant distortion from the bulb's heat, since the entire form is concentric to the annual rings. Paradoxically, the thinness increases the durability since the shades can

flex to accommodate shrinkage and expansion."

Clearly, this process is a highly engaging and rewarding exploration for Bloch. He admits there are some steps in the process that are less fun than others, but he says, "I feel very fortunate. I have been able to make my life's work and meaning from this one little niche of woodturning. I love the exploration of all the branches of this stream I am paddling in."

Visits to Peter Bloch's studio can be made by appointment. For more, visit woodshades.com. To see a video showing Peter's process from start to finish, visit vimeo.com/45938941. ■

Peg Lopata is a freelance writer in Cambridge, Massachusetts.

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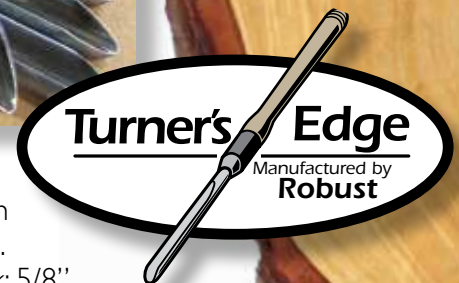


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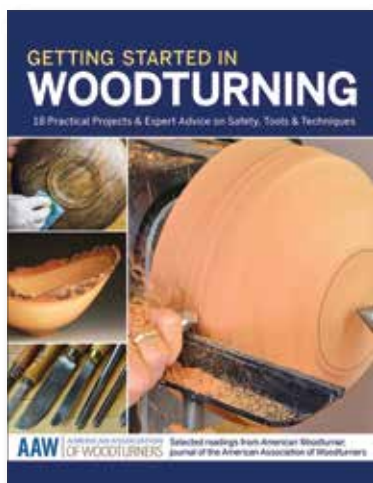


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JAKOB WEISSFLOG GERMANY

I started turning in my father's (Hans Weissflog's) workshop when I was eleven years old. I became an apprentice woodturner. Throughout my apprenticeship, I learned about all different kinds of woods and other natural materials. Today, I work as a full-time woodturner in the field of arts and crafts. My aim is to showcase the beauty of wood through contemporary designs. Endless combinations of materials and wood offer the possibility to play with different colors and shapes. Good design and good craftsmanship are important factors I always strive for in my work.



3 Long Points, 2018, African Blackwood, amarello,
6" x 2¾" x 2¼" (15cm x 7cm x 6cm)

