TURN A BIRD FEEDER • PLATTERS • DONUTS AND COFFEE

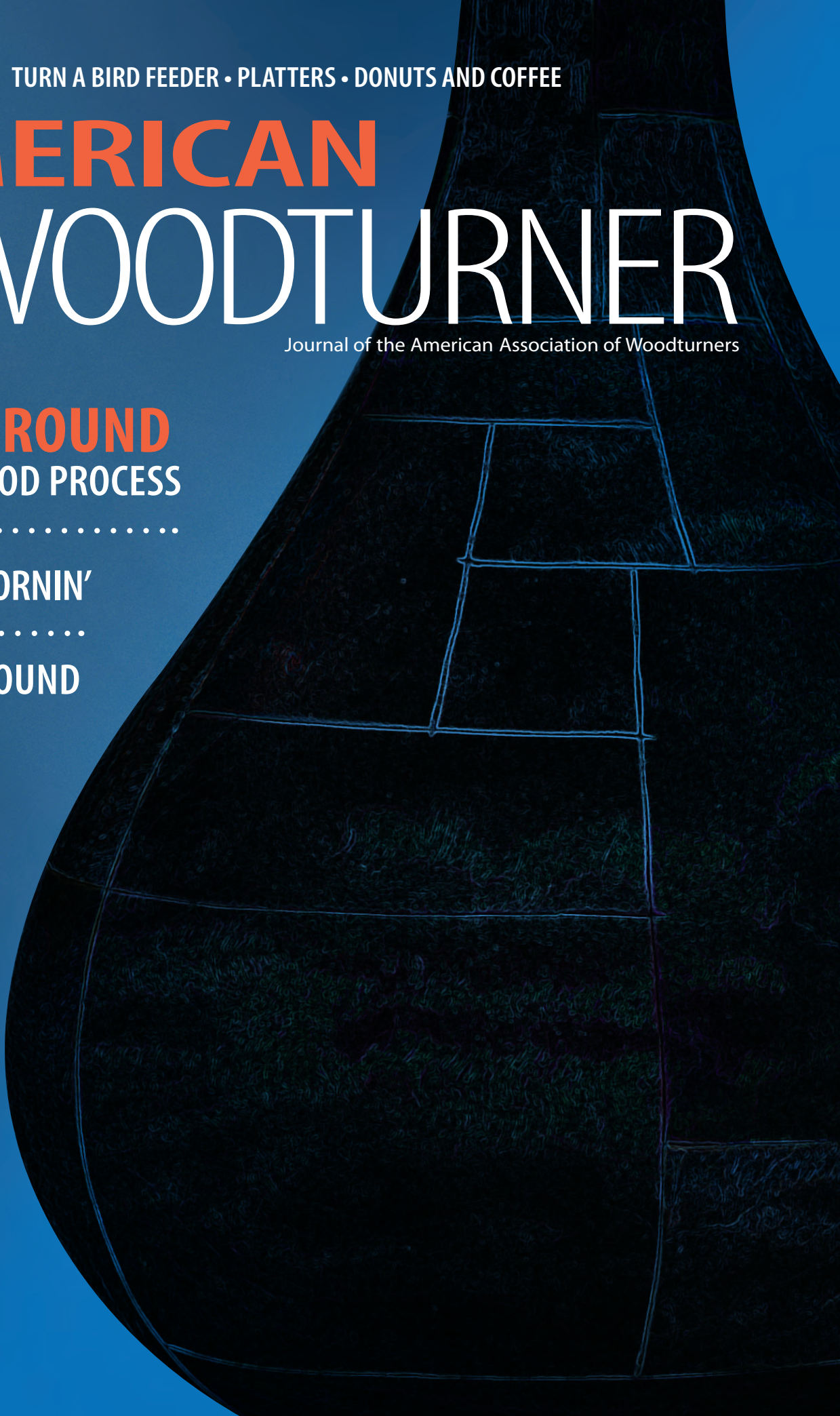
AMERICAN WOODTURNER

Journal of the American Association of Woodturners

BEYOND ROUND
THE LOST WOOD PROCESS

TOP O' THE MORNIN'

TURNING AROUND AMERICA



August 2012 vol 27, no 4
woodturner.org

John Mascoll

In May, John Mascoll won the $5,000 Best of Show award for his woodturnings at the MidFlorida Mayfaire by-the-Lake Art Show on Lake Morton in Lakeland, Florida.

Photos by Rudolph Lopez

Indian rosewood, Macassar ebony finial, 18" × 10" (46 cm × 25 cm)

Queen palm, Caribbean sea whip coral finial, 30" × 8" (76 cm × 20 cm)

Verawood, citrus finial and accents, 15" × 11" (38 cm × 28 cm)

Masur birch, Pacific sea fan coral finial, 22" × 10" (56 cm × 25 cm)

Spalted Cuban mahogany, bubinga finial, 12" × 14" (30 cm × 36 cm)

Spalted Cuban mahogany, sea fan coral finial, 24" × 8" (61 cm × 20 cm)

Australian grass tree, bocote base and finial, 22" × 8" (56 cm × 20 cm)

Spalted hackberry, ebony base and finial, 17" × 7" (43 cm × 18 cm)

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

American Woodturner (ISSN 0895-9005) is published bimonthly by:
American Association of Woodturners
222 Landmark Center
75 5th St W
St. Paul, MN 55102-7704
office: 651-484-9094
toll free: 877-595-9094
fax: 651-484-1724

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

Executive Director Phil McDonald
Program Director Linda Ferber
Curator Tib Shaw

Yearly membership in the American Association of Woodturners is $53 USA, $58 Canada, and $68 overseas and includes a subscription to *American Woodturner*. Electronic-journal AAW membership, $43

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

Or join online at woodturner.org

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

POSTMASTER: Send address changes to AAW, address listed *above*.

Publications Mail Agreement No. 40064408
Return undeliverable Canadian addresses to:
Express Messenger International
P.O. Box 25058, London BRC
Ontario, Canada N6C 6A8

Printed in the USA by Quad/Graphics, Saint Cloud, MN

MIX
Paper from responsible sources
FSC® C084269

Inside This Issue

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FEATURES

AMERICAN WOODTURNER

Journal of the American Association of Woodturners

ASSOCIATION NEWS

WOODTURNERS CHATTER

GALLERY

COVER

Cover – Art Liestman, *Alpha*, 2007, Bigleaf maple burl, acrylics, 4¾" × 3⅝" × 2¾" (12 cm × 10 cm × 7 cm)

Back Cover – Jim Duxbury, *Flowing Images*, 2012, Cherry, maple trim, 47" (120 cm) tall

woodturner.org

EDITORIAL

Editor Betty Scarpino
317-254-1374
editorscarpino@gmail.com

Editorial Advisors Kip Christensen
Denise DeRose
John Giem
Malcolm Zander

Journal Production **Albarella Design**
Linnea Stenberg
Art Director

Jaime Thompson
Production Management

EDITORIAL SUBMISSIONS

Send article ideas to:
editorscarpino@gmail.com

For tips on article submission and photography requirements, visit woodturner.org/products/aw.

MEMBER SERVICES

For address changes or journals damaged or lost in the mail:
Contact the AAW office at inquiries@woodturner.org or call 651-484-9094 or 877-595-9094 (toll free).

Index to previous articles:
Download a free complete *American Woodturner* index (PDF format) at woodturner.org/products/aw.

To order back issues:
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ADVERTISERS

For rates and specifications, contact:
Pierre Productions & Promotions, Inc.
Erica Nelson
763-497-1778
erica@pierreproductions.com

Betsy Pierre
763-295-5420
betsy@pierreproductions.com

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

A NOTE ABOUT SAFETY

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

Take appropriate precautions when you turn. Safety guidelines are published online at woodturner.org/resources/safety.htm. Following them will help you continue to enjoy woodturning.

From the Editor

At the San José symposium, I had the pleasure of introducing Frank Cummings to the work of Derek Weidman and Jerry Bennett. Frank—who would be critiquing the Instant Gallery—had not been to an AAW symposium in many years. I wanted to see his response to Derek's and Jerry's work because to an *untrained* eye, the pieces look as if they were created without a lathe.

Just as I suspected, Frank had overlooked Derek's and Jerry's pieces, wondering what they had to do with turning. As Derek and Jerry explained their techniques at that chance meeting, Frank expressed his delight and appreciation!

Recently, an AAW member questioned Mark Gardner's piece shown in the June journal. "This is not turning. Why is it on the back cover?" I attended a demonstration by Mark in March and saw him turn something similar. The piece on June's back cover *is* turned. Embellishment sometimes conceals turning techniques, but to an observant eye, the use of the lathe is evident.

What will we create with lathes to express ourselves and what will the turning field look like in another twenty years? Bowls, vessels, and pens will provide the foundation, of course, while innovative new work will ensure that woodturning continues its expressive and forward-looking evolution.
—Betty Scarpino

Jerry Bennett, *Wildwood Flower*

Derek Weidman, *Round Horn*

Mark Gardner, *Make a Nest for Me*

President's Letter

Were you in San José? An amazing 1,365 members spent three days watching 170-plus demonstrations and panel presentations at our 26th international symposium. Attendees brought more than one thousand pieces for display in the Instant Gallery. John Jordan and Richard Raffan, two woodturning icons, received well-deserved tributes. Three exhibitions, "A Walk in the Woods," "Beyond Containment," and the "Raffan Retrospective" were well attended.

The enhanced viewing our new video equipment provided was a big hit. Turning tools, gadgets, and wood from the tradeshow went home with excited owners; many turners purchased new lathes. The Educational Opportunity Grant auction grossed $52,910. This money will be awarded to AAW members, chapters, and schools next year. The Return to Community fundraiser, Empty Bowls, raised $4,175 for Second Harvest, a supplier of local food banks. And, as with every year at the symposium, we had a happy bunch of new turners in the Youth Room.

I want to express my deep thank-you to Dean Adkins and all the local volunteers who seamlessly ran the event. Many thanks to the Bay Area Woodturners Association, Nor-Cal Woodturners, Silicon Valley Woodturners, West Bay Woodturners, and Wine Country Woodturners for their help over the past year with the symposium. When this event comes to your area, please jump in and help. We are an association of volunteers, and it only works when everyone lends a hand.

In San José, the AAW Board held its most important meeting of the year. We always have a call for more programs than we can fund, so to increase revenue we will be rolling out a membership drive. We are happy to report that membership is growing at 4.5 percent yearly, and we intend to increase that rate. The AAW grows one member at a time, and you can help by sharing the names of your woodturning friends who are not yet members. We will send them an invitation to join.

The Board is pleased to announce that Phil McDonald, currently Operations Director, has accepted our offer to become AAW's new Executive Director. We look forward to working with Phil on two major initiatives:

- *A description of the technical needs and the development of our new website.* The Communications Committee has been collecting ideas from AAW members. Please continue sending suggestions to Phil (phil@woodturner.org).
- *Increasing grants and donations.* The AAW is a 501(c)(3) nonprofit, which means gifts to the AAW are tax deductible. Has the AAW helped you become a better turner and enriched your life with new friends? We ask for your support by sending a donation.

My best wishes for a happy, safe, and productive summer of woodturning.

Dale Larson

Remember to Vote!
AAW Board Election

Photos and statements of the six nominees running for election to the AAW Board of Directors appear on pages 5—6. Please read the statements and then vote for up to three candidates.

There are two options for voting: (1) by electronic ballot, available on the AAW website at woodturner.org/BoardVote or (2) by paper ballot, included in the plastic bag with this journal. The ballot contains your name and membership number. Tear off the ballot where instructed, put it in the enclosed envelope, affix a stamp, and mail the ballot. ***Ballots must be cast electronically or received in Saint Paul no later than midnight Central Standard Time on October 19, 2012.***

We encourage you to participate in the voting process and hope that you take the time to help make this election turnout significant.

2013 Board Candidates

The Nominating Committee is pleased to present the following six candidates to the AAW membership for their consideration. There are two ways to vote: (1) by electronic ballot, available on the AAW website at woodturner.org/boardvote or (2) by paper ballot, included with this issue of the journal, along with a self-addressed envelope.

We encourage you to participate in the voting process and hope that you take the time to help make this election turnout significant.

Your vote must be cast electronically or received in Saint Paul no later than midnight, Central Standard Time on October 19, 2012.

—Cassandra Speier, Chair, Nominating Committee

Ron Brown, Georgia

My desire to serve is driven by a wish to serve at a higher level and to share my passion for woodturning.

In my role as a demonstrator on The Woodworking Show circuit for Woodline USA, I have served as woodturning ambassador to more than 100,000 people each year for the past six years, presenting educational seminars and offering woodturning tools, jigs, and how-to videos to woodworkers everywhere. I derive great personal satisfaction from sharing skills and fostering the love of turning with artisans of all skill levels.

I view the turning world as a pyramid with the very talented and accomplished at the top, a middle level of the local chapter leaders with several accomplished artisans, and a vast foundation populated by large numbers of novice and struggling turners. Many of these enthusiasts are either new to turning or need help with specific skills and techniques.

My organizational credentials are numerous, but may best be demonstrated through the Gwinnett Woodworkers Association, AAW chapter #192, which I founded in 1998 in Lawrenceville, GA. Today, this thriving organization boasts 170-plus members, has a scroll saw special-interest group (SIG), a woodturning SIG, and a computer-users group.

I am already called to serve the woodturning community through my profession. I wish to further serve the woodturning community as a board member in the AAW.

Philip Hauser, New Jersey

I started to turn wood in 1987. In 2002 I took early retirement from my career in an international corporation to pursue woodturning and related activities on a more full-time basis. I have been a member of the AAW for most of my twenty-five years as a woodturner, and would very much like to offer my knowledge and experience to further its growth and quality.

For the past eight years, I have headed the DelVal turners in South Jersey. The club membership has grown more than threefold in these years through a quality schedule and an emphasis on social interaction. I offer an open shop once a month to the club members. The goal is to bring work in process and problems to discuss and find ways to solve issues.

Shortly after my retirement, I became a volunteer at the Wood Turning Center in Philadelphia. I was the treasurer of the Center and a board member for five years. The Center's activities have given me a much broader perspective of the woodturning field, its history, and its evolution. The Center is a nonprofit organization and I gained firsthand knowledge of the differences compared to the business world.

Prior to my retirement, I was the chief financial officer for the U.S. subsidiary of a Swiss-based corporation. During my thirty years with the subsidiary in New York City, we acquired numerous companies, growing from a couple of hundred people to an organization of many entities employing thousands. I was strongly engaged in the acquisition process, the negotiation of contracts, and the financial analysis of strategic and business plans. I believe that this experience, combined with my love for woodturning, would be an asset in dealing with current and future challenges of the AAW.

Kurt Hertzog, New York

The past three years have gone by ever so quickly. My service as a member of the Board of Directors has covered many bases during that time. As a member of the EOG committee and then as chair for the past two years, we've granted nearly a quarter million dollars to chapters, members, and organizations. I've served as chair of the Chapters and Membership committee for three years, striving to enhance individual member value. During this time, we increased the journal to six issues per year, created and expanded a monthly prize drawing program, created Woodturning FUNdamentals, arranged for members and chapters to take advantage of the AAW's credit card program, added many new chapters, and more. I've served on several other committees, a short stint as VP, and most recently as chair of the Symposium Planning Committee. My goal in each of these positions has been to help modernize the organization in function and method, always with the goal of expanding the member value.

Even with the many accomplishments of the staff, Board, volunteers, members, and chapters during these past three years, there is much more we can accomplish. We are planning the future symposia both in site and operations to take advantage of the technologies to capture and share the event worldwide. The planning to allow the largest numbers of our membership to attend the annual symposium is continuing. Partnering with our many chapters' regional symposia to make attendance at a woodturning symposium possible for the largest number of our members is a personal goal. The focus of my service has always been making membership in the American Association of Woodturners more desirable, beneficial, educational, and a greater value. I ask for your vote in my bid for re-election to the Board of Directors.

More candidates on next page

Larry K. Miller, Washington

I retired after a forty-year career working at all levels of the information technology field in college education, oil, and aerospace industries. I worked my way through college achieving three degrees, the highest being an MBA.

I have participated on several boards, including one national board, and becoming president of four. I've founded two organizations, one for information technology professionals, and the other the Woodturners of Olympia, a chapter of the AAW. I started woodturning in high school, but had a thirty-five year layoff while supporting my family. As founder and president of the Woodturners of Olympia, I, along with the board of directors, have been successful in building a financially secure organization that averages about ninety members. I have been involved in the AAW youth program for six years, initially as an instructor and then as the registration coordinator since 2009.

Rob Wallace, Iowa

If elected to the AAW Board, I would bring a diverse array of experiences with me, which I believe would expand and complement existing strengths of the Board. I have served in leadership capacities for several national and international botanical organizations, and have extensive experience running large meetings similar in size to AAW symposiums.

For the past two years, I have served on the Board of Trustees of our local arts organization, including the past year as its president. I am a woodturning artist, and have been selling consignment artwork at galleries in Iowa for several years.

I am an active member of the recently formed Woodturning FUNdamentals Committee and serve on the Symposium Planning Committee. I also served on the AAW's Bylaws Re-Write Committee. If you've attended any of the past seven AAW symposia, you may have seen me volunteering as a demonstrator assistant, videographer, or as part of the EOG auction crew. I enjoy the opportunity to participate in the betterment and development of our organization. In addition to presenting woodturning demonstrations to various turners' groups, my experience also includes writing bylaws for and starting a local AAW chapter, for which I currently serve as president. With these diverse experiences, I am sensitive to the needs and concerns of the full range of AAW members, and will represent you well.

The skills I would bring to the Board include goal-oriented leadership and communications, promotion of educational goals and programs, accomplishing long-term projects, and project management. My vision for the AAW is to continue its growth and influence in improving the art and science of woodturning through promotion of national and regional woodturning activities, enhancing and improving communications within the organization and between the AAW and other organizations, development and expansion of educational programs, and coordination of local chapters.

Lou Williams, Wisconsin

I have long been a member and admirer of the AAW, and would be delighted to have the opportunity to work on behalf of the Association as a member of the Board.

As someone who has been involved in the association business on both the volunteer and staff side for more than forty-five years, I have a deep awareness of the hard work it takes to create and maintain a successful member organization.

First and foremost, I am a full-time, dedicated woodturner and have been turning for about ten years. I participate in about twenty art shows a year and have won several best of show awards. I teach woodturning at Northeast Wisconsin Technical College.

The largest commitment I have made as a volunteer is my work with the International Association of Business Communicators, one of the two largest associations in the world serving the public relations/communication professional community (16,000 members). I served as chair of that association, and as the chief of the thirty-five–member staff. I am one of only forty members named a Fellow, an honor I received in 1985. In April 2012, I was inducted into the Public Relations Measurement Hall of Fame. That honor was for the instrumental role I played in the creation of the largest research project ever undertaken to understand the role of public relations/communication in organizations.

I have counseled major associations such as the American Society of Association Executives, American Society of Interior Designers, American Academy of Pediatricians, Lions Clubs International, and the National Parent Teachers Association.

I would love to bring my association and public relations experience to bear on AAW. I take these commitments very seriously, and would do my absolute best to help ensure that the AAW continues its history of superb service to members.

Change to AAW Bylaws

At its June meeting, the Board made one change in the association's bylaws:

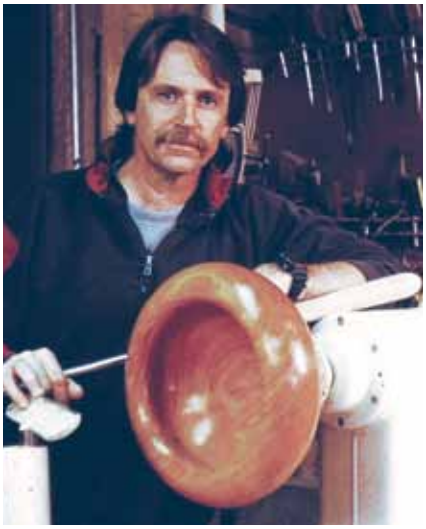
Old wording: Section 5.13 Committees (a) The Board, by majority vote, may designate such committees it may deem necessary and appropriate. Each committee shall serve at the pleasure of the Board. A committee will contain at least three (3) persons. ***All committees shall have at least one Director as a liaison to the Board and the following Committees shall have a Director as chair: Bylaws, Chapters and Membership, Conference, Educational Opportunity Grants, Finance, Nominating, and Publications.***

New wording: ***All committees shall include at least one Director as an active full member who will also serve as a liaison to the Board. Finance and Nominating Committees must be chaired by a Director.***

The change was made to ensure that the best-qualified AAW member could chair any committee other than Finance and Nominating. The roles of Nominating and Finance chairs are described elsewhere in the Bylaws.

—Dale Larson, AAW Board President

Phil Brennion
Former AAW Board President Passes



Phil Brennion passed away May 15 at the age of 58. He was a professional woodworker since 1976, and joined the AAW in 1987. He was active, involved, and highly respected within the woodturning world. He served on the AAW Board of Directors 2002–2005, as president his last two years on the Board. He was an effective leader, skillful organizer, excellent communicator, and a visionary. In the most positive way he motivated people with whom he worked. He was always open to new ideas, and was instrumental in starting the AAW Youth Program and the Professional Outreach Program. He also initiated and promoted the AAW's permanent collection.

Many knew Phil from his leadership positions in the AAW. The list of his other accomplishments includes: talented woodturner; teacher in Chino Valley, Arizona, where he was instrumental in creating an unprecedented woodturning program at Yavapai College; co-owner of Van Gogh's Ear, a successful crafts gallery in Prescott; and author of articles in *American Woodturner* and *WOOD* magazine.

Phil made the most of each day. I was inspired by his determination, knowledge, positive attitude, and friendliness.

Those of us who knew him were deeply saddened by the debilitating circumstances he encountered over the years and now mourn his recent passing. At the same time, our memories of the man, the turner, the teacher, the leader, and his spirit, will forever be cherished. ■

—Bill Haskell, Former AAW Board President

Winners of the 2012 Best Chapter Newsletter/Best Chapter Website Contests

Congratulations to the following AAW local chapters for winning the newsletter contest.

- **First Place:** Finger Lakes Woodturners, fingerlakeswoodturners.com, Ralph Mosher, editor
- **Second Place:** San Diego Woodturners, sdwt.org, Phil Stivers, editor
- **Third Place:** Woodturners Guild of Ontario, wgo.ca, Pete Kaiser, editor

Congratulations to the following AAW local chapters for winning the website contest.

- **First Place:** South Puget Sound Woodturners, spswoodturners.org, Tim Spaulding, webmaster
- **Second Place:** Great Plains Woodturners, greatplainswoodturners.com, Cindy Boehrns, webmaster
- **Third Place:** Fraser Valley Woodturners Guild, fvwg.ca, Derek Bird, webmaster

More information about these contests can be found on AAW's website at woodturner.org/community/chapters/chapter_contests_2012.html. ■

Call for Demonstrators
AAW Symposium 2013
Deadline: October 15, 2012

The AAW's 27th annual international symposium will be held in Tampa, Florida, June 28-30. Visit the AAW website at woodturner.org/sym/sym2013/ for instructions on how to submit your application. For more information or assistance, contact the AAW office at inquiries@woodturner.org or call 651-484-9094.

Chapter Collaborative Challenge 2013

For the 2013 AAW's 27th annual international symposium in Tampa, Florida, the chapters and membership committee will again sponsor a Chapter Collaborative Challenge (C3).

Each AAW chapter is invited to submit one collaborative work created by as many chapter members as possible, with a minimum of six participants.

Rules

- The work can be any turned object, functional or not.
- The size and weight limits of the collaborative pieces, including the packing container and all packing materials, will be those set by UPS for a single standard box *(see sidebar below)*. Assembled pieces may be larger but must fit in the single standard-size box. Size restrictions apply regardless of commercial or chapter delivery.
- The names of all participants must be on the work or on an accompanying nameplate.
- At least one chapter representative must be in attendance at the symposium to be responsible for displaying and return shipping of the entry.
- Any electrical/electronic devices in the piece must have an obvious power switch for safety and noise reduction. However, the AAW cannot guarantee that electricity will be available where the collaborative challenge is set up.

Each chapter must specify in which category they would like their piece to be judged:

- Artistic
- Mechanical/ Technical
- Fantasy

Four prizes will be awarded:

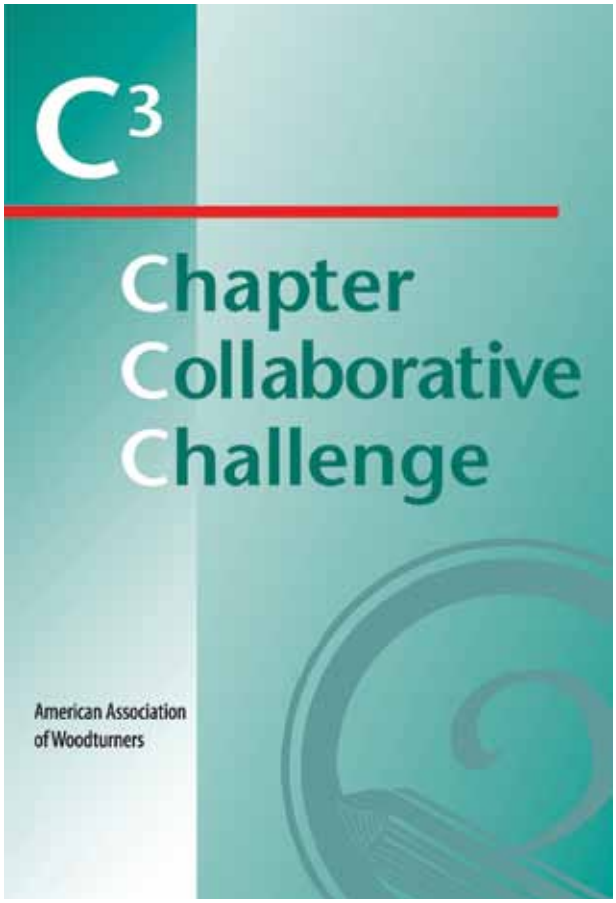
- Best in Show plaque
- First Place plaque for each of the three categories

In addition, for each of the four winning categories, the AAW will provide one free symposium registration.

The pieces will be prominently displayed during the symposium in an area near the Instant Gallery. During the symposium, attendees will be invited to select, by ballot, their choice for Best of Show and their favorite piece in each of the three categories. Votes will be tallied prior to the banquet, during which the winners will be recognized.

In addition, the chapter's name will be engraved on the Collaborative Challenge perpetual plaque, which lists the winners since the 1998 symposium. The plaque resides in the AAW office in Saint Paul. All entries will receive a certificate of participation.

Collaborative Challenge pieces may be offered for sale. Shipping the work to the buyer is the joint responsibility of the chapter and the buyer.



- Standard packages can be up to 108" (270 cm) in length or up to 165" (420 cm) in length and girth combined.
- The packages can be up to 150 pounds (70 kg).

UPS package size is determined by adding the length (the longest side of the box) and the girth (2× width + 2× height). Details of this measurement can be found at ups.com/content/us/en/resources/ship/packaging/.

Remember to Vote! AAW Board Election

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Calendar of Events

October issue deadline: August 15

Send information to editorscarpino@gmail.com

England
October 17–20, "Wizardry in Wood," presented by the Worshipful Company of Turners, Carpenters' Hall, London. For more information and to view the exhibit, visit wizardryinwood.com.

New Zealand
October 4–7, New Zealand International Woodturning Symposium, Wesley College, Auckland. Featured demonstrators include Alan Carter, Mike Davies, Kelly Dunn, Douglas Fisher, Alby Hall, Glenn Lucas, Guilio Marcolongo, Niki Marshall, Jasper Murphy, Gordon Pembridge, Liz and Neil Scobie, Molly Winton, and Malcolm Zander. For more information, visit sawg.org.nz or contact Dick Veitch at dveitch@kiwilink.co.nz.

Arizona
February 22–24, 2013, Desert Woodturning Roundup, Mesa Convention Center. This 5th biennial symposium, hosted by the Arizona Woodturners Association features Richard Raffan, Malcolm Tibbetts, Michael Hosaluk, Molly Winton, David Marks, John Lucas, J. Paul Fennell, Matt Monaco, and Rex Burningham. The event includes pen-turner gathering, live and silent auctions, vendor area, instant gallery, and door prizes. Following the symposium, Richard Raffan will teach a hands-on workshop. Further information is available at desertwoodturningroundup.com or call 480-650-5185.

Florida
June 28–30, 2013, AAW's 27th international symposium in Tampa. Mark your calendars now!

Minnesota
September 2–December 28, "A Walk in the Woods," Gallery of Wood Art, Landmark Center, Saint Paul. Ongoing exhibit is "Touch This!" featuring fascinating facts about wood and woodturning, as well as pieces that you can touch. For more information, visit galleryofwoodart.org.

Montana
October 6–7, Yellowstone Woodturners Symposium, Career Center, Billings. Malcolm Tibbetts will demonstrate segmented woodturning. For more information visit yellowstoneturners.org.

Nevada
October 18–21, 3rd Segmenting Symposium, Horizon Resort and Casino, Stateline (Lake Tahoe). Demonstrators are John Beaver, Andy Chen, Dennis Daudelin, Ray Feltz, Lloyd Johnson, Bill Kandler, Dennis Keeling, Craig Kirks, Phil Miller, Michael Mode, Dave Peck, Jim Rodgers, Mike Shuler, and Malcolm Tibbetts. Special guest Bud Latven will give a PowerPoint presentation of his work. For registration and more information, visit segmentedwoodturners.org.

Pennsylvania
October 13, Cumberland Valley Woodturners host Mark Sfirri demonstration, Kauffman Community Center, Greencastle. For more information contact Bob Robinson at popswoodshop@comcast.net.

Tennessee
January 25–26, 2013, Tennessee Association of Woodturners' 25th anniversary woodturning symposium, Marriott Hotel at Cool Springs, Franklin, just south of Nashville. Featured demonstrators include Dixie Biggs, Jimmy Clewes, John Jordan, John Lucas, and Mike Mahoney. Upcoming details on tnwoodturners.org or email tawsymposium@aol.com or call 615-973-3336.

Images are from AAW's "A Walk in the Woods," on display through December 28, Gallery of Wood Art, Landmark Center, Saint Paul, MN. To view more photos, visit galleryofwoodart.org. A catalog is available at woodturner.org/shop/ProductShopItem.asp?PID=187.

Photos by Tib Shaw.

Pat Matranga, *Appalachian Saturday Night,* 2012, Compressed maple and cherry, mahogany, cork, brass, 8" × 3" × 9" (20 cm × 8 cm × 23 cm)

Bob Holcombe, *Praising Acorns: California Black Oak,* 2012, 7½" × 9" × 7" (19 cm × 23 cm × 18 cm)

Ric Romano, *Relic Olla,* 2012, Elm, bent wood handle/collar, 8" × 7½" (20 cm × 19 cm)

The Heart of a Community: The Story of Adam Hood

We must be willing to let go of the life we planned so as to have the life that is waiting for us. – Joseph Campbell

Adam Hood is 29 years old, in a wheelchair, and grateful to be alive. When he was 24, an age when young men feel immortal, he took risks. Then, on April 2, 2007, while riding home from work on his motorcycle, he took one risk too many. He lost control, wrecking his cycle and his body. The accident damaged his spinal cord; he now uses a wheelchair.

But Adam feels lucky to be alive and have full use of his upper body. This is his story. It is about an individual's recovery and is also about community—our community of woodturners.

Growing up, Adam gravitated to extreme sports—he was a competitive wake boarder and stunt motorcycle rider. He was also on the wrong path. "I was someone who hung with the wrong people, did the wrong things, and acted the wrong way," he recalls.

At work, he was a welder, making things that people used. Steve Hood, Adam's father, is a cabinetmaker. Like his father, Adam chose a life in the trades over one in the office. He loved working with his hands.

The change to Adam's body happened in a frightful instant. The change to his emotions did not. "Lying in my hospital bed feeling depressed, I came to realize this is not helping. I needed to move on," he said. What happened was a tragedy, but if he had not embraced his loss, it would have been a much greater one. He was alive and had the love of his family.

"I do not know why Adam accepted his injury so quickly, but he did. He asked for a wheelchair to get on with his life," said his father. A new life began. Adam's email tag, *wheelin24-7,* tells it all.

Adam taking the Independence for a spin.

Missy, Adam, and Steve at the new lathe.

First lathes

Two years after the accident, Adam's father came home from an auction, the proud owner of an old Rockwell lathe. He thought he bought it for himself, but right away Adam said, "Pops, I want to learn how to use that." The lathe has a fixed height, so Adam used his power chair to lift himself high enough. It was awkward, but he could use the lathe.

Adam then bought a used Craftsman tabletop lathe for forty dollars, thinking that would be easier to use than the Rockwell. Steve built a stand allowing Adam to turn from his wheelchair. It required body positions and a range of moves that most turners would find exhausting. However, it worked, and Adam became enthralled with woodturning.

Adam and his wife, Amanda, decided to use their limited resources to buy a new JET mini lathe. Then Steve talked the family into chipping in for Adam's Christmas present—a chuck and a few tools to go with it. Steve built Adam another table, an improved version. Adam learned how to turn by sitting perpendicular to the bed and leaning over the ways to get access to the inside of objects. He began turning goblets and small bowls and other small items—bottle stoppers, pens, toothpick holders.

Steve continued solving logistical problems for Adam. He built a workbench and mounted a small bandsaw for him. The old gouges worked, but Adam was having other challenges—unsuitable ergonomics, limited tools, and the frustration of learning on his own. Nevertheless, he was hooked!

Chapter connection

Adam and Steve began attending meetings of the Woodturners of Polk County. Like many chapters, the meetings begin with show and tell. Adam brought a few goblets and small bowls. When he showed his work, everyone could see it meant something to him. He described the problems he was having using his lathe and the difficulty in getting the correct angles with a bowl gouge.

Ed Brannon happened to be sitting next to Adam at that first meeting. He turned to him and noted, "You know Adam, they make lathes for seated

turners." But a new lathe was beyond his wildest dreams. Adam and Amanda were then living with his parents. Like any young couple, they dreamed of having a home of their own; spending $6,000 for woodturning equipment seemed like a farfetched fantasy.

Seeing that Adam had a passion for woodturning and wanting to help, Ed called David Ellsworth for advice. "Let's start by getting Adam a membership to AAW," David replied. Ed next approached a foundation in his hometown of Milford, PA. Although the foundation did not usually provide grants to anyone outside of the local community, a week later, Adam Hood received a check for $1,000. The story had traction. Adam was elated. Out came the catalogs.

A sit-down lathe

Adam and Steve began to dream. They dared to look at lathes designed for people who turn while seated. Steve also had the idea to place wood wedges to tilt Adam's JET lathe 30 degrees to be more ergonomic. Adam bought a grinder and some gouges (learning in the process how fast $1,000 can be spent). Ellsworth donated one of his sharpening jigs. Don Geiger, Florida guru of sharpening, gave Adam a few of his specialty tools and taught him how to properly sharpen them. Al Hockenbery donated a few used but serviceable gouges and much-needed instruction. Local chapter members Bob Varner, David Scully, and Ted Smith began mentoring Adam. Scully admits being "hard on him." But it paid off. Adam was now wheelin' full speed ahead.

Ellsworth stayed involved. He hoped to interest Brent English of Robust Tools, LLC, in modifying a Robust lathe to suit Adam and others who wanted to sit and turn. After six months of study and design, the prototype plans were ready. Discussion intensified between Adam, Brent, and David, with advice from Jim Proffitt, Tony George, Jim Howe, and Bob Brzycki. Step by step, the prototype was tweaked, redesigned, and modified so that the lathe could be approached from the side for spindles and from the end for bowls and hollow forms.

Of primary importance, the design needed to be ergonomically functional for a seated turner. Safety and ergonomics are important for all woodturners and are especially critical for anyone with a disability. People in wheelchairs can develop significant shoulder and elbow problems later in life. At 29, Adam can get away with leaning and reaching and elbows flying. But it takes a toll.

With the design set, production of the first Robust Independence model was under way. It promised to be a full-size, 16" capacity powerful lathe that could be used seated or standing and have options for turning both spindles and bowls. It would be a leap forward in lathe design and serve a new constituency of woodturners, not just people who needed to sit but also those who might want to sit or stand, as well as turn off the end of the lathe, without sacrificing versatility and capacity.

The Independence lathe arrived in March 2012, just less than two years from the day Adam first tried out that Rockwell. Adam felt like a kid on Christmas morning—a dream had come true. Since its arrival, his family has had to pry him off of it each night to come to dinner. Every day is a learning experience. Each piece is an improvement over the last. This was the life waiting for Adam.

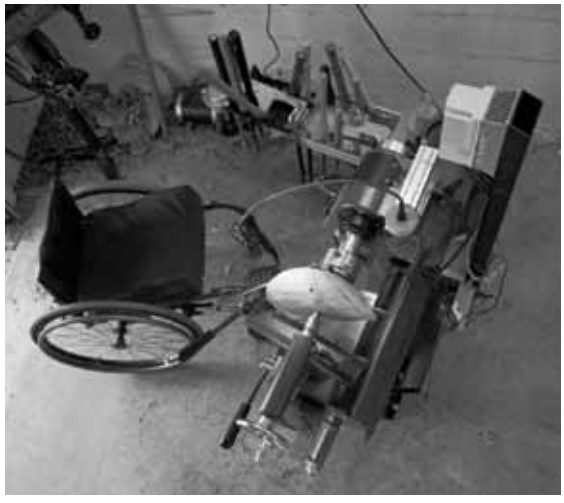
Community involvement

Adam has become a leader within his local community of people with disabilities. He initiated a social group that regularly meets for dinner; he calls it the "gimps' night out." They are becoming a force to reckon with: "When you make a reservation at a restaurant and 15 people roll in with their wheelchairs and significant others, people take notice," Adam exclaimed. My guess is this is only the beginning.

Other community initiatives have been planted as well. Woodturners of Polk County established a project to assist Adam and others with disabilities. Adam is reaching out to the Veterans Administration and volunteers at the local VA hospital. Other members started the Freedom Pen Project to make pens for active military. Who knows how many other ideas will flourish in how many other places? Of particular help has been the Florida Department of Education, Division of Vocational Rehabilitation Services. They are assisting Adam in developing a long-range business plan, and they are providing needed support.

At a recent chapter meeting, we asked Adam about his dreams. He replied, ▸

Adam's support team, *(l to r)*, Al Hockenbery, Sherry Hockenbery, Persa Oquendo, Don Geiger, Adam Hood, David Ellsworth, Steve Hood, Brent English, Tony George, Bob Varner, David Scully, Ed Brannon.



The Independence.

Since this project began, many have helped.

In Florida: Al Hockenbery, David Scully, Ted Smith, Bob Varner and members of the Woodturners of Polk County. Rudy Lopez, Jim Smith, and the Tri-County Woodturners.

Don Geiger, Geiger Solutions; Steve Parker, Woodturning Blanks 4U; Roman Rosignof, Manro; and Persa Oquendo, Department of Education, Division of Vocational Rehabilitation.

Others: Joe and Ronnie Biondo, Trent Bosch, Ed Brannon, David Ellsworth, Brent English, Robust Tools; Craig Jackson, Easy Wood Tools; Glen McLean, Wonky Wood Works; and Barry Surplice, Henry Taylor Tools.

Adam's most important support: wife, Amanda, parents Steve and Lynn Hood, and grandparents Don and Oneita Bailey.

"I want to build a successful business in woodturning: Adam Hood Studios. I need to work with my hands. My passions in life are my wife, Amanda, and woodturning. I want to help others—fully able or not—learn and enjoy woodturning. Woodturning has changed my life, and this new lathe is giving me the capacity to expand my work." Looking ahead five years, "I see myself conducting demonstrations at shows, perfecting my skills, and growing as a woodturner. All I need to do is get over my fear of public speaking!" He grinned, paused, and then added, "I am struggling with the words to thank everyone who has done so much for me and my family."

This story is about a local AAW chapter deciding to help one of its members. As it happens, the effort grew into something more significant. We think it is about the woodturning, and it is, but it is much more than we think.

Photos by Roman Rosignof, Manro, Orlando, FL.

Adam Hood received an Educational Opportunity Grant for 2012. ■

Edgar Brannon, Milford, PA, is a member of the AAW, president of Water Gap Woodturners and a director of Peters Valley Craft Center; Robert Varner, Lakeland, FL, is a member of the AAW, president of Woodturners of Polk County, and a member of Tri County Woodturners. To see Adam turning, visit vimeo.com/39977398.

Top Incentive Central Oklahoma Woodturners

The Central Oklahoma Woodturning Association (COWA) used a Green membership donated by the AAW as an incentive for its members to create an inventory of spin tops.

Our local chapter includes the Oklahoma City area and we support our community by turning and giving away spin tops to youth at the Choctaw Land Run Festival, a reenactment of a cavalry and Native American festival, complete with cannon fire, rifles, and horses. Club volunteers set up six JET midi lathes onsite and turn tops for three days. We give away approximately eight hundred tops.

Students who attend the festival get to choose from our inventory, or they can stand in line for their own special top, decorated with three colors they select. We enjoy seeing their eyes widen and light up; one would think someone handed them a $20 bill. After receiving a top, we brand them with a rubber stamp on their hand as part of the process.

In order to get a head start on the spin-top inventory, which is depleted quickly, we used the Green membership as an incentive for club members to turn, decorate, and donate tops. For the first lot of twenty tops completed, the turner's name was placed into a hat for a drawing to win the membership. Each additional lot of fifteen earned another entry.

Michael Reggio won the drawing, but donated back the AAW membership; he had already rejoined the AAW for 2012. We decided that the next new member to join our club would be eligible to receive the AAW membership. Mark Graves, a visitor at our December meeting, chose to join and he received the AAW 2012 Green membership. Not bad for Mark's first club meeting!

To collect the tops, we placed a clear container at our entry door to track and show monthly progress. Club members turned more than four hundred tops by the December meeting when we held the drawing. ■

—Jim Clow, President COWA

Tips

Measure bowl-bottom thickness

Every now and then I run into a turning for which I need to know the exact thickness of the bottom. The old dowel and eyeball trick just is not accurate enough. Why not use dial calipers? Again, this is a little tricky as there is no way to index the base against the mouth of the vessel to get an accurate reading. What I need is an exact measurement in thousandths of an inch. So with that in mind, I came up with a base that can be quickly attached/detached from my dial calipers. I made these from ½"- (13 mm-) thick polycarbonate and a couple of thumbscrews. Pictured are ones for my 6" (15 cm) and 12" (30 cm) dial calipers.

—Sig Mekosky, Washington

Hand truck to move logs

Here is an easy way to use a hand truck to move several logs. Start by hooking a tie-down web strap to the back bottom rung of your hand truck. With the strap attached, but out of the way, lay the hand truck handle down and load two or three logs on. Bring the web strap over the logs and wrap the strap around the top rung of the hand truck. Hold onto the loose end of the strap and lift the hand truck handle to the normal loaded position. The web strap keeps the logs stacked on the hand truck and only minimal effort is needed to hold the strap tight enough to keep the logs in place.

—Bob Gerenser, California

Mini parting tool

The mini parting tool is a salvaged piece of street sweeper bristle (steel flat wire), held in a small vise-grip pliers.

—Joseph Greiner, Florida

Sand the inside of vessels

When I have to sand the inside of a small-mouth vessel, I never stick my finger in it while the lathe is running. Instead, I use a toothbrush with abrasive wrapped around it. The brushes form to the inside shape and allow me to apply pressure to get the job done. I use a quality toothbrush because the handle is already bent in the correct position and it is flexible. The inexpensive brushes have straight handles and are hard plastic.

Start with a quarter sheet of paper and wrap it around the brush. You now have a cylinder with a toothbrush in it. Rotate the paper so that the loose end is on top and hold that down with your index finger. Now you can sand without the fear of putting your finger inside the vessel, which can be dangerous. ■

—Mike Cyr, Massachusetts

Learning to Turn

There is no common demographic in the woodturning classes at Cerritos College in Norwalk, California, and yet a vibrant community spirit exists. The woodturning program is part of the college's Woodworking Manufacturing Technology Department, which includes furniture making, cabinetry, and architectural millwork. Instructor Jim Driskell started the woodturning program in 1999, thinking that there might be enough interest to offer one class every two years. "But," he says, "we had one hundred fourteen people sign a 'Show of Interest' sheet at a local woodworking show before we offered the first class!"

The program has a dedicated classroom with twenty-four mini lathes, two larger-capacity lathes, and other machines. With state budget cutbacks, there are currently three classes offered per semester.

Students take woodturning for reasons as varied as their background. Some are turners from local woodturning clubs. There are woodworking students who want to make turned items for furniture—they quickly learn that woodworking skills do not automatically translate into turning skills.

The most endearing are students who simply need additional college credits and take a woodturning class. More often than not, these students discover they enjoy woodturning, where the skills they learn boost confidence.

Academic rigor is a hallmark of the program. Students are encouraged to practice. "When I first started turning, I decided I was going to make one hundred pieces of firewood and I was going to use whatever free wood I could find so that all I was investing was my time," student Ron Jordan recalls. "I wanted to get all the 'doing it wrong' out of the way so I could get to the 'doing it right' because practice doesn't make perfect; perfect practice makes perfect."

Advanced class

The advanced class on segmenting has an ever-evolving curriculum. For this course, Jim created a *living CD* and he gives one to each student at the beginning of the semester. The CD contains photos, articles, drawings, and procedures. One section contains layout diagrams for segmented turning. All aspects of woodturning—from finishing projects to how to construct a floating ring base—are in another section. A syllabus section includes notes on safety.

Jim attends numerous woodturning events throughout the year where he takes images of segmented pieces, which he then loads onto the CD. Students are exposed to top-tier contemporary work that challenges their artistic sensibilities and technical knowledge. When Jim sees a design that he wants to try, he executes it a few times and makes extra pieces at every step so that he can make a storyboard.

At the end of each semester, Jim photographs the work produced by students for an electronic scrapbook. Future students can then view previous students' work.

Now that he has been turning for a few years, Ron Jordan is able to appreciate excellent work from a new perspective. "The stuff that makes it into magazines and shows is nothing like the very first thing a turner makes. It's like anything else: There's a learning curve." By plowing through that learning curve, students have gone on to win regional competitions and sell their work in local galleries. ■

—Marci Crestani

Ron Jordan's floating box

Storyboards are displayed for students when designing segmented ring construction.

Instructor Jim Driskell *(l)* helps student Andrew Downs.

Phil McDonald Named Executive Director

Following the symposium in San José, the AAW Board of Directors voted unanimously to appoint Philip S. McDonald as executive director of the organization. The action followed Phil's hiring in February as operations director.

For twenty years, Phil was an administrator at the University of Minnesota, where he excelled in organizational development and strategic planning. He served in a variety of high-level positions at Minnesota's largest university, including chief of staff to the vice president for university services. He retired from the school in 2004 to begin Home Revivers, a successful residential construction business. Phil holds an MBA from the University of Minnesota.

Pacemakers and Lathes *Update*

In response to my request for personal experiences of woodturners who have pacemakers and use a lathe (*AW* vol 27, no 2), I heard from thirty-six individuals. The results are encouraging and are of interest to others.

Of the respondents, twenty-three have implanted electronic devices: twenty-two pacemakers (four pacemaker/defibrillators) and one pain-management device. Of those with pacemakers, four are medical doctors. Most surprising is that all of the respondents with implanted devices have continued to turn and none have experienced problems with their devices while turning. Respondents reported a variety of pacemakers and, not surprisingly, turn using a variety of lathes, most of which are variable speed. The only reported modification to a lathe for compatibility while turning wearing a pacemaker (ICD) is the installation of a remote switch and use of an adapter to keep the work a few inches farther away.

Of far greater concern to turners with ICDs, however, are gasoline-powered chainsaws and electric welding equipment. One respondent, on the advice of his cardiologist, uses a shooter's recoil pad over his ICD when using such equipment. Another reported using a Makita electric chainsaw, although he has also used his Stihl MS250 in cyclone recovery.

Several respondents (who do not have implanted devices) suggested lathe modifications: shielding the motor and/or inverter, moving the power inverter farther from the headstock, or replacing the inverter with a different type. Based on the results, though, these would be unnecessary. One suggestion was to replace my Powermatic lathe with a Oneway lathe. If emissions from the motor or inverter are a concern, this makes sense because the Oneway has the motor beneath the bed in a shielded box. A suggestion received from two individuals was to contact the Amateur Radio Relay League for assistance in analyzing emissions from equipment.

Despite these extremely encouraging results, proper caution for a turner newly receiving an ICD implant would be to test the water before turning. From a respondent: "Just like finding out if the water is too hot, you insert a toe to test! So, I tested the EMI theory by attending one of my club's workshop classes and stood beside someone operating a VL300 lathe where I would have assistance if I experienced difficulties. There was no noticeable effect, so I ventured to my own lathe, which I switched on and stood next to for some fifteen minutes with no effect. At the next visit to the cardiologist, I asked if it was safe. He did not see a problem, so I have been turning ever since."

An interesting side note: One respondent, a member of the Functional Neurosurgery Team at the University of Virginia, has been working with brain pacemakers. He reported that one manufacturer is removing magnetic switches from these devices. He has tested a Powermatic 3520B, a JET mini lathe, and the JET 1442 with two models of deep brain stimulators (DBS) that still have magnetic switching, performing the tests several times while holding the stimulator at various points around the motor housing. The tests did not turn the DBS off. ■

—Marsden Champaign

URLs for further research

Medtronic, medtronic.com/patients/index.htm?cmpid=patients_global_nav

American Heart Association, americanheart.org

Heart Rhythm Society, hrspatients.org

National Heart Foundation, nationalheartfoundation.net

American Health Assistance Foundation, ahaf.org

A lecture on Electromagnetic Interference with Implantable Cardiac Devices by David L. Hayes of the Mayo Medical School, fac.org.ar/tcvc/llave/c016/hayes.htm

From the Archives, Grinders

Articles from previous issues of the Journal can help you build woodturning skills and techniques. For instance, to learn more about grinder wheels and how to use grinders, visit the AAW website at woodturner.org. Click on Members' Area, use your membership number to create a password (located on your journal's mailing label), and then access the journal archives. It's easy!

"Get a Good Start at the Lathe," Bob Rosand, vol 23, no 3, pp 50-53

"Grinder Wheels," Bill Neddow, vol 26, no 2, pp 23-26

"Sharpening Jigs and Safety," Jim Rodgers, vol 24, no 4, pp 25-26

"Sharpening Demystified," Kirk DeHeer, vol 21, no 4, pp 32-34

On the Edge of Disaster

Safety in Woodturning

Hilda V. Carpenter

While working in our shops, we woodturners sometimes tempt disaster. The very nature of standing in front of a lathe with a hunk of wood balanced between two points spinning anywhere from 300 to 4,000 RPM, attacking it with a hunk of strong steel is, naturally, anathema to safety.

Knowingly or not, woodturners take risks, with danger right under their noses (literally). Last year, after losing Joan Gilmer (*AW*, vol 26, no 4), a talented, experienced woodturner, safety came to the forefront at the AAW symposium, where all demonstrators were required to wear faceshields. Many demonstrators talked about the importance of safety. Even when uncomfortable using microphones under their faceshields, they persevered to send a signal to all of us woodturners that safety is paramount.

However, eye protection and faceshields are the tip of the iceberg of turning safety, as I found out after interviewing more than thirty-five woodturners from the United States and New Zealand. These woodturners had several horror stories that I term *blow-ups*. I asked the turners to share their experience with the less experienced turners—or to experienced turners who may get careless.

A safe way to turn a large bowl: The wood is solid and is securely screwed to a faceplate. The toolrest is positioned close to where the cutting action is happening, the tailstock supports the spinning wood, and the turner is using a bowl gouge (not a spindle-roughing gouge). Note the ample light.

Photo: Joshua Friend

After analysis, these stories fall into four general categories: (1) flaws in the wood, (2) chuck failure, (3) tool misuse or failure, and (4) beginner/mentor failure. The list is not comprehensive, nor could it be. We are ingenious after all—someone is going to think of a new, unique way to cause harm. Some stories were comical; some were downright scary.

Three additional categories provide general safety measures all woodturners should employ.

Wood flaws

It is noteworthy that the wood failure stories included both professional and hobbyist turners. The comical sight of a hunk of wood sticking into the wall is like a "Wile E. Coyote and Roadrunner" cartoon. The only thing missing is the ACME rocket logo.

With any living organism there will be flaws. In the case of wood, flaws are sometimes readily apparent; sometimes they are not. The key is to be on the lookout for cracks or grain changes. A large crack may be apparent to the eye; however, less obviously, small fissures are where the danger lies. To an

This faceshield is inexpensive, lightweight, and easily adjustable. It will fit any head or face and glasses can be worn underneath it. The plastic is replaceable.

This wood is punky and may have hidden cracks. For safety's sake, discard it and use wood that you know is solid.

Because of a crack in the wood, a platter split in two while being turned on the lathe. Half of it lodged in the wall near the student.

untrained eye, cracks and flaws can appear to be part of the grain pattern.

A classic storyline developed: As the woodturner refined the form, a crack—already in the wood or caused by the turner—is present. The turner did not stop the lathe to regularly check the soundness of the wood. High speed combined with either a catch or taking too big a cut caused the wood to fly apart or out of a chuck. The worst horror story I heard was about a crack that gave way as a platter spun at a high speed. The largest chunk hurled through the air and imbedded into the wall, just missing the turner's face. The smaller piece remained in the chuck. When asked if he saw the crack ahead of time, he replied, "Yes, I was a little worried that I might be getting into trouble, but I had no idea that the crack went as deep as it did."

Cracks that appear insignificant on the surface of the wood can run deep into the middle. Beginners are at risk for not knowing this. They are often not yet able to tell the difference between a crack and grain pattern. If you are unsure, use a magnifying lens or ask a more experienced turner's opinion of the soundness of the wood. If the wood is cracked to begin with, discard it and select a sound piece.

Will pouring CA glue into a long, large crack suffice? I would not bet my right eye on it, but for small surface cracks, that glue works well. Be sure, though, that the crack is only a surface event.

Throughout the turning process, periodically check the progress of your work to make sure you have consistency of wall thickness and know how deep you are cutting into the bottom of a bowl or vase. A too-thin area in the wall can render the entire form weak and prone to explode with the slightest catch. And, we all know what happens when we cut through the bottom of a bowl—funnel shards can be lethal.

Punky, soft wood does not hold well when fastened in a four-jaw chuck. Neither does cracked wood.

Gnarly, unsound wood *can* be successfully turned, but only if you know proper methods of stabilizing it while it whirls around, attached to the lathe. Unless you are familiar with those methods, use sound wood. Wood is far less expensive than repairing damage to your body.

Chuck failure

Chuck failure can be a creeping, hidden disaster waiting to happen. This seems so simple, yet danger can be avoided. Chucks need to be used properly and regularly maintained. Ensure that the chuck is securely screwed onto the lathe's spindle. (For faceplates, use the setscrew, if available.) With the lathe in reverse while sanding, a chuck (or faceplate) can unwind and fly off the lathe all too quickly. That nightmare came true for a couple of turners who had not checked to make sure their chuck was fastened tightly.

Chuck jaws can come loose. Check the hex screws that hold the jaws in place. These screws, even slightly loose, will create shimmies or wobbles in the turnings that can cause an out-of-balance piece of wood to fly loose at high speeds. Turn at slow to moderate speeds and if a wobble is detected, determine the source and fix the problem before turning up the speed dial.

The design of the tenon that holds a bowl blank into a four-jaw chuck should be such that the tenon does not bottom out in the chuck. The shoulder of the chuck squarely paired with the shoulder of the tenon will provide a safe hold when combined with a tenon diameter that closely matches the diameter of the chuck jaws. (Want to know more about chucks and how to use them properly? Read Richard Raffan's article in volume 27, number 1 issue of this journal.)

Tool misuse or failure

I was surprised at the number of turners who had tried a tool with no instruction on its proper use. Of course the dreaded skew chisel topped the list. As sharp as they may seem, skew chisels need to be truly sharp. A dull point or edge will cause the turner to push harder than necessary to make the tool cut. When a dig-in happens, the kickback is an equal, opposite reaction, throwing the tool out of the wood. For the most part, the wood suffers the damage, but the tool itself can become a rocket. Take light cuts with skew chisels. If a light cut is not making shavings easily, sharpen the tool. Get instruction on the proper use of your skew chisel.

The bedan, detail gouge, parting tool, and even faceshield appeared in stories from both inexperienced and experienced turners. One turner literally burned the wood because her parting tool was ▸

Secure your chuck (or faceplate) onto the lathe's spindle either by hand or use a mallet if you are not strong enough to push it tight. I use the mallet method, which I learned from one of the older turners.

Tighten the hex screws that attach the jaws to the body of the chuck.

Make sure the bottom of the tenon does not bottom out in the chuck and that the shoulder of the chuck rests on the shoulder of the tenon.

binding on the sides of the cut. That could have been easily fixed, but the more serious concern was the embers that fell into the wood shavings at her feet, starting a fire. She was wearing a heavy-duty, air-helmet faceshield so she didn't smell the smoke right away. Her husband happened to come into the shop, saw the smoke, and grabbed some nearby water to put out the fire.

In the case of the bedan, the question is *which side is up?* A bedan can help create smooth finishes, as well as assist in turning beads and coves. It also is a good tool for creating tenons. But this tool is relatively new to most turners, so instruction on its proper use is not widespread. In one case a turner was creating a tenon on a thick piece of wood for a spindle turning. Two things happened that fell in line with other bedan stories. First, he had the tool upside down to perform such a function. Next, the bedan became trapped in the wood, spun under the toolrest, and hurt his hand. Unfamiliar tools can end up as ceiling fixtures—ACME rockets come in a variety of designs. Learn their proper use from an experienced turner.

Scrapers. I use them on my bowls. Improperly used, they can cause major dig-ins. While finishing an eight-inch bowl, using a scraper on the inside to smooth the surface, one woodturner did fine with the side walls. When he went to finish the bottom, however, he failed to reposition the toolrest. With the tool hanging too far over the toolrest, a severe catch happened, jerking the scraper out of his hand. Airborne, the tool imbedded itself into a wood rack behind him. He has never stuck a scraper into the bottom of a bowl again. Unfortunate, because scrapers, when used properly, are quite safe: Bevels of scrapers do not touch the wood when scraping or shear scraping. The toolrest should be positioned as close as possible to the wood and still have the shank resting solidly on it. (For more information on scraper safety, see *AW*, vol 21, no 4, "Woodturner's Fear Factor," by Lyle Jamieson.)

By *tool failure* I mean that the actual tool failed. For instance, creating your own tool handles is an inexpensive way to personalize tools, but a ferrule should be part of the handle and should also fit properly. Ferrules help keep the tool shank safely lodged in the handle. If a tool were to be caught between the toolrest and the piece of work, a properly fitting ferrule can save the day. Most of the stories of flying wood fragments included skipping adding the ferrule when making the handle. Tim Heil can tell you all about adding a fancy ferrule to your tool in his *AW* 2011 journal article (vol 26, no 2).

Other stories included turners who had setscrew handles and either the setscrew came out, or became loose. The steel would either spin or move in or out of the holder. Periodically inspect the tightness of setscrews—they can become loose with turning.

Beginning turner/ mentor failure

If you agree to teach another turner what you know, especially if he or she is a beginner or new to the tool/technique you are offering, you are assuming a responsibility of safety for both of you. Know your own limitations and do not offer instruction if you are not prepared to assume the safety of your fellow turner.

I received countless stories where accidents occurred when a turner was teaching someone else a technique. In one case, an experienced woodturner of more than thirty-five years was working with someone to help him refine his bowl turning. The mentee became distracted and the tool flew out of their hands, right into the mentor's abdomen. He showed me his scar.

For the mentors, stand clear of the less experienced turner while he or she turns. The target area is adjacent to or in front of the turner, so stand to the side and let the mentee learn through hands-on practice. Stop the student occasionally to reinforce positive techniques. If the student experiences a catch (and they will), this is an opportunity to reenact the event and then correct the wrong technique. The reenactment can take place with the lathe off while the student calms his nerves.

Teach the ABC's of turning: anchor, bevel, and cut. Anchor the tool to the toolrest, acknowledge the bevel, and begin the cut slowly. For this to make sense to beginners, make sure the student understands that the bevel supports the cut, especially at the beginning. The cut can then take place with a greater assurance of safety.

The student and instructor/mentor should both wear faceshields.

If you are attending a class or workshop with other turners, make sure you are aware of your surroundings. You might want to position your lathe slightly out of line of the person behind you. And remember that you are a student—let the

instructor take care of your neighbor who does not understand a technique.

If you have never used a particular tool, ask for help from someone who you know is knowledgeable.

Woodturning is a rewarding pastime or profession. Teaching woodturning to others is equally rewarding. The stories indicate that the teacher and the student will both learn a lot from the time together, so take advantage of expert help whenever you can.

Sharp tools are safe

A dull tool can skip or cut the wood inappropriately, catching the turner off guard. When a tool is dull, the turner will apply more muscle to make it cut. Let the tool do the work—pushing harder does not replace sharpening a tool or learning its proper use. Check the sharpness of a tool by scraping the cutting edge against your fingernail or across a soft piece of wood; it should leave a mark. If it does not make a scratch, it is too dull. If a tool is not cutting easily, sharpen it.

Learning how to properly sharpen your tools is well worth the time invested. Take a class at one of the many schools for woodturning (they are all listed on the AAW website at woodturner.org). Buy a good DVD on sharpening and practice. You will have a lot more fun and discover there is more in the turner's bag of tricks than 60-grit abrasive.

Faceshields and dust protection

Select a faceshield that fits your head securely and is easily adjustable. For turners with large heads, make sure your faceshield is far enough away from your face so that it does not fog up. I went through three manufacturers' faceshields before finding one that had knobs that would adjust to fit my small head. Then, when you buy that perfect faceshield, buy several replacement visors and change them often to keep your vision clear.

A turner's faceshield is as much of a tool as any that cuts wood, but be aware that a faceshield is only a last line of defense. Faceshields are not capable of taking the full brunt of a large chunk of wood smashing into your face. I am not aware of any studies that have been conducted on the extent to which faceshields protect from flying chunks of wood or rocket tools, so do not lure yourself into thinking that other safety measures can be ignored simply because you conscientiously wear your faceshield.

The negative affects of wood dust *are* cumulative. At the very least, wear a properly fitting dust mask. Better yet, wear an air-circulating dust helmet/faceshield and install a dust collector in your shop. Change or clean the filters regularly. Those tiny, seemingly insignificant airborne "rockets" are potentially lethal.

Miscellaneous

There were many other stories about drill presses, CA glue and accelerator, epoxies, lacquers, bandsaws, and chainsaws. However, of all the turners I spoke with, not one said that their blow-up stopped them from grabbing another piece of wood from which to make their next masterpiece. Not one professional teacher said they intended to stop teaching and demonstrating.

Only one turner claimed, "I've never had a blow-up." I repeated this to several experienced woodturners and asked their opinion. They all skeptically said: "That guy is either lying, or he doesn't really turn." Perhaps it really was true, but the point is that mistakes do happen—safety awareness and practice are every turner's defense against getting seriously, or critically, hurt.

Consider including in your local chapter's newsletters reminders about safety and short stories about members' blow-up episodes, along with the lessons learned. New turners appreciate this information and experienced turners need reminders.

Lastly, newbie or experienced: Woodturning is live-on-the-edge fun and can be safe. You are the primary factor in staying safe, so follow your instincts. If your gut feeling tells you something might not be safe, pay attention. Armed with an understanding of proper techniques and safety, you can be assured that your tools and wood will *not* become ACME rockets. ■

When using a scraper on the inside of a bowl, make sure the toolrest is as close as possible to the surface being cut. You might even want to use a curved toolrest. Use plenty of light.

This tool handle is not safe. Include a ferrule when you make your own tool handles so that the wood will be supported near the shank of the tool. For this tool handle, which was turned too small for the available ferrule, I will attach a small hose clamp.

Dr. Hilda V. Carpenter began turning three years ago. At a SWAT symposium she attended Binh Pho's demonstrations. Shortly after, she purchased a Robust lathe and fell in love with turning, carving, and airbrushing. Hilda is a retired professor and Executive Coach and now lives in Texas.

A special thank you to Stephen Hatcher, Binh Pho, Graeme Priddle, the online forum of World of Woodturners, and all the clubs, professionals, and individuals who participated in interviews.

TOP O' THE MORNIN'

Making the Finger-Snap Top

Roger Zimmermann

I used to start my day by turning a finger-snap top before going off to my job. A salesperson at work—who was 110 percent Irish—heard about, then saw, my tops and dubbed them Top o' the Mornin.' She ordered 200 to pass out to the Big Brothers Big Sisters organization in her area.

Handmade tops are a great item to give to kids (and adults) or sell at craft fairs at low cost. They also represent a good exercise in product engineering and design. In this article I delve a little into the mechanics of tops and offer some tips to make your tops better. The focus will be one-piece finger-spin tops, but many of the principles provided are applicable to other types of tops as well.

Scale and ease of use

Finger-snap (or spin) tops are small tops that are propelled by a sharp twist of the thumb and first or middle fingers. Kids ages five and up already have the motor skills to spin these, unlike larger tops that are spun with a string or a whip. The tops described here are made from small scraps of wood and can be turned from start to finish in minutes. For demonstrations at shows, they are ideal.

Snap tops generally measure about 1" to 2" (25 to 50 mm) tall and 1" to 2" in diameter at the widest point, although larger tops are not uncommon. Wood is the traditional medium, but they can also be made from many readily available materials, such as plastic, aluminum, or brass, with ordinary woodturning tools. They can be painted, colored, grooved, or otherwise decorated from simple to very ornate, as in the collaborations of Bonnie Klein and Jacques Vesery.

Stem

The shaft or stem that drives the top is typically about 3⁄16" (5 mm) in diameter. If the diameter is thicker or thinner than that, the top may become difficult to spin well. Thinner stems impart a faster spin, but the torque required to generate high speed with quick snapping of the fingers will also be higher. This is particularly noticeable for tops with heavy or large-diameter bodies.

Making the stem taller increases the probability of introducing wobble into the top. Shorter stems are easier to spin, with better performance. Make the stem no longer than half the overall length of the top. Good balancing also requires attention to the moisture content of the material. If your top was turned from green or semi-dry wood, there is a very good chance the stem will warp and make the top wobble.

I find that ornate features on the stem can often contribute to the beauty of tops. Plain shafts tend to look unimaginative if used for every design, whereas those with beads and graceful curves can greatly enhance the value of a top.

Medley of tops

Top body

The larger the diameter of the body, the harder it will be to spin the top. Reducing the weight of a large-bodied top, however, can help. Use lighter wood for larger tops and denser wood for smaller tops. Heavy tops will generally spin longer but are harder to get up to full speed because of greater starting inertia. The top must accelerate to high speed in the brief time that finger snapping imparts its force—less than a second! Keep the mass of the body (center of gravity) to the outer edge when possible for lighter tops to achieve longer spinning capability.

The choice of material for tops can be critical. For maximum performance, choose straight-grained wood free of knots and imperfections with an even density. Be cautious about using wood from branches or small trees. The ideal site for good top wood is about halfway from the center to the sapwood in a tree at least 8" (20 cm) in diameter. A large difference in the spacing of the growth rings will probably lead to instability of the top. Check that the grain lines are evenly spaced across the diameter of the body. Heartwood on one side of the top with sapwood on the other may create imbalance such that the top may not even spin. The grain should run the length of the top and not perpendicular to it. Make sure the outer edge of the body is perfectly smooth for better balance.

For easier spinning, locate the body somewhere in the lower half of the top. The higher the body on the spinning axis, the greater the chance of inducing a wobble in the top. For little kids, a shorter body that is low to the ground is easier to spin and is much more stable than one that rises halfway up the full height. Once you get a better feeling for the center of gravity and its effect on motion, you can experiment and make tops that prove harder to spin but have very interesting behaviors.

Tip of the top

The tip of the top requires a lot of attention. It needs to be in the very center of the bottom and smooth. An ultrasharp tip may actually be worse than one that is a bit rounded over. A sharp point may embed itself in the bearing surface and cause too much friction. It may also not allow the top to orient itself and stand straight up. While making the top, you can insert a round-headed brad into the wood point and then machine it to dead center. A metal tip will last longer than a wooden one, but a wooden tip that is not too pointed will hold up quite well.

Decoration, finish, and presentation

The surface of the top can be grooved with rings or textured, but don't create an imbalance in the process. Kids love to paint the tops and watch the colors change and meld as the top is spinning. If a natural finish is desired, coat with a simple product like Tung oil or buffing wax. Put finished tops in little velvet bags. ▸

Spalted maple, 1¾" × 1½" (44 mm × 38 mm), 45 second spin time, easy to spin with low center of gravity

Maple, 1½" × 1¾" (38 mm × 44 mm), maple, 65 second spin time, very easy to spin because of low center of gravity; tight sleeper, wakes up slowly

Various tops (*top left clockwise*): apple, bubinga, white oak, white oak, white oak, cocobolo

They make perfect gifts to cherish forever. Consider making platters with slightly concave surfaces to spin the tops on.

Spinning technique

Finger-snap tops are spun by the rapid twisting of the stem between thumb and forefinger (middle finger works as well for some). Hold the top in a vertical position with the arm and hand held steady. The stem is allowed to roll between the two fingers as the snap progresses. Don't try for high speeds initially; that will come with a little practice. If snapped well, a good top in excellent balance should spin between 3,000 to 4,000 rpm and continue for about a minute or more, depending on the physical characteristics of the top, supporting surface, and initial snap speed. If the bearing surface is rough, friction will slow the top down sooner. If accelerated to speeds that it cannot handle, the top will wobble out of control.

An alternative method is to spin the top on the end of the stem rather than the tip. Just above a suitable surface, hold the inverted top vertically, body and tip up, between the first finger and thumb. Snap as before, but afterward quickly pull your hand away, allowing the top to fall free to the surface below. This requires a bit of practice. The top may hesitate a bit before righting itself on the end of the stem. Some tops spin better on the end of the stem than on the tip as designed. Go figure!

Troubleshooting structural problems with spin

If practice does not overcome spinning difficulties, the top itself may need tuning. First, make sure the tip is smooth. If you feel a burr, use very fine sandpaper to sand the tip perpendicular to the top's axis, but do so very lightly. If the point is off center, you may have to carefully

remount the top in a jam or vacuum chuck to true the tip. You can also try to balance a wobbly top, but it takes a bit of an effort. It is obviously better to use uniform wood initially. My brother, a mechanical engineer, floats his tops in water. The heavy side will roll to the bottom. You can remove or add weight as you please to stop or retard the rolling. (A drop of dish soap will break down the water's surface tension.) With some persistence you can balance the top to very tight tolerances and make it spin a very long time, as well as go into a deep "sleep."

Experimentation with performance and design

Most of the rules of thumb offered up to this point apply to making basic tops that spin easily. Once you master these, you may sense that high performance isn't everything. For most people, attractive form and surface also matter. Such considerations, however, may conflict with optimum spin. You have to use your best judgment about which rules to break. For example, you may find it worthwhile to risk slight imbalance or shorter spin time by turning an urnlike silhouette or incorporating some striking sapwood. If the resulting top spins poorly, only a little time and very little material have been lost.

Strive to make your tops as elegant as possible. They will sell better and be much more interesting to look at. Also keep in mind the age and ability of your potential client or audience, including the more sophisticated top lover. Experiment with different grains, densities, stem lengths, diameters, tip sharpness, and placement of the center of gravity. Surprisingly, you can make good spinning tops by doing everything "wrong." You never know until you try. I even keep many of my top "failures," since they are still lovely to look at. Some of the tops shown here have broken the rules in various ways. One of my very best spinners was cut from a 2"- (50 mm-) diameter maple branch with pith. On the other hand, if you want only a consistently good spinner, stick to the basics.

Top jargon

Along with tops comes a set of terms that you may want to use with your audiences. During spinning, a well-balanced top will come to a position where it appears to be actually standing still. This is called *going to sleep* or the top is *asleep*. At other times the top may have a secondary spinning axis called precession. This occurs when the axis of the top wobbles in a slow circle around the tip (just as the earth wobbles on its own axis, though much more gradually). As the top slows down, it will progressively tilt, which is called *waking up* (technically distinct from wobbling). Each top has its own sleeping and waking up pattern, which gives it a unique signature.

Games to play with the tops

Hold a contest to see which tops can spin the longest. Note that tops spun in a slightly concave dish will bang into each other; find out whose top is left standing at the end. Try spinning your tops on unusual surfaces such as the back or palm of your hand. Try to spin the top on the base of the stem instead of the pointed tip, as described earlier. Above all, have fun! ■

Roger Zimmermann is the president of the Wisconsin Valley Woodturners. You can email Roger at latheybum@aol.com.

Ebony, redheart, 2" × ¾" (50 mm × 19 mm), 20 second spin time, average spinner, less spin time because of its small size

Cocobolo, 2" × 1" (50 mm × 25 mm), 15 second spin time, difficult spinner because of its high center of gravity and narrow diameter

ARTIFACTS OF ENCHANTMENT

Brigitte Hinrichs

About 20 years ago German woodturner Armin Kolb began developing his craft with the usual repertoire of bowls, boxes, and pens. He already had a preference for spinning tops; however, over time they gravitated to the center of his work. Traditionally, tops were trinkets in the broad product range of the typical woodturner and were often given away with the sale of other items. Armin approached this class of objects with a new perspective. He felt it was important to dispel the notion of the spinning top as a simple children's toy and, instead, to understand it as an artifact.

Years of experimentation led Armin to combine various hardwoods with natural materials such as amber, coral, and bone and occasionally to embellish the ensemble with gold, silver, or gemstones. He investigated which shapes and material combinations were possible and necessary to highlight the aesthetics of a spinning top without robbing it of essential functionality—its rotation. In the process, he built a rose engine lathe and explored eccentric turning and inlay techniques to produce formerly unimagined designs.

The results span a fascinating range of tops evoking timeless architecture, heirloom jewelry, and delicate celestial models. Pierced interiors and zigzag stems on some may initially hold the viewer back because they suggest works too fragile or eccentric to handle. But the fine workmanship and detail usually prompt closer inspection and first-hand discovery that all his tops really do spin.

Armin Kolb, Germany, *Amma,* 2003, Pink ivory, ebony, black Palmira, amaranth, 3½" × 2⅓" (9 cm × 6 cm)
Photo: Roland Schmidt

Play

"What exactly do you do with such a top?" many still ask. The answer is as surprising as it is obvious: "You *play* with it." But what is the meaning of play in this context? Or more precisely: What does it mean when adults play? It's about forgetting oneself, as when children become absorbed in their game and lose track of all the distractions around them. Armin's spinning tops invite people to set aside the purpose-orientation of our society and to pause for a few moments, focusing on their own center. In Japan, the name for top—*koma*—literally translates as "happy alone." The top places the spinner under its spell as the world falls away and nothing further needs to be satisfied.

Movement and stillness

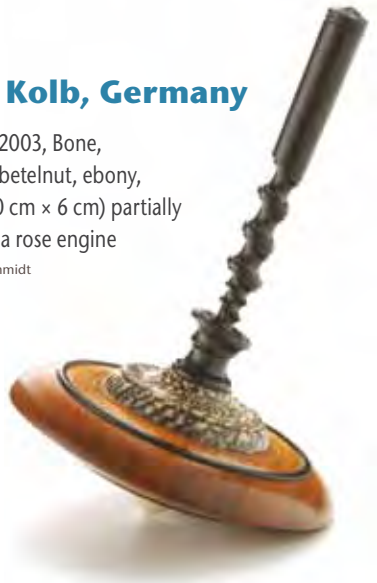
The attraction of tops lies partly in their quirky behavior. Some of them prefer their cozy circles, while others sway drunkenly. Perhaps the most startling display occurs when the top embodies motion at a "standstill," running silently in perfect rectitude. Movement, as a symbol of external action, has become one with stillness, the inner reflection.

For Armin, then, the top offers the user not only the amusement of a familiar children's toy but also the visual and kinetic experience of centering and absorption in the present. Its powers of engagement and nuanced aesthetics provide enough inspiration for him to commit all his energies to its continuing development and enrichment.

See more of Armin Kolb's work at spinningtop.de/.

Armin Kolb, Germany

Fernambuk, 2003, Bone, fernambuk, betelnut, ebony, 4" × 2⅓" (10 cm × 6 cm) partially turned with a rose engine
Photo: Roland Schmidt



Eugn, 2003, African blackwood, amboyna, bone, antler, blue pigment, 3" × 2" (8 cm × 5.5 cm)
Photo: Roland Schmidt

Coral Tops, 2001, Bone, coral, silver, gold, ruby, ebony, 4" × 1½" (10 cm × 4 cm)

Without, 2003, (*left*) bone turned with rose engine, silver, betelnut, amber, mammoth ivory, emerald, (*right*) bone turned with a rose engine, coral, amber, mammoth ivory, ruby, 3" × 1⅛" (8 cm × 3 cm)

Pink Passing, 2003, Pink ivory inlay turned with a rose engine, ebony, bone, 4" × 2⅓" (10 cm × 6 cm)
Photo: Roland Schmidt

Without, 2003, (*left*) Bone, antler, silver, African blackwood, ruby; (*right*) bone inlay turned with a rose engine, antler, silver, sapphire 2⅓" × 1½" (6 cm × 4 cm)
Photo: Roland Schmidt

Untitled, 2001, Boxwood, 4" × 1⅛" (10 cm × 3 cm)

Axe de Rotation, 2001, Tulipwood, ebony, 3½" × 1½" (9 cm × 4 cm)
Photo: Roland Schmidt

GALLERY OF TOPS

Robert Sakauye

BEYOND THE SIMPLE TOP

Since the flowering of artistic woodturning in the 1980s, the humble spinning top has evolved into a vehicle of creative expression for many. Long known for her chatter-worked and vibrantly colored tops, for example, Bonnie Klein recently created *Fire and Ice*, reminiscent of fine-cut crystal. It illustrates just how far her continuing explorations have ranged with the use of alternative materials, rose engine detailing, and detachable parts (note the offspring and internal flame). Her crisply foliated collaborations with Jacques Vesery further celebrate the lavish top. Magical intricacy also infuses Robert Sakauye's tops, with their kaleidoscopic surfaces and mating receptacles. The meticulous work of Randy Rhine suggests a similar penchant for labor-intensive assembly and calculated pattern exposure, graphically documented on his website. Comparable precision is evident in the starburst layups of Eli Avisera's blockless dreidels, which rest on lettered containers for Chanukah presents. In contrast, Judy Ditmer's executive models and mini-spinny earrings rely on festive bangles to set them apart from traditional tops and make an imaginative leap to the jewelry department.

With little ornamentation, the other tops here take a radically different approach to complexity. John Lucas's microtop series achieves its drama through visualization of a mathematical progression toward the infinitesimal. With a length one-half the width of a parting tool, the smallest member hints at even tinier, invisible tops receding toward the spin of quarks. The trio of tops from high-end furniture manufacturer Herman Miller also envisions relationships—in this case, the interactions of a dance ensemble twirled en pointe. These tops do not need to be stationary to be fully appreciated. They pay tribute to the modernist aesthetic and playfulness of designers Charles and Ray Eames, whose seven-minute film *Spin Tops* (viewable on YouTube) remains a classic for top enthusiasts.

—David Fry

Randy Rhine, Yellowheart, pink ivory, boxwood, blackwood, brass

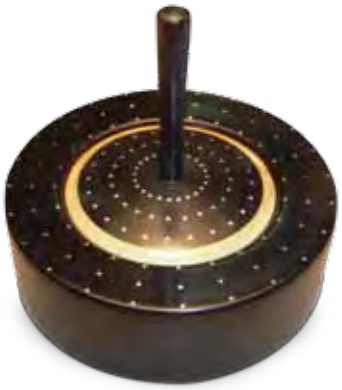
Randy Rhine, Blackwood, pink ivory, boxwood, Colorwood, segmented and ornamental turning, inlay

See more of Randy's work at randyrhine.com.

Judy Ditmer, assorted tops (*clockwise from lower left*), tiny executive tops with beads, ½" (13 mm) dia; regular tops 1½" (38 mm) dia; executive top with beads; tiny tops ½" dia, mini-spinnies (earrings with removable earwires become functioning tops)

Robert Sakauye, peg top box, African blackwood, boxwood, bloodwood, 3" × 2⅜" (76 mm × 60 mm)

See more of Robert's work at gallerym.net.



Robert Sakauye, *Starry Night* top, African blackwood, boxwood, silver; 2¼ × 2" (60 mm × 50 mm)

John Lucas, microtops, African blackwood, ½" to 1/16" (13 mm to 1.6 mm) high

Geoff Whaling, 2010-2012, small collection of square- and radial-laminated spinning tops, various timbers and veneers. Typically 3" × 1¾" (75 mm × 45 mm)

My initial foray into making tops was a deliberate plan to develop spindle-turning skills. Lamination of timber became more pronounced through seeing Jack Wooderson create simple yet effective patterns in tops using concentric rings with laminated veneers as dowel inserts. Exposure to many influences from turners such as Jim McPhail, Randy Rhine, Randy Knapp, Jon Sauer, and later Eli Avisera lead me on a journey to hone my skills in spindle turning and joinery so I could develop and refine a simpler style of spinning top.

At the 2009 Turnfest symposium in Australia, I met Bonnie Klein. She encouraged me to look up Eli's Avisera's work, which led to further refinement of laminated timbers. I am currently working with linear laminated blocks, developing Tunbridge style laminations.
—*Geoff Whaling, Australia*

Eli Avisera, *Round Dreidel Box,* 2010, Maple, ebony, silver; 3¾" × 2" (95 mm × 10 mm)

See more of Eli's work at avisera.co.il.

Herman Miller, 2009 Special Edition Tops, Eames tribute, Walnut, 4½" × 2½" to 3" (114 mm × 63 mm to 76 mm)

Photo courtesy of Herman Miller, Inc., hermanmiller.com

Bonnie Klein, *Fire & Ice,* 2011, Cast acrylic, 6" × 2½" (152 mm × 64 mm)

See more of Bonnie's work at bonnieklein.com.

Photo: Tib Shaw

COLLABORATIVE TOPS

JACQUES VESERY AND BONNIE KLEIN

As the World Turns & the Seasons Spin, 2009, Swiss pear, white oak, fossil mammoth ivory, acrylic paint, metal leaf, 6" × 5" × 21" (15 cm × 13 cm × 53 cm)

This collaborative set was featured in "Boxes and Their Makers," a traveling exhibition based on the book *New Masters of the Wooden Box*.

As the World Turns Green With Envy of the Sun and Moon, 2007, Cherry, pear, koa, glass, acrylic paint, 6" × 4" (15 cm × 10 cm)

Collection of Gene Colley

See more of Jacques' work at jacquesvesery.com.

Beyond Round
The Lost Wood Process

Art Liestman

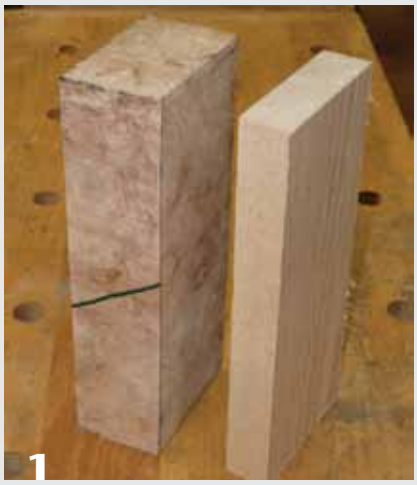
Where I live, companies harvest bigleaf maple trees and cut the highly figured wood into 2"- to 3"- (5 cm- to 7 cm-) thick slabs for use in musical instrument bodies. After the wood is dried, companies select the highest quality pieces to sell to instrument makers. Woodturners often purchase the leftovers. This wood is quite beautiful and well suited for turning, but given that it has already been cut into thin slabs, we turners are limited to what we can make: small shallow bowls, platters, or perhaps peppermills. For hollow vessels, these slabs are not ideal, except for tiny vessels.

We can, however, still make larger hollow vessels out of this material by combining ideas that other turners utilize to make hollow vessels that are oval in cross-section. Michael Hosaluk's fish originate from a solid piece of wood, something like a 4" × 4" (10 cm) spindle blank 6" (15 cm) long. He turns a hollow vessel, bandsaws out of the middle a 1½"- (3.8 cm-) wide strip of wood, glues the two outer halves together and then decorates the fish, disguising the glue joint. The result is a 6"-long fish shape, nearly 4" tall and only 2½" (6 cm) wide.

Lowell Converse, in an article in *American Woodturner* (vol 13, no 2), describes a technique he called *lost wood*. He begins by turning a staved vessel with, for example, twelve staves. Alternating staves are removed and the other staves are glued back together, creating a vessel with six curved sides meeting at angles where the staves are joined.

Ideas combined

My approach combines Michael's and Lowell's ideas. Take a 3"- (7.6 cm-) thick slab of figured wood that is 4" wide and 8" (20 cm) long. (The grain runs in the 8" direction.) Resaw the 3"-thick board down the middle to create two equal planks. Select a waste board (poplar works well) and cut a board that is 1" (25 mm) thick and 4" wide by 8" long. (The grain oriented the same direction as the figured wood.) Glue the three pieces together with the poplar board sandwiched in between. Turn the glued-up assemblage into a vessel form, and then hollow it. Separate the blanks along the glue lines and then glue the ▸



1 Mark the goblet blank with an angled line for easy reference at glue-up time.

2 Drill alignment holes in the goblet blank before resawing.

3 Drill matching alignment holes in the waste wood.

4 Position the waste wood between the halves of the resawn goblet blank.

5 The entire assemblage, including the paper layers, is ready to be glued.

6 The assemblage is glued and clamped. Let the glue cure overnight.

7 Cut away enough wood from each end to eliminate the alignment holes.

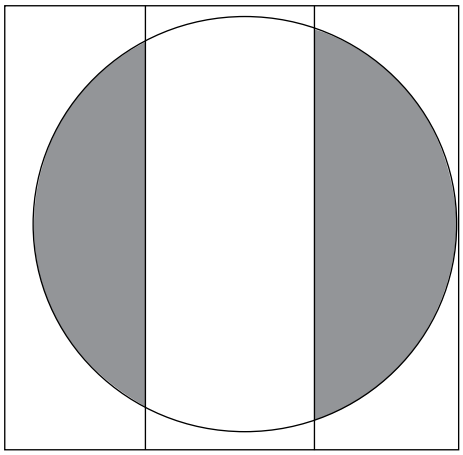


Figure 1.

two outer halves back together. The result is a hollow vessel, football-shaped in cross section: 8" tall and 4" and 3" in diameter. The grain will be matched.

To illustrate this process more clearly, I will describe how to make a goblet. The goblet idea came from Bruce Pratt during a class I taught at Arrowmont. Denise DeRose, my assistant during that class, helped improve the gluing method.

Grain matching

To help ensure that the grain matches in the finished goblet, I recommend the following procedure.

Assemble the following materials:

- 2" × 3" × 8" blank for the actual goblet (grain running in the 8" direction)
- 1" × 3" × 8" waste wood
- Two ¼" (6 mm) bolts that are 3½" (9 cm) or 4" (10 cm) long, plus a washer and nut for each bolt
- Brown paper bag (Kraft paper)
- Carpenter's wood glue (yellow glue)

Prepare a glued-up assembly for turning

Mark the 2" × 8" face of the goblet blank with angled lines so that the workpieces will be obvious to orient during glue-up (*Photo 1*).

1. Using a drill press, drill two 17/64"- (6.4 mm-) diameter holes through diagonally opposite corners of the 3" × 8" face (*Photo 2*). (The holes are just slightly oversized for the ¼" bolts.)
2. Line up the goblet blank with the waste wood blank and transfer the locations of the holes to the latter.
3. Using the drill press, drill ⅜" (10 mm) holes through the opposite corners as marked. The oversized holes will make the alignment easier (*Photo 3*).
4. Carefully resaw the goblet blank into two pieces that are approximately 1" × 3" × 8" (*Photo 4*).
5. Lightly sand the inner (recently cut) faces of the two blanks on a belt sander to make them flat for gluing. Also, sand the two faces of the waste-wood blank.
6. Cut two rectangles of brown paper slightly larger than the slabs of wood (*Photo 5*).
7. Apply a thin layer of glue to coat the inner face of each of the goblet blanks and to both sides of each piece of paper and both sides of the waste blank.
8. Assemble the layers in order with a paper layer on either side of the waste blank, the goblet blanks on the outside, and with the holes aligned.
9. Insert the bolts through the holes (pushing through the paper) to align the layers.
10. Add the washers and nuts and tighten.
11. Use additional clamps to squeeze out the excess glue and let cure overnight (*Photo 6*).

Kirsten Kone

A Kirsten Kone allows the turner to remount a hollowed-out turned item, such this goblet, without compressing its rim, lip, or shoulder (which could cause a crack). A bit of sandpaper creates a friction drive on the inside of the cup while a live center holds the foot. The friction drive uses 150-grit abrasive on a sanding pad mounted at the end of a bar, which presses on the bottom inside of the cup or the hollow vessel. The cone does not function as a drive; it merely helps to align the goblet or hollow vessel. Mounted in this fashion, the stem of this goblet or the foot of a hollow form can be safely turned and sanded.

Franck Jannesen wrote an article on how to make a variation of the Kirsten Kone in "Reversing Bar Revisited" (*AW*, vol 23, no 1). Similar devices are available commercially.

12. Unclamp and remove the bolts.
13. Cut approximately ½" (13 mm) off each end of the glue-up to remove the drilled holes (*Photo 7*).

You now have a glued-up assembly that is approximately 3" × 3" × 7", an ideal size for a goblet.

Locate the center point

Before mounting the assembly between centers, it is important to locate the correct center point on each end. Since the waste blank will be removed and the two outer layers will be glued back together, locate the point in the exact center of the thickness of waste blank. (Centering the width is not as crucial, but it should be close.) *Figure 1* shows an end view of the result if the center point is located to the right of center: The two dark areas represent the different thicknesses of wood that remain after removing the lost wood. This difference will result in two forms that will not align properly to form a goblet.

Steps for turning the goblet

The goblet will be turned in two steps. First, shape, sand, and finish the cup of the goblet and shape the foot. Leave the stem overly large. For the second step, break the glue joints to remove the waste wood and then glue the two outer forms together. After the glue cures, remount the blank and turn the stem to its final dimension. The result will be a cup and foot that are football shaped and a round stem. Here are the steps:

First turning procedure

1. Mount the assembly between centers and turn it to a cylinder.
2. Choose which end is to be used for the foot and turn a tenon of appropriate size for your chuck (*Photo 8*).
3. Remount the blank into the chuck and true up the cylinder. Use the tailstock for support.
4. Mark the locations of the bottom of the goblet's cup and the top of its foot by turning shallow grooves into the cylinder.
5. Shape the outside of the goblet cup (*Photo 9*), being careful to leave a thick stem below it. Because the waste wood will be removed, the diameter of the stem at this point must be at least 1", plus the thickness of the intended final stem. To be safe, I leave it a little thicker.
6. Prepare to hollow the inside of the goblet cup. Since you will eventually be removing the waste wood, you can drill holes into this wood to help determine the wall thickness of the cup as it is hollowed. I drill holes every ½" or ¾" along the length of the cup in alternating sides (*Photo 10*). This step is optional.
7. Hollow the inside of the goblet cup (*Photo 11*). I left the walls about ¼" (6 mm) thick, but thinner walls look more elegant.
8. Sand and finish the inside and top of the cup. Do not worry about leaving a dimple or nub at the bottom of the cup; the waste wood will be removed.
9. Shape the outside of the foot and decrease the diameter of the stem to about 1½" (4 cm) diameter (*Photo 12*). I created a gentle curve on the top of the foot, with straight sides below. Experiment with different shapes to see what you like.
10. Sand the outside of the foot and cup.
11. Remove the assembly from the chuck.

Split the blank and re-glue

1. Securely hold the tenon of the blank in a bench vise (or place the chuck on the bench and use it for a vise).
2. Here are two methods to split the assembly:
   a. Carefully place the cutting edge of a bench chisel exactly on a glue line at the lip end of the cup. ▶

Turn the assembly to a cylinder and turn a tenon on one end.

Mark where the foot and goblet will be, then shape the goblet cup.

Drill holes into waste wood for checking thickness (if desired).

Hollow the inside of the goblet cup.

Shape the stem and foot.


Separate the blank from the waste wood.


Align and glue the goblet halves together and clamp to dry overnight.


Turn the stem. Take care not to mar the cup and foot with the tool or abrasive paper.

Tap the chisel with a mallet until the joint splits along the glue line.

b. Using a solid blade-type box-cutter knife, wiggle the knife into the glue line and then twist the blade to separate the wood.

3. You should now have three pieces: the waste wood and two outer layers (*Photo 13*). The brown paper will have split in half, leaving paper on the surface of the glue joints.
4. Lightly sand the inner faces of the outer layers on a belt sander to remove the paper and make them flat for gluing.
5. Apply a thin layer of glue to coat the inner face of each of the outer layers.
6. Carefully align the blanks and clamp to squeeze out the excess glue (*Photo 14*). Remove any glue that gets into the inside of the cup. I use a moist paper towel to wipe off excess glue, followed by a dry paper towel to get rid of any glue smeared by the moist towel. Alternatively, let the glue dry enough so that it can be carefully removed with a fingernail or sharp knife.
7. Allow the glue to cure overnight.

Second turning procedure, the stem

To turn the stem, remount the goblet between centers. There are several ways to do this, the key being not to damage the inside of the finished cup. I use a Kirsten Kone, which is explained in the sidebar. When you turn and sand the stem, take care not to mar the surfaces of the foot and bowl (*Photo 15*).

Cleanup

After turning the stem, it will be necessary to do some handwork with rasps and/or sanders to blend the forms created from the two turning sessions. Once you are satisfied with that, simply sand and finish.

The result is a goblet with a football-shaped cross-section in the cup and foot and a round stem.

Other forms

I chose a goblet to illustrate the process, but the lost wood method can be used to produce many other interesting shapes, either by simply gluing the two outer parts together or by continuing with additional shaping between centers. By using different thicknesses of waste wood, you can get various football shapes. *Figures 2* and *3* show the cross-sections of 4" diameter turnings with 1"- and 1½"-thick waste wood strips removed, respectively.

To dazzle your friends, try making a goblet with a captured ring using this method. (That's a joke.)

One interesting option is to turn a hollow form, being careful to make the entry hole entirely contained within the waste wood. When this layer is removed and the two outer layers glued together, you have a hollow form with no obvious entry hole. By carefully matching the grain and/or the use of surface enhancements (color, pyrography, carving) you can disguise the glue line. The photo gallery accompanying this article shows pieces turned using the lost wood process.

Give it a try. Your turnings don't have to be round!

Art Liestman coaxes wood into peculiar shapes in Coquitlam, British Columbia. Please visit his website at www.artliestman.com.

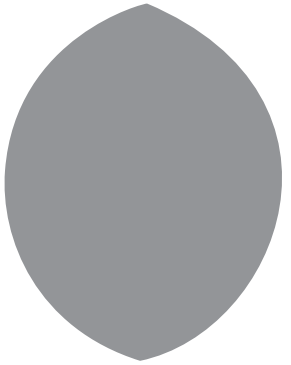


Figure 2.

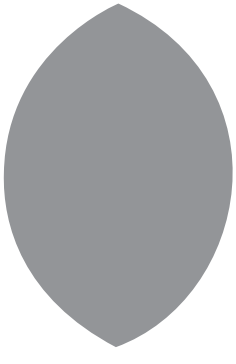


Figure 3.

Lost Wood Gallery

Art Liestman

Photos: Kenji Nagai

Art Liestman and Bruce Campbell, *Lost Wood Box*, 2012, Bigleaf maple burl, 3⅞" × 2⅝" × 2 1/16" (10 cm × 7 cm × 5 cm)

Alpha, 2007, Bigleaf maple burl, acrylics, 4¾" × 3⅝" × 2¾" (12 cm × 10 cm × 7 cm)

Restart, 2010, Bigleaf maple burl, acrylics, 8 1/16" × 4" × 2¾" (21 cm × 10 cm × 7 cm)

Splay, 2009, Bigleaf maple burl, acrylics, 11⅛" × 4⅝" × 3⅜" (28 cm × 12 cm × 9 cm)

Remembrance, 2011, Bigleaf maple burl, 3⅞" × 3¼" × 4⅝" (10 cm × 8 cm × 12 cm)

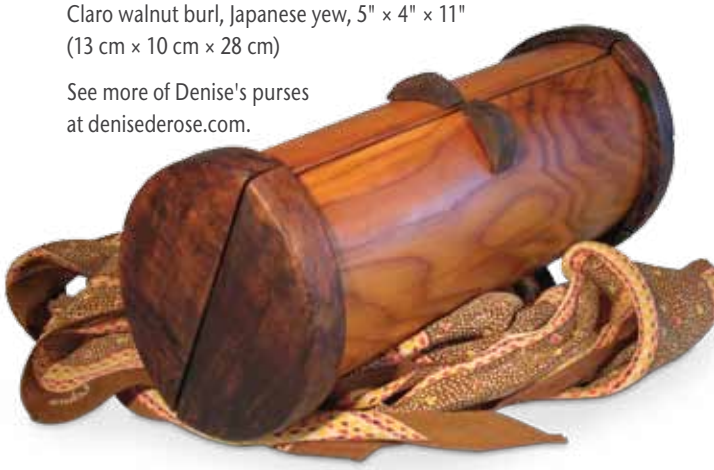
Teapod: An Evolutionary Ancestor of the Teapot, 2011, Bigleaf maple burl, walnut, acrylics, 3½" × 8½ × 4" (9 cm × 22 cm × 10 cm)

LostWoodGallery

Lowell Converse, untitled, six-sided vase, 2004, Walnut, maple, 10" × 4" × 5" × 6" (25 cm × 10 cm × 13 cm × 15 cm)
Photo: Nick Falzerano
Collection of Dave and Karen Long

Denise DeRose, *Made Yew Look* clutch purse, 2009, Claro walnut burl, Japanese yew, 5" × 4" × 11" (13 cm × 10 cm × 28 cm)

See more of Denise's purses at denisederose.com.



Michael Hosaluk, *Saskatchewan Fish,* 2007, Birch, toothpicks, rice paper, acrylic paint and gel, 5" × 4" × 7" (13 cm × 10 cm × 18 cm)
Photo: Trent Watts

Podash, 2012, Ash, 3½" × 5" × 5" (9 cm × 13 cm × 13 cm)

Club, 2012, Mahogany, 3¾" × 4¾" × 5¾" (10 cm × 12 cm × 15 cm)

Joe Landon

I became interested in the lost wood process by studying the work of Art Liestman after I saw his work a couple of years ago. The idea of turning a hollow form into a pod using this technique incubated in my mind for a while. My work is a progression and my ideas are often light years ahead of my skill set—I have only been turning for four years.

These pods represent an accumulation of concepts and inspiration from many AAW masters, with my own unique spin. I learned to turn hollow forms from Trent Bosch three and a half years ago. John Jordan taught me basic carving skills about a year and a half ago. Both Trent and John were demonstrators at my local chapter, Central Illinois Woodturners.

I place objects, usually small pebbles, inside the cavity of the pod. This introduces the element of sound when a pod is picked up and explored. In stark contrast to my typical delicate, colored, high-gloss hollow forms, pods are meant for kids to explore and to appreciate. In reality, they appeal to the curious and playful side in all of us. ■

Stunning Digital Photos Show Off Your Turnings

Ed Kelle

You can take stunning digital photographs of your turnings, and may be able to do it using the *compact camera* you already own, provided it has manual controls for lens aperture and shutter speed. All you need to do is create a setup where you can control the background and the lighting—I will show you simple gear you can make yourself—and if you would like consistency among all of your images, photograph your work in the same setup each time. A dedicated area is ideal, if possible, but temporary setups can work just as well, since the only thing that really matters is what the camera captures.

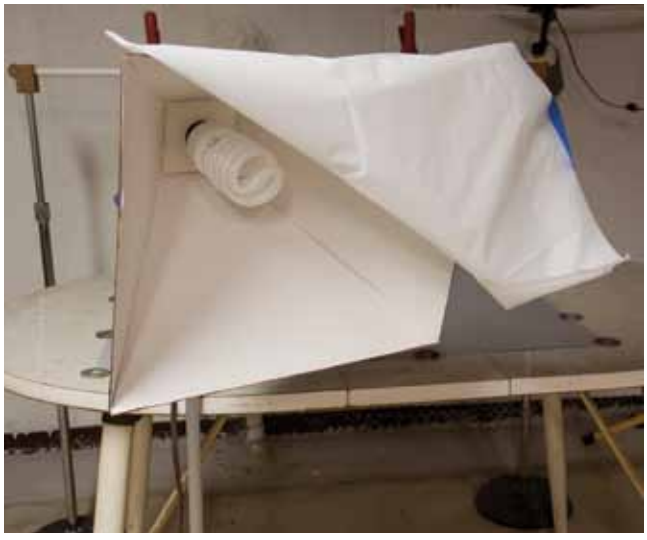
To inspire future works, you can take advantage of the digital format to evaluate design potential, by stretching forms, changing tones, compositing sections, and creating many variations. Use your camera to record works in progress as well as for reference when disassembling machinery and electrical wiring. Have fun with your camera; don't be intimidated by the technology.

Backgrounds

For backgrounds, a roll of neutral gray photo paper is a good choice because it will not influence the color of your turnings. Other choices are white, black, and gradated backgrounds. Your choice should enable your turning to stand out from the background. Organize the setup so the background gently sweeps upward behind the subject. Placing the sweep farther away from the subject enables light to drop off and create a gradation without purchasing a gradated background. Use black backgrounds sparingly; they can make an object appear to float.

Lights

You can get a good photo with almost any light source, provided it is bright enough and that your camera is set for automatic white balance (see Definitions sidebar). I prefer pigtail-shaped, cool-running compact fluorescent photo bulbs. They are daylight-balanced, can ▸



(*Above*) Diffuser — Made from ½"- square strips of wood, covered with a double layer of white plastic tablecloth, the open back side of the diffuser permits the background to curve up behind the object so that the light intensity falls off. The result is a softly gradated background that fades toward black as it recedes.

(*Left*) This softbox was constructed from cardboard lined with white paper, with front diffusion from a double layer of white plastic tablecloth. A fluorescent bulb runs cool enough to be safe inside, but an incandescent light would not be fire-safe.

Setup #1

Here is the simplest setup: overhead light comes from a single compact fluorescent photo bulb mounted in a socket with a reflector but no diffuser. The lighting is flat with no sense of depth, and the shadow is strong.

run for a long time at low temperatures, and have a lifespan of a few thousand hours. At $8 to $10 each, they are more expensive than the lamps available in home centers, but their quality is worth it. In the setups shown in this story, I'm using a single 43-watt bulb in a small ball-head fixture attached to a lightweight aluminum stand. My hardware is ancient, but you can buy similar gear for $20 or less. When I need more light, I add a 27-watt bulb as a fill light.

Whatever type of light you choose to use, it is always best turn off any other lighting so it will not cause a color shift somewhere in your image. I also block out windows in my studio to have total control over all the light. This helps create consistency across many images.

The setup

Most turnings show best under diffused light with soft shadows. This can be achieved with a light tent. Some tent kits include background papers that fit inside. A drawback is that with the limited depth of a tent, there is no light drop-off to create a gradation. I have created my own diffuser from white plastic tablecloth on the sides of an open-end wooden framework (*Page 35, top photo)*, which allows unlimited depth for my background. I also soften the light with homemade softboxes that house the bulbs. They can be constructed from foam core and cardboard lined with white paper to reflect the light inside, and then covered with more white plastic tablecloth. They can be various sizes and shapes to control the spread of light. Do not place hot incandescent lights near any diffusion material, and only use cool-running fluorescent bulbs in these softboxes.

A good starting point is to set two lights at 45 degrees to your subject, one close, which will be the main light, one farther away to create dimension. Move your lights around and notice the changing effect. A single overhead light is a good alternative, although you probably will want to place squares of white cardboard or foam core just out of the camera frame to bounce light back on the subject. In contrast, black board can be used to absorb light from a side of the subject to darken it. Large pieces of board can block light from the background to darken it. Don't be afraid to experiment—the pairs of setup photos accompanying this story illustrate the journey from an okay photo to a good one, by making small changes one step at a time.

The camera

Always check your camera to be sure you have enough memory card space and a charged battery before placing it on your tripod. Set the *ISO* to its lowest setting—200 is good—for reduced noise. Move in and out to maximize the size of your subject in the frame while leaving a little space all around; I try to fill about 60 to 70 percent of the viewfinder with my subject, which leaves room to crop the image for various purposes. Frame horizontal objects in a horizontal format and vertical ones in a vertical format. Placing the camera close to the subject with a wide-angle lens can cause some distortion. It is better to set up farther away and *zoom* in a little bit.

Adjust the tripod legs to the desired height and check that the camera is level. For maximum stability, do not extend the tripod's central column any more than necessary. Adjust its legs instead.

I photograph vessels from slightly above them to show just a glimpse of the opening. For bowls, I like to show slightly more of the inside. Refrain from shooting down into a bowl because the image will flatten out and give no sense of form. Place a platter on a stand that does not compete with the subject.

Exposure

Photography is all about exposure. Even with the camera in an automatic mode, exposure can be difficult to understand and control. All camera meters calculate exposure from light to

dark. You can calibrate your setup by taking a full-frame image of a standard Kodak 18 percent gray card. When photographing a full sheet of white paper, the camera will adjust the exposure to create that gray tone. If you shoot black paper, it will also try to create that gray tone. That is what the camera meter is designed to do: average what it sees.

In automatic modes, the camera balances *shutter speed* and *aperture* (lens opening) to create proper exposure. Envision a seesaw, with shutter speed on one side and aperture on the other. A change in one side requires a change in the other to retain the same balanced average, but the tradeoff will be depth of field.

A lens focuses light to a single plane where the image will be perfectly sharp. Depth of field is the range of distance that will be in sharp enough focus in front of and behind the actual plane of focus. Small aperture openings—f/22 to f/32—produce the greatest depth of field, while large aperture openings—f/3.5 or f/4—give a shallow depth of field. An aperture setting of f/3.5 to shoot a large bowl would show the rear of the bowl much less sharply focused than the front. Changing to f/11 or smaller would bring more of the bowl into focus, but the tradeoff would be a slower shutter speed—no problem on a tripod, big problem if you are holding the camera in your hand.

Here is how to take control of each photo, starting from the camera's automatic settings. Place the 18 percent gray card where your subject will be, pointed directly at the camera under your ▸

Setup #2

The single bulb has been moved to the side and a bit to the front of the piece, and although the tent shown diffuses the light, it also limits its distance to the background paper so light cannot fall off. The diffused light makes soft shadows, but the right side of the piece is too dark.

Submitting photos for publication

After you've created your masterpiece and photographed it, what next? You may want to publish it on the Internet, and print publications such as this one might feature your work. Here are some tips:

- Always capture your images at the highest quality settings—the largest file size—and use RAW format if your camera has it. Internet and print photo requirements vary; be sure you can fill a request for a higher-quality image.
- Once you have the lighting set up as you wish, take both horizontal and vertical photos, which will give editors options for layout. If you have the opportunity, ask the publication you'd like to submit your photos to about whether a specific type of background is required.
- For how-to articles, capture at the best quality and zoom in tight with the camera to fill the frame and focus on what is important in each step when making the project or illustrating a technique.
- For publication, it's best not to do any computer manipulation yourself. Leave it to those who work with the printers. Adjustments to white balance and sharpness that look good to you on your computer (each computer has variable color resolution, as well) could be disastrous on press.
- Treat each new piece as if it is your best ever, and do not be afraid to try various viewpoints and angles once you have your main shot. Zoom in on interesting areas and experiment with lighting and depth of field. You will be pleasantly surprised by what you can create with your camera.

Setup #3

To reflect light onto the dark side, place a square of white cardboard just out of view on the right. The right side is brighter now, but the flat background robs the piece of its three-dimensionality.

Setup #4

A square softbox, made from diffusion plastic, cardboard, and duct tape, replaces the light tent. Its soft directional light renders the object three-dimensional and falls off nicely on the receding background. The white cardboard reflector brightens the right side, but now there is a distracting pattern of square highlights and the background could be a bit darker.

desired lighting conditions. Zoom in so the gray card fills most of the frame. Using the camera's Aperture Priority (AV) shooting mode, choose the aperture that will give you the depth of field you want, take a picture of the card, and note the meter readings. The camera will expose the gray card to the average it is looking to create in every photo. Now that you know the setting that will deliver this exposure, take the camera's metering out of the equation by changing to manual mode with these settings. This will prevent the camera from recalculating exposure based on what it sees after you remove the gray card. Custom white balance also can be set in some cameras using the gray card, though I have found that daylight-balanced fluorescents are very close to the "daylight" setting. Fine-tuning can be done in software later on.

Finally, set the file size and image quality to always capture the most information (largest file) using the best quality, then downsize later as necessary. If you wish to shoot in RAW format, change to that now.

Action!

Whew, now you are ready to begin photographing your turnings. Don't worry, with experience the setup process becomes second-nature and goes by quickly. First, be sure to dust off your piece before photographing it. It is amazing how much dust you do not see until you zoom in on a photograph. Take your time to determine the best feature of your piece

Exposure—Gray-card metering will give appropriate exposure for both light and dark subjects.

and face that toward the camera. You have spent many hours creating your masterpiece, so don't just plop it down in any orientation. Hold it in your hands, turn it around, look at it from higher and lower viewpoints. If you had only one frame of film left, how would you best present your piece? If it contains amazing wood figure and/or color, be sure to show this. Frame your subject and check your focus. Some cameras permit zooming in to check focus in Live View on the display. I use manual focus when on a tripod, because the auto-focus sensor might not focus on the front edge of a bowl and I want the sharpest focus to be there. If your camera has image stabilization, turn it off when using a tripod. Use the self-timer or a remote release so the camera does not shake when you press the shutter button.

When you use the exposure settings from the gray card, the image should closely represent what you see, with visible highlights and shadows. Review the image carefully and check for focus by zooming in on your display. For more depth of field, adjust the aperture smaller (larger f-stop number) and remember also to compensate by admitting more light by way of a longer shutter opening (larger fraction) in order to keep the same exposure level. For a dark detailed finial, confirm that it is not getting lost against a dark background. Try some variations on your image by raising or lowering the camera. Take close-up detail shots to show off special features. Move or turn off a light to create dimension and drama. Any major changes to lighting could require re-metering the gray card, although on cameras with Live View, you will see these changes instantly onscreen and can adjust your settings and view the results before taking a new shot. Without Live View, just shoot, look at the image, and shoot again.

Do you really need a new camera?

Digital photography provides instant results, which allow for immediate reshoots. Gone is the fear of wasting film, the wait for processing, and the anxiety of not knowing how the photos will come out.

The ultimate use of the images—for email, prints or publication—governs your camera needs. If you only intend to share pictures online and make 4" by 6" prints, you don't need a 15MP DSLR camera. Any recent compact camera with a manual setting probably is good enough—you can save your money for wood and tools. Until recently I was using my nine-year-old 4MP compact camera with very good results.

Two kinds of digital camera *The digital single-lens reflex (DSLR) camera on the left has interchangeable lenses, a large sensor, and many manual settings. The compact camera on the right may be all you need because it has a manual mode that gives you control over the exposure.*

Digital photography has given woodturners many opportunities to share our work, thanks to email and the various Internet forums. Digital format also rules in print media: All major print publications use digital technology. Most publications accept only digital images.

The choice is between a compact camera and a DSLR camera, shown side by side in *Photo a*. If your compact camera has manual settings allowing you to control the lens aperture and shutter speed, it's probably capable of taking good pictures. Camera phones generally do not have manual settings, so for that reason and others, they aren't a reliable choice.

The DSLR camera has interchangeable lenses, which are sharper than the small lenses on a compact camera. It probably has more manual controls and settings, and it has a larger sensor that can capture more information in small steps between black and white. The larger sensor also introduces less digital noise, which is like the grain in film or static on the radio.

Most DSLR sensors are sized like 35mm film, with a 3:2 width-to-height ratio. Compact cameras primarily use a 4:3 ratio. This makes a difference when you want a specific enlargement such as an 8" by 10" print (4:5 ratio): You'll have to crop the image to achieve it.

Number of Megapixels	Approximate 3:2 print ratio size		Screen resolution 72 dpi
	at 300 ppi	at 200 ppi	
2mp 1600 × 1200 pixels	5.3" × 4"	8" × 6"	22.2" × 16.6"
4mp 2464 × 1632 pixels	8.2" × 5.4"	12.3" × 8.1"	34.2" × 22.6"
8mp 3456 × 2304 pixels	1.5" × 7.7"	17.2" × 11.5"	48" × 32"
12mp 4209 × 2800 pixels	14" × 9.3"	21" × 14"	54.8" × 38.8"
15mp 4752 × 3168 pixels	16.3" × 10.9"	24.5" × 16.3"	66" × 44"
21 mp 5616 × 3744 pixels	18.7" × 12.4"	28" × 18.7"	78" × 52"

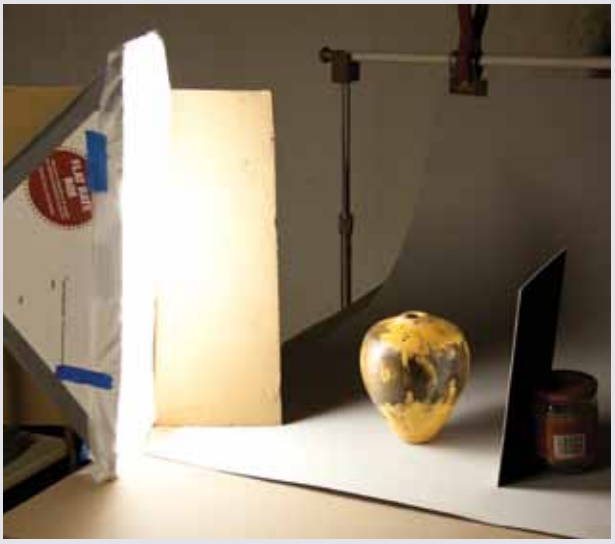
Once you have loaded the camera's memory card with the shots you want, remove the card from the camera to view it on a computer for analysis without disturbing the setup or camera position. I never disassemble my setup until I am sure I have all the images I want. Transferring files into your computer with a card reader saves time and conserves your camera's battery.

Organize your photos

Organize a filing system for easy searches by using folders based on date, project, or file type. Time spent now will pay off later. I do my weeding out before the import process, looking closely at all the photos before selecting the ones I want to import and save. I file all turning photos in a main "Turning" folder to separate them from my ▸

other photography. If I am making a specific project, such as a piece for a show, I put those shots into one folder with the same name as the piece itself. Otherwise, I usually import into a folder named by month and year. The imported photos—the original full-sized captures—go into an "Originals" subfolder so that I will always have them as backup. From there I can select the best to work on, the one or two shots that tell the entire story of the piece. I open each selected image in image-processing software, make any adjustments I think it needs, and then save the finished full-size image to an "Adjusted" folder using a descriptive name for easy identification. From there I may have subfolders for copies of these adjusted files called "Full Size" and "Web Size," with additional subfolders and files for specific needs. For consistency, I always keep the file name the same and use "Save As" to copy the resized file to its new subfolder.

Setup #5



Switching to a tall and narrow homemade softbox restricts the wide spread of the light while a second cardboard panel blocks some light from the background, making it darker. But the bright highlight still distracts attention from the piece itself.

Edit your photos

Image editing programs help you to present your object in the best possible way. Digital editing should not be used to improve the quality of the item itself: Sanding scratches or flaws need to be addressed before shooting photos. There are many options for editing software and those provided with cameras have greatly improved. Other options, which all contain similar features, include Adobe Photoshop (expensive), Adobe Photoshop Elements (more affordable), Adobe Lightroom, and GIMP (freeware). Whatever software you choose, your main objectives will be to adjust exposure levels and white balance if

Setup #6

The homemade light tent further diffuses the light from the square softbox. It is better, but the highlight is too bright and the right side is too dark.

necessary, clean up dust specks, crop (trim the photo to its final proportions), and resize.

Resize your photos

From this final image, you can resize downward from largest file size to smaller. Remember, you cannot go smaller to larger without losing quality. When resizing images, the main concern is the total number of pixels. Print publication normally requires *resolution* of *300 pixels per inch (ppi)*, while home printers do well with 200ppi. Web resolution is 72ppi. To determine *image size* at a given resolution, divide the large side by that resolution. For example, an image that is 2100 pixels wide will be 7" at 300ppi, 10.5" at 200ppi, or just over 29" at 72ppi. A 7" 300ppi image used on a 3½" by 2" business card is much larger than it needs to be. You can use it, but it will slow down processing and printing time. The same is true with the too-large image sent to your home photo printer. It will print slowly with no gain in quality. Images can be too large for websites and emails as well, requiring much scrolling to view. Some forum sites give specific size limitations, and some email filters block too-large files. For sharing photos online through emails and website viewing, I always resize down.

I resize downward using the Image Size command in Photoshop; some software, iPhoto for example, can apply a resizing menu to a selection of photos. Each software is a little different, so you will have to consult its Help section to learn exactly how you would, for example, resize a 6MP original file down to 800 pixels by 1200 pixels at a resolution of 200ppi for a 4" by 6" print. Once you have resized the image for your purposes, since the image is now described with fewer pixels, some fuzziness may have crept in. You can correct it by choosing Filter>Sharpen>Unsharp mask. Good results can be had from settings of Amount 100, Radius 1, and Threshold 3; higher settings can create abnormal halos around contrasting edges. Use Save As to copy this smaller file to a new folder; you can use the same name as long as the file is in a different folder.

For web and email, I repeat this process with resolution set to 72 and the pixel dimensions set at 1600 pixels for the largest dimension. This retains good detail within email file-size limits and can be viewed without the need for scrolling. If a forum has size limitations, use that number for your larger dimension. As before, sharpen after resizing and Save As to a new subfolder named "Web Size."

When saving in JPEG format, leave compression at the highest quality/least compression for print files and use a middle setting for small, fast files to email. For safety, be sure to back up files to an external drive or burn to disk from time to time. Better safe than sorry. ■

Ed Kelle has been a painter, sculptor, photographer, designer and now a woodturner. He currently works to incorporate all facets of his background experience into his pieces.

Setup #7

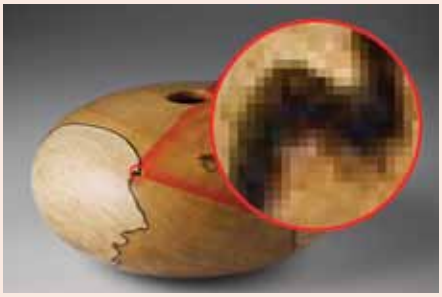
This setup combines everything learned so far: light from a single compact fluorescent bulb inside the tall narrow softbox diffuses through the white plastic on the homemade light tent, whose open back allows the background to recede. The white cardboard on the right reflects light back onto the right side of the piece. You could continue to experiment with how the light is rendering the object by fiddling with the diffusers, moving the bounce card or adding a second card, and perhaps adding a second light source, but I am pleased with this image. Compare it to where we began in Setup #1, on page 36.

Digital definitions

Take this opportunity to become familiar with your camera, learn how to change settings and how to navigate through the menus. The more comfortable with your camera you become, the better photos you will create.

Pixel/pixel dimensions

A *pixel* is a picture element, a tiny block of numbers describing color and intensity. One pixel by itself is not much, but think of a mosaic: with many tiles (pixels) arranged together, we can see an image. More tiles, more detail. Software can always downsize a large file to a smaller one by discarding pixels. Software also can mathematically inflate an image by creating new pixels, but software can't create information out of thin air — the new pixels won't contain any new detail.



Pixels — *You can see the pixels, or picture elements, in the enlarged section of this digital photo. The camera records each tiny square as numbers representing color and intensity.*

Megapixel (MP)

A *megapixel* (MP) is one million pixels, calculated by multiplying the width of an image in pixels times its height in pixels. My nine-year-old compact camera could capture 2464 pixels wide by 1632 pixels high, about four million pixels (4MP) of information. But note that if you crop an image to remove excess background, then you have lost the cropped pixels: 4MP might end up 1MP.

These days most cameras can capture more than 6MP at their highest setting. It's usually best to capture large and downsize later. Memory cards are inexpensive; keep spares on hand. That will enable you to take the best-quality pictures without worrying about having enough space for them.

Kilobyte/Megabyte

Kilobytes (KB) and *megabytes* (MB) measure file size, not image size, and images can be compressed to different sizes, so they occupy less storage and are faster to email. The more you compress an image, however, the more the image can degrade, even though it retains the same number of total pixels as before. Don't compress your best images.

Resolution/Image size

Image size is the relationship between your uncompressed file size and your desired output resolution. Email files and screen-based images for websites and Internet forums are limited to 72 pixels per inch (ppi), so an image measuring 4" × 6" onscreen would need to contain 4 × 72 × 6 × 72 pixels. That's 124,416 or 125KB. Home-quality inkjet printers generally need 200ppi at final size to give a high-quality print, so that same 4" × 6" image needs to contain 4 × 200 × 6 × 200; that's 960,000 pixels, almost 1MP. Most publications require images of 300 pixels per inch (ppi) at final size. An image measuring 4" × 6" on the magazine page needs to contain 4 × 300 × 6 × 300 pixels; that's 2,160,000 or just over 2MP.

The chart on page 39 lists common megapixel sizes for compact cameras and gives the size file to expect without cropping. If I took a 4MP image for print publication, I would divide the pixels in the long dimension (2464) by 300ppi to determine that the photograph could print up to 8.2" on the long side. For printing on a home inkjet printer, 2464 divided by 200ppi would give a 12.3" print. This same file viewed online would be more than 34", way too large. Resizing the image is necessary.

Shutter speed

The shutter speed is the time in seconds or fractions of a second that the camera's lens remains open to admit light. Typically useful shutter speeds range from 1/60 of a second to 1/250 of a second, though most digital cameras are capable of a much wider range of settings. You can't hold the camera at shutter speeds slower than 1/60 second, but a tripod enables you to use slow shutter speeds.

Aperture

The aperture setting represents the size of the lens opening. Larger opening, more light, shorter exposure. Smaller opening, less light, longer exposure. Aperture is expressed by f-numbers or f-stops, a system in which a small number such as f/3 indicates a large opening and a large number such as f/32 indicates a small opening.

ISO/ASA

The *ISO* setting on a DSLR controls your camera's sensitivity to light, same as the ASA number with film. A higher setting can make a photo with lower light, but also may introduce more noise, which is similar to the grain of film. In low light, you might need to go to ISO 3200 and beyond, but there will be a tradeoff in image quality. Unlike with film, digital ISO can be changed from shot to shot.

Optical zoom/digital zoom

Optical zoom is the magnification you can get from the camera's lens, from widest angle to maximum telephoto. For example, going from 4x to 7x results in more magnification. *Digital zoom* is calculated by the camera beyond its optical limit. It is not as crisp and clean as optical zoom. It's best to use optical zoom whenever possible and digital zoom only when you have no other choice.

Live View

Many cameras display your image onscreen as it will appear when photographed, so you can change settings and get instant feedback before you press the shutter.

RAW/JPG

RAW is the largest file format capturing the broadest range of information. RAW files require advanced software such as Adobe Photoshop for processing. The files are not compressed and are fully editable for exposure, white balance, color saturation, and sharpness.

JPEG (JPG) files are more typical and are easier to use. They can be compressed for emailing. The total number of pixels captured does not change between RAW and JPG format, but the amount of data per pixel is different. Sports photographers shoot JPG for fast, continuous shooting. Professional studio and landscape photographers use RAW for total control over exposure, color balance, brightness, contrast, hue, and saturation. RAW format is not a necessity for most people.

White balance/color temperature

Did you ever shoot daylight film indoors and get an unwelcome color shift? Each light source has a characteristic *color temperature.* Our eyes adjust instantaneously to different light sources; we do not consciously register shifts in colors. Cameras, however, record color as it actually is. Digital cameras allow you to set the *white balance*, which governs how the sensor interprets color temperature. Most cameras have an auto setting that does a good job most of the time.

Donuts and Coffee

A Small, Versatile Chuck Lets You Turn Scoops

Mike Peace

A simple one-piece coffee scoop is fun to turn and makes a great gift. It begins as a spindle project, turning a handle with a ball on the end. Then you change the axis to hollow out the bowl. The challenge is chucking the piece sideways. My friend and professional wood artist Peg Schmid taught me an easy way to make these scoops, using a donut chuck *(Photo 1)*. Larger versions of the donut hold bowls, tall vessels, or goblets for reverse chucking. Whatever the size, a donut chuck consists of a back plate that attaches to the headstock and a turned wood ring, or donut, that connects to the back plate with machine screws or threaded rod. (On this small chuck, the screws thread into T-nuts embedded in the back plate.) The workpiece fits between the plate and the donut, and the screws hold it tight. You do the turning through the hole in the donut.

You will probably spend more time making this donut chuck than turning your first scoop. Take your time, though, because you can use this chuck for years to come.

Rough out the chuck parts

First, make the back plate. Begin with a 1"- (25 mm-) thick piece of hardwood, cut to 5½" (140 mm) square. Drill a ⅛" (3 mm) hole though the center. Mount the blank between centers. Turn it round and cut a tenon ¼" (6 mm) long to fit a scroll chuck.

Next, draw a circle halfway between the edge of the tenon and the edge of the plate *(Photo 2)*. You will use this line later when drilling holes for the T-nuts. Round over the edges front and back.

Cut a blank for the donut from a piece of ¾" (19 mm) hardwood; make it 5½" (140 mm) square. Mark diagonals to locate its center, then drill a shallow ⅛" hole in the center. Remove the back plate from the lathe and screw it, tenon side up, to the donut square using the ⅛" holes. Next, locate the T-nut holes. Lay a ruler across the tenon, lining it up with the diagonals on the donut blank. The centers for the T-nuts are where the diagonals cross the circle on the back plate *(Photo 3)*.

Drill the holes

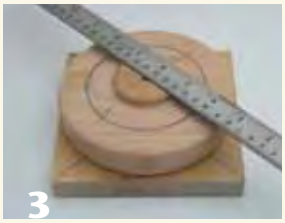
The halves of the chuck are held together with ¼" (6 mm) machine screws and matching T-nuts. The screws should be 2½" to 3" (64 to 76 mm) long.

Begin by drilling a ⅛" pilot hole through both pieces of wood. Place the assembly tenon side up on a drill press. Use a ¾" (19 mm) Forstner bit to drill four shallow holes to recess the heads of the T-nuts in the back plate. Align the center point of the Forstner bit in the pilot hole. Do not drill deeper than necessary to make the T-nuts flush with the surface. Flip the assembly over and drill four more shallow holes to recess the screw heads.

Measure the shoulder of the T-nut to determine the correct drill size for the main hole; it will probably be 5⁄16" (8 mm). Drill through both pieces of wood, centering the bit on the pilot hole. You will find that a 5⁄16" hole ▸

1 A donut chuck holds the scoop so you can hollow the bowl.

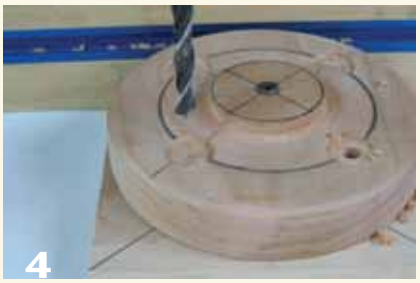
2 After turning the back plate, add a line to locate holes for T-nuts.



3 The T-nuts go where the diagonals intersect the circular guideline.

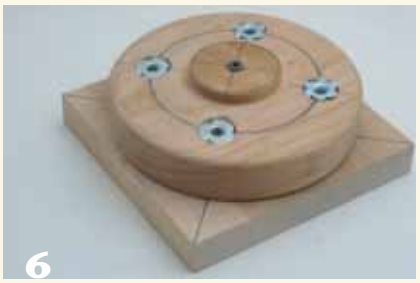
provides some necessary play for the machine screws *(Photo 4)*.

Finally, drill a side hole to accommodate the scoop handle. Stand the wood on its side and grab it with a large woodscrew clamp. Make sure the clamp contacts the entire flat surface of the wood and is screwed tight *(Photo 5)*. Use a ⅞" (22 mm) Forstner bit to drill down one side of the chuck, centering the bit where the two plates touch. Drill carefully and slowly, and clear chips from the hole frequently. Drill to just past the edge of the tenon.



Drill both halves of the chuck for the T-nuts.

A woodscrew clamp supports the chuck as you drill the hole for the handle.



Hammer T-nuts in the back plate.

Secure the donut with two screws when you shape it.

Turn the donut round and remove the sharp edges.

Mark a 1½" (38 mm) circle on the donut to hollow through.

Stop hollowing when you reach the back plate.

Cut a ⅜" (10 mm) deep hollow in the center of the back plate.

Use a spindle gouge to hollow the inside of the faceplate.

Rough-turn the blank and define the bowl area of the scoop.

Assemble and shape the donut

Hammer T-nuts into the holes in the back plate *(Photo 6)*. Screw in at least two screws opposite each other *(Photo 7)* and tighten them to hold the two pieces of wood together. Remove the center screw.

Mount the two pieces into a scroll chuck, using the tenon on the back plate. Turn the donut round and round over the edges *(Photo 8)*.

To make the hole in the donut, begin by marking a 1½" (38 mm) circle on it *(Photo 9)*. Use a spindle gouge to hollow the opening to that line. Round over the front edge to remove any sharp edges. This will make the shoulders of this opening approximately 1¾" (44 mm) in diameter. Be aware that the screw heads are close to the cutting area. Stop hollowing when you have cut into the back plate *(Photo 10)*.

Leave the back plate in the chuck but remove the screws and set the donut aside. Use a spindle gouge to hollow the center of the back plate to mimic the round ball of the scoop. This hollow does not have to be exact, but it must be concave. You will be able to use the chuck for a variety of scoops if you make the hollow larger than necessary. This chuck will accommodate scoop balls ranging from about 1⁹⁄₁₆" to 1¾" (40 to 44 mm) in diameter. Do not hollow more than ⅜" (10 mm) deep *(Photo 11)*. Cutting deeper can cause the tenon to fail.

Reattach the donut to the back plate, but reverse the donut so its interior face is out. Begin in the center and remove any remaining wood from the previous hollowing. Round over all edges so that any surface touching the ball of the scoop will not leave a mark or depression. If the chuck does leave marks on the scoop, glue in a ring of thin leather or closed-cell foam. The


14
Use a PVC ring to identify high spots as you try to make a perfect sphere.


15
Turn and then embellish the handle.

shoulders of the opening will be close to 2" (50 mm) *(Photo 12)*. Remove the screws and remount the donut with its front side out. Your chuck is now ready to use.

Rough-turn the scoop

Make the scoop from a reasonably dry hardwood blank approximately 2" (50 mm) square and about 6½" (165 mm) long. I have used dogwood, maple, cherry, and Bradford pear. I avoid spalted wood or wood that contains worm or insect holes.

Turn a cylinder with a tenon and shoulder to fit your scroll-chuck jaws. I usually shape the tenon before turning the entire cylinder completely round, making it 1¾" (44 mm) in diameter.

To make sure I get rid of the hole left by the live center, I use a small parting tool to reduce the end of the cylinder by ¼". I stop the parting before I get to the live center. Then I mark a line 1¾" in from the end and make two parting cuts side by side to a depth of about ½" (13 mm) to define the bowl. Mark a centerline on the bowl area to help you shape the bowl evenly *(Photo 13)*.

Shape the bowl and handle

Remount the blank into a scroll chuck and bring up the tailstock for support. Begin by shaping the scoop bowl, striving for a perfect sphere. Do not shape the handle yet because you want as much mass in the workpiece as possible to reduce chatter as you shape the ball. Turn the bowl end as close to a ball as you can. Any problems in shape will be obvious after you hollow out the bowl.

Move the tailstock out of the way and carefully turn away the nub (and hole) left by the live center. If necessary, support the bowl with your free hand while you do this. Use a slice of plastic plumbing pipe that is about 1½" in diameter to move around the surface to help find and turn away high spots *(Photo 14)*. Sand the bowl before shaping the handle. I usually start at 120 grit and stop at 400.

Shape the handle by working from the bowl end toward the headstock. I make the smallest diameter about ⅜" (10 mm) and the largest diameter about ¾" (19 mm). Make sure the design feels good in the hand and has no points or sharp edges. Before adding burn lines, use a spear-point scraper or the point of a skew chisel to make small V cuts to keep the burn wire from drifting. Sand, then add burn lines *(Photo 15)*.

Carefully support the scoop with your free hand while parting it off, or use a fine saw to do the final parting.

Hollow and finish the bowl

Insert the newly turned ball and handle into the donut chuck. Tighten all four screws as evenly as possible. The handle looks best when it is pushed back toward the back plate *(Photo 16)*. This slight tilt gives the finished scoop a pleasing look and makes it easier to use to scoop coffee. Drill a depth hole in the ball with a ⅜" twist bit in a Jacobs chuck *(Photo 17)*. Hollow the ball with a spindle gouge, followed by a round-nose scraper *(Photo 18)*. Finish the walls to about 3/16" (5 mm) thick. I made a small caliper from stiff music wire that I bought at a hobby shop. The calipers allow me to measure the walls without removing the scoop from the chuck *(Photo 19)*.

A bowl with a 1¾" outside diameter holds about two tablespoons of coffee grounds. You can calibrate the scoop by using a measuring spoon to fill it, hollowing it more as needed.

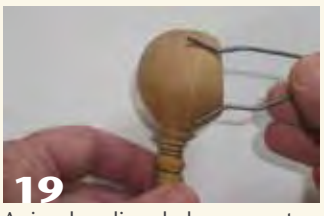
The best finish might be no finish at all. I typically apply a couple of coats of antique oil. ■

Mike Peace took up woodturning shortly after retiring from doing payroll software implementation. He also served in the U.S. Army Reserve. Mike is president of the Chattahoochee Woodturners and is active in two other chapters in the Atlanta area. He recently helped plan and run a workshop as part of an EOG awarded to Chattahoochee Woodturners for those wanting to improve their demonstration skills.


16
Mount the scoop with the handle pulled back out of the way.


17
Drill a depth hole with a ⅜ (10 mm) bit in a Jacobs chuck.


18
Hollow the bowl with a spindle gouge and scraper.


19
A simple caliper helps you get the wall thickness right.

Treen

Robert Sutter

The *Oxford English Dictionary* defines *treen* as "made of tree." However, for my purposes *treen* is any object made of wood that is not furniture. Before the Industrial Revolution, craftsmen working alone or in small groups produced a wide variety of objects for household use from the forests all around them. To be sure, the blacksmith, the silversmith, and the pewterer all worked in metal, but by and large it was the age of wood. This era ended in the late 18th and 19th centuries as mechanization took over, when wood was replaced by ceramics and other materials that lent themselves to mass production.

Later in the 19th century, small businesses like the Peaseware

Peaseware, from left, five-piece thread holder, sugar bowl with lid, small cup with lidded boxes. In 1850, David Pease established a water-powered turning factory in northern Ohio, which his descendants continued in business until 1975. The factory produced a wide variety of wooden objects, mostly turned green from the abundant maple that grew nearby.

Peaseware sugar bowl, 8" (200 mm) tall. The lid is a snug fit turned with an integral knob.

These five parts fit together to make the Peaseware thread holder, 5" (125 mm) dia.

Woodturning Factory in Ohio (1850–1975), and John Grass Woodturning in Philadelphia, founded in 1863, kept the woodturning craft tradition alive. Peaseware was mostly hollowware such as sugar bowls, thread holders, small boxes, and cups, as shown in the photos, while the sign on John Grass's building offered "wood poles, rollers, handles, mallets, mauls." Edward Pinto illustrates seven thousand useful wooden items within the pages of the standard reference, *Treen and Other Wooden Bygones*. While some are pedestrian, like John Grass's mauls, others are amazing flights of fancy (see page 48) created within the strictures of wood worked on a water-powered lathe with the craftsman's steel tools.

When my wife and I began to collect treen, there weren't many other people interested in these old wooden bits and pieces, so prices were reasonable, both in America and abroad. From our collection of seventy or so pieces of treen, I chose sixteen to illustrate how form, scale, texture, complexity, and the craftsman's skill can combine to produce fascination. As a designer, I look to these pieces as a rich trove of ideas. As a maker, I'm astounded by the workmanship these craftsmen routinely achieved.

Studying these traditional woodturning forms reminds me to be true to the lathe, its tools, and the material we sometimes take for granted. I don't suggest that we should never stray from the simple bowl made of beautifully figured wood. But the exotic woods that were available to our 20th century heroes are not so easily come by today. This fact encourages many turners to experiment with surfaces, form, and scale, but they are always building on our rich tradition and its recognizably comfortable ideas. ■

Bob Sutter, a retired graphic designer and photographer, lives in Hanson, MA, where he turns "a variety of stuff, always looking for breakthroughs."

The bottom of the collapsible cup is a separate piece plugged into the base of the case. This allowed the four rings that telescope together to be turned separately and then assembled with the base.

The collapsible cup is shown closed in the middle photo on page 48.

London bobby's whistle, 4" (100 mm) long. The incised rings indicate the piece was turned and end-bored, then cut to make flat surfaces top and bottom and open the airway.

The five-piece cherry fancy had to be made of well-seasoned wood to avoid distortion. It has no evident purpose beyond displaying the skill and ingenuity of the anonymous turner.

The photo at right includes the assembled fancy.

Three complex tours-de-force showcase the anonymous artisans' skill. From left, collapsible birch cup in case, 3" (75 mm) tall when open; stemmed goblet with eight rings, 5" (125 mm) tall; turner's fancy, 8" (200 mm) tall.

Lignum vitae spice grinder from England, 10" (250 mm) tall. Hand-chased threads join the three main parts; the iron grinding mechanism is hand forged.

Painted spill holder, 7" (175 mm) tall. Spills, used to light lamps, candles, and pipes, were produced by running a spill plane over the edge of a piece of dry pine. Most likely spills were purchased from local cabinetmakers and carpenters.

Boxwood lemon squeezer, 7" (175 mm) long, with hand-chased threads.

Cherry standish, a stand for inks, pens, and other writing materials, 7" (175 mm) tall. The removable canister with the perforated top is a sander, used to sprinkle fine sand on a document to dry the ink. The center vase held pens. Most treen was left unfinished or polished clear, but this piece has been chemically stained to give the cherry the color of mahogany.

Rosewood sewing aid, 5" (125 mm) tall. This complex gadget clamps to a table so that the pincushion top is handy to the sewer. The retractable tape is marked in "nails," an old fabric measure of 1/16 of a yard. Its complex decorative elements suggest it was turned on a Holtzapffel lathe or some equally versatile machine.

Unlike a standard rolling pin, this Pennsylvania Dutch utensil could be used one-handed. The frame of the pin, joined with a mortise and tenon, is an example of the melding of turner and cabinetmaker traditions.

DAMAGE-CONTROL PLUGS

Music to My Ears

Grace Lewis

The friction chuck

For turning DC plugs, I use a friction chuck. When mounting on a friction chuck, the billet is placed between centers and the tailstock tightened, thus holding it by pressure, or friction. The chuck has two components: (1) a headstock pad and (2) a tailstock extension turned to fit a live center. The headstock pad can be attached to a faceplate or tapped to fit the spindle thread.

Components of a friction chuck (back row, left to right) headstock-mounted wooden pad, tailstock extension (custom made to fit in a Woodcraft Pro live center via magnetic mounting), live center, and (in front) sleeve for tailstock extension. The sleeve is mounted over the tailstock extension to prevent accidental nicking of the steel during production turning.

Instead of a steel extension for the tailstock, a shopmade extension that fits into the live center can be used. A long one like this, however, does not run as true as a shorter version, but it does allow for the use of a longer toolrest.

Advantages of friction-chucking method:

- It prevents undesired penetration of the wood by a drive or live center.
- The billet is easily mounted and held safely at a lathe speed between 1200 and 1800 rpm.
- The diameters of the headstock pad and the tailstock sleeve serve as perfect gauges for sizing the plug diameter on either end, eliminating repeated measuring.
- Allows for precise cutting without interference from a scroll chuck.
- Allows the billet to be cut to its finished length prior to mounting.

Damage-control (DC) plugs are cone-shaped wooden objects used to plug pipes during repair work on ships. They are made in various sizes *(Photo 1)*. In this article you will learn how to make a plug that is tapered from 1½" to ½" (38 mm to 13 mm) in diameter over a length of 2" (50 mm). The plugs are easy to turn, require little equipment, and can be produced in minutes. They make good use of small pieces of wood.

For this size plug, you will need wood that is slightly larger in cross section than the largest finished diameter and 2" in length. You will also need wood to make a friction chuck (*Photo 2 and Friction chuck sidebar*).

Mount your first blank of wood between centers (*Photo 3*). You can eyeball the center or pre-mark it, but make sure the wood grain is parallel to the lathe axis (spindle turning). Before you start turning, set your lathe to a speed between 1200 and 1800 rpm and wear a faceshield—some woods

1 Damage-control plugs come in various sizes.

2 Friction chuck components are shown before the plug stock is mounted onto the lathe.

3 The mounted billet is ready to turn into a tapered plug.

DC plugs in shipyard use

A DC plug is inserted snugly into pipe by a head-on hit from mallet or hammer.

Plugs are removed by executing a swift tap on the side of the plug.

Depending on the amount of swelling from water, a plug may be used more than once in similarly sized pipes.

are prone to splintering and the blank is held by friction only.

Turn the plug

Round the edges of the block. I used a round-nose chisel to rough down the corners (*Photo 4*). Start shaping the taper by taking wood off of the tailstock end of the block (this will become the ½" end). Work your way to the left until you have roughed out a taper (*Photo 5*). As you form the angle, it is a good idea to occasionally readjust the toolrest so it is parallel to the tapered wood.

Continue working, this time from the left to right, to refine the taper. When the plug is the shape you want, take lighter, finer cuts along its entire length, aiming for the straightest line possible. Light cuts reduce the potential of using too much radial force, which can result in overcutting or in unwanted surface undulations. Although there is some margin in the sizing of plugs, neither end should be more than 1/32" too large or too small. It is okay to be slightly oversized on the large end and undersized on the small end, but not vice-versa.

By now your plug is nearly finished. There was some tearing of the wood fibers, so to achieve a smoother finished product, I used a shear cut: Rotate the scraper to a 45° angle with the bevel rubbing, still cutting from left to right. Lift the handle as you cut downhill (*Photo 6*), for the final few cuts.

To improve the final surface of the wood, use sandpaper of the desired grit (120-grit works well) to eliminate slight undulations and then burnish with synthetic steel wool. As with any type of production turning, you should occasionally measure a plug to ensure your finished products are correctly sized.

I use a permanent marker to sign my plugs with a creative doodle on the bottom (*Photo 7*). I play the bass, so I use the bass clef.

Opportunities

You have successfully created your first DC plug (*Photo 8*). As I discovered, DC plug production is a great opportunity to earn extra cash for personal use. I was able to earn the money I needed to attend bass camp and further my musical knowledge.

Others have also benefitted from this project. One youth turning group in Virginia was able to pay for a set of tools by turning an order of DC plugs. Plugs can also be modified in shape or size and decorated to make DC-plug dolls (*Photo 9*).

As you can see, turning damage control plugs is a fun project that may offer a fiscal benefit. I hope this article gives you everything you need to experience the DC plug for yourself! ■

Grace Lewis is a high school student and aspiring musician from Chesapeake, Virginia. After winning a lathe in the Richmond AAW Symposium, she began to dabble in woodturning and was able to fund some of her musical endeavors through the projects she completed. Grace plans to continue on from high school to become a professional bassist and teacher.

4 Begin with initial roughing cuts to eliminate corners.

5 Taper the wood to obtain a basic cone shape. Start at the tailstock end.

6 Shear cutting with a round-nose scraper improves the surface quality.

7 Add a personal touch by signing your work—in my case, a bass clef.

8 The completed DC plug.

9 DC-plug dolls can be made using the basic plug shape.

{PLATTERS}

Ron Katz

I have always had a passion for carpentry with exotic woods. For the past ten years, I have combined careful detail and innovative design to build fine furniture. In 2009, I dedicated myself to woodturning and developed a unique style of arranging exotic woods to form platters and bowls.

Combining my electronic engineering background and a thirty-year career as a professional photographer, I use computer programs and a CNC router cutting process to compose forms and designs for platters.

My primary attraction to this style of composition is my love for modern art and uncluttered geometric design. The abundance of exotic wood plays well into my passion for vibrant color composition. All platters are treated with food-safe oils and are made with nonendangered woods. ■

To view more of Ron's work, visit sawdusters.ca

2009, Curly roasted maple, curly maple, 3" × 9½" (8 cm × 24 cm)

2009, Ash, goncalo alves, 3" × 9½" (8 cm × 24 cm)

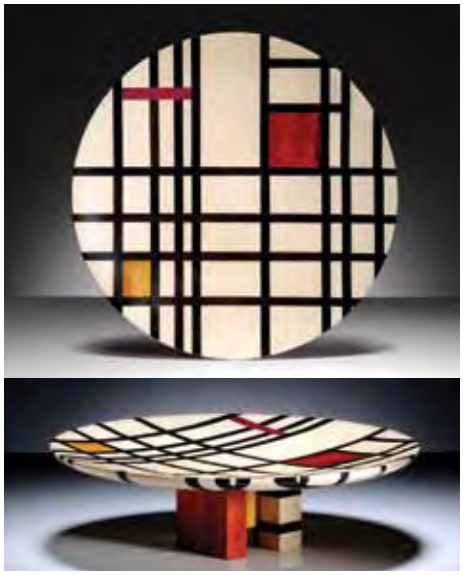
2010, Cocobolo, 2½" × 10½" (6 cm × 27 cm)

2009, Bloodwood, South American oak, 1½" × 10" (4 cm × 25 cm)

2009, African blackwood, holly, bloodwood, pau amarello, 3" × 9½" (8 cm × 24 cm)

2010, English elm, pear, imbuia , black epoxy, 2" × 10" (5 cm × 25 cm)

2011, Roasted curly maple, curly maple, brass rod, 3" × 12" (8 cm × 30 cm)



2010, Ebony, holly, Osage orange, bloodwood, purple heart, 2½" × 11" (6 cm × 29 cm)

2010, English elm, walnut, red amboyna burl, 3" × 12" (8 cm × 30 cm)

2010, Roasted curly maple, curly maple, red amboyna burl, thuya burl, African blackwood, 2¾" × 11½" (7 cm × 29 cm)

THE REMARKABLE HANSEL COLLINS

Joshua Friend

Located in the heart of the picturesque Litchfield Hills of northwestern Connecticut is a bed and breakfast called 7C Herb Garden B&B. There are many bed and breakfast establishments in this area; it is a famous destination for experiencing classic New England countryside. But what makes this place noteworthy—especially to anyone interested in woodworking—is its proprietor, Hansel Collins, and his wife, Alicia. At age 90 and blind, Jamaican-born Collins remains an avid woodworker and offers for sale skillfully made wooden kitchen items, hand-carved or turned on the lathe.

When I arrived at the B&B to interview Hansel, I thanked him for taking the time for me. "All I got is time," Hansel laughingly said in his easy accent. "Not much money, but lots of time." It is evident that he is content with his life. He is not in a hurry, and even at 90 he appears strong and able. I am inspired.

Blindness and age are no handicap for Hansel Collins, pictured here at the carving bench.

We sat at his dining room table, which is in the oldest portion of the house—dating to the 1730s, with the original floorboards! Strewn across the table is a bounty of Hansel's woodcrafts: tasting and mixing spoons, spatulas, forks, salad servers, cutting and cheese boards, and letter openers, which were all hand-carved and sanded at the carving bench. There is also a turned wooden bowl, 18" in diameter. Its creation would be impressive for any woodturner, let alone someone without sight.

Hansel gradually went blind from glaucoma. In 1968, when he and Alicia bought the four-acre property, his sight had deteriorated to limited tunnel vision. To make matters more challenging, the old house had sat vacant for four years before the Collinses found it, so it needed a lot of work, which Hansel did mostly by himself.

A growing family

Hansel and Alicia moved to rural New Preston, CT, from Bridgeport, CT, because they needed more space for their growing family. Over the years, they had six children of their own, fostered twelve, and adopted three of the foster children. Hansel first told me about their kids over the phone, and when I asked again to confirm how many they had fostered, he replied with his characteristic humor, "Twelve so far." I told Hansel it is clear that he is not afraid of hard work, and he replied simply, "I grew up on hard work." There is no arrogance or resentment in the statement, merely factual acknowledgement.

If you visit the 7C Herb Garden B&B, you might hear firsthand the story of how Hansel and Alicia met and eventually married. Hansel came to the United States during World War II as part of a program that provided additional farm labor while civilians were called away

from their jobs. As it happened, a woman who lived near Hansel had the flu, so he offered his "home remedy"—quinine. The quinine nearly killed her, but even so, she and Hansel became friends.

That woman was Alicia's aunt, and through her, he learned of Alicia, who was living in Kingston, Jamaica. He and Alicia began writing to each other and sending pictures. They could not talk on the phone; "that was not a privilege." Eventually, he proposed in a letter, without ever having met her or heard her voice. When she accepted, he bought her a gown and a ring and made his way back to Jamaica, where they were married a week later.

When I expressed my surprise at their long-distance courting, Alicia was quick to remind me that they have been married for 57 years. She explains, "You get to know someone better by writing back and forth. When you have something to say to someone, even if they are in the next room, write it down. You have to think through it as you write it, so it is better than just speaking to each other."

Working wood blind

After his vision was gone completely, Hansel became involved with The Connecticut Institute for the Blind (Oak Hill) to help him transition to living without his sight. They offered to supply Hansel with some woodworking tools and machines, on the condition that he learn to use them safely. So Hansel attended The Carroll Center for the Blind, in Newton, MA, which helps the blind achieve independence through rehabilitation and educational services. There, Hansel took a course on the safe use of woodworking machinery. Hansel told the staff at the Center that he had heard it is possible to cut circles on a table saw, and he wanted to learn how. They taught him that—and much more. Shortly after the course, a truck arrived at the Collins' house with machinery: a table saw, lathe, drill press, bandsaw, and more.

Hansel began to produce wooden kitchenware and sell it at the B&B. He uses local hardwoods, such as cherry and maple. Spoon and fork blanks are cut on the table saw. The tines of large forks are created with the workpiece standing vertically at the table saw, held against a miter gauge. Then he takes the work to his carving bench, where he hand-shapes each piece using carving chisels, rasps and files, and a variety of handplanes. Finally, the work is hand-sanded and mineral oil applied.

Showing me around his shop, Hansel dons a heavy work apron and ties the strings behind him. He sits at the carving bench and demonstrates the sanding of a large spoon. His right hand sands with rapid motion, then his left hand darts in to evaluate the result. The confidence of his movements shows it is a well-orchestrated and well-practiced process.

At the lathe, Hansel primarily makes bowls and plates to complement his line of wooden kitchen items. Although he received some education on safely using other tools and machines, he taught himself how to use the lathe without ever having used one prior to becoming blind. He had seen lathes in action; his brother was a wheelwright who made spindles on improvised, hand-cranked lathes erected in the forest, so he understood the concepts.

Unlike his brother, Hansel has the benefit of using a modern Delta lathe with a heavy floor-standing toolrest. The headstock is angled and moved to the center of the ways so he can turn larger-diameter pieces. He has a small block of wood clamped to the toolrest that he uses as a guide for presenting his cutting tool. With the lathe off, he positions the tool and verifies its distance from the workpiece. Then he turns the lathe on and slowly advances the cutting tool into the spinning wood. After the piece has taken shape, he proceeds with sanding, also at the lathe, and works through to a fine polish. Finally, he applies a coat of mineral oil.

When I first heard of Hansel Collins—a 90-year-old blind woodworker from Jamaica—I thought I would interview him and just focus on the story of his craftwork. But, as it is with many woodworkers, the craft is part of a larger story. During our brief interview, I saw that there is much more to Hansel's rich, remarkable life—his family, his work ethic, his gracious and persistent style. I was inspired just meeting him. So it seems fitting that now, with all of their children grown and on their own, Hansel and Alicia welcome people from around the world into their B&B to continue sharing themselves and extending their incredible legacy. ■

Joshua Friend, a woodturner and writer, is a member of the Nutmeg Woodturners League, an AAW chapter that meets in Brookfield, CT. See jfriendwoodworks.com for examples of his work and contact information.

To learn more about the 7C Herb Garden B&B, visit 7cherbgarden.com.

A selection of Hansel's craftwork, mostly in cherry and maple.

Prior to turning on the lathe, Hansel uses his fingers to gauge the position of his cutting tool in relation to the wood.

Hansel and Alicia Collins, owners of the 7C Herb Garden B&B, New Preston, CT.

Some fairly simple turnings create an attractive, sturdy feeder that will draw many birds to your yard.

Turn a Bird Feeder

Rudi Franke

Our back yard is a wilderness paradise close to a large mid-western city. As a longtime bird lover, I decided to add a bird feeder to our landscape. I wanted something with ample seed capacity, excellent weather protection for the birds and seeds, and good resistance to marauding squirrels. I combed through catalogs, but everything seemed inadequate and overpriced.

Since I couldn't find the right feeder ready-made, I built my own. I chose a cylindrical seed reservoir, so I would not have to make a jointed structure to hold glass panes. A cylindrical feeder also meant I could put my lathe to good use. I mounted the feeder on a post made from PVC drainpipe, which won't rust or decay.

The feeder shown here is my latest version, with simple, practical features that make it easy to use and maintain. High winds won't blow off the top, which protects the seeds and birds from getting wet in rain or snow. Six birds can feed at once. The turned wooden top and bottom hold a large seed reservoir made from an acrylic plastic tube. I designed the feeder so that I could turn the bottom and perch from the same piece of wood. Using a 4"- (102 mm-) diameter PVC pipe keeps the feeder stable; oiling it keeps the squirrels at bay. I also added a large plastic disk on top to keep red-shouldered hawks away.

Begin at the bottom

The bottom of the feeder requires the most work to fabricate, so it is a good place to begin. Rough-cut a circle from a 12" (30 cm) square blank of clear ¾" (19 mm) wood. I used tulip poplar. Mount it on a faceplate and turn it round. Make a similar disk for the feeder top.

Mark lines 60° apart on the bottom disk to locate holes in the rim for ¼" (6 mm) dowels to hold the perch to the bottom's center. Mark a bold red line on one side of the blank from the outer perimeter toward the center. This will help you orient the perch and center portion properly once you separate them. Then mark a series of bold red lines ¾" (19 mm) from the edge of the disk and parallel to it *(Photo 1)*; these will appear as a reddish blur while the lathe is running, to help show you the inner edge of the perch.

Remove the disk from the faceplate to drill the dowel holes on the rim. Use the guidelines on the face to locate the hole positions. Hold the blank on edge in a woodscrew clamp or clamp it to a fence on the drill press table. Use a square to be sure the guideline is vertical before you drill a hole. Drill these holes oversized for a ¼" dowel. Try a 9/32" (7 mm) bit and do a test fit. If the dowel does not slide into the hole easily, go up to the next-largest bit.

Do not worry about the dowel being too loose; the geometry of the finished piece holds the perch securely in place. Drill six holes at least 3" to 3½" (76 to 89 mm) deep; the deeper the dowels go into the center, the better. Drill small holes on the face at each of your red marks. Flip the disk over and draw another series of red lines where the holes appear.

Remount the blank and draw a 6"- (150 mm-) diameter circle on it to mark the outside of the groove for the plastic seed reservoir. Make a light initial cut with a thin parting tool, then check with the plastic tube to see if you have it right. Once you have the outside of the groove established, test-fit the tube again. When it fits, cut the groove at least ⅛" (3 mm) deep and a bit more than ⅛" wide. The extra width allows for expansion and contraction of the wood *(Photo 2)*.

Round over the edge of the blank to begin shaping the perch and then begin rounding the inner edge of the perch, about ¾" (19 mm) from the edge, while also removing about 1" (25 mm) of wood toward the center of the disk.

Cut from both sides. When you have removed ¼" from each side, you will begin to see the holes for the perch supports. Use them to gauge how much more material to remove so that the perch ring does not separate completely. Stop when there is still about ⅛" of wood left. Sand the outer profile and redraw your red indexing mark across both pieces.

Remove the disk from the faceplate and use a handsaw to cut away the perch *(Photo 3)*. Use a sanding-drum attachment in the drill press to smooth and refine the inner profile of the perch.

Saw away most of the scrap attached to the disk. Remount it onto the faceplate, turn a smooth profile on the rim, and turn a shallow cove between the slot for the seed chamber and the outer rim. Give the piece its final sanding and drill a ⅝" (16 mm) hole through the center.

To attach the perch to the center part, lay both pieces on a flat surface with the indexing marks aligned. Insert a dowel into a hole in the perch, apply a bit of waterproof glue (I used Gorilla glue) to its inner end, and push it into the corresponding hole in the center part *(Photo 4)*. Try not to get any glue on the perch. Take a second dowel and push it through a hole on the opposite side of the perch. Apply glue and push in the dowel. Carefully center the two parts and glue in the remaining dowels. Let the assembly dry overnight.

Add the anchor

The anchor holds the feeder firmly on the bell-shaped, or female, end of the PVC pipe. It consists of two wood disks and a ⅝" dowel 10" to 12" (25 to 30 cm) long that passes through them and the feeder bottom *(Photo 5)*. ▸

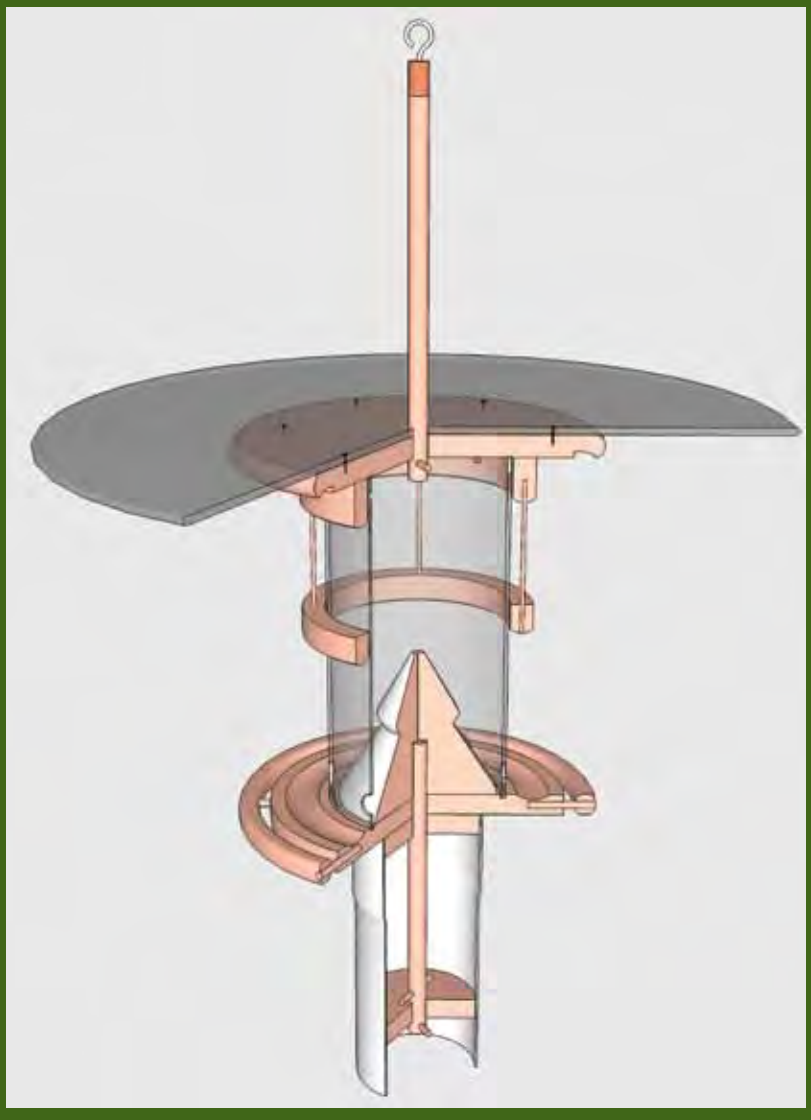


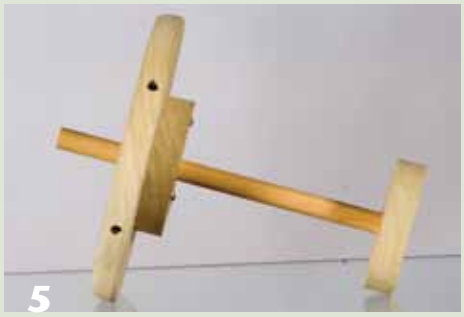
Figure 1. This cutaway shows how the parts are shaped and assembled. The large hawk guard on the top is optional.

Pencil guidelines locate holes for dowels. The red marks are guides for turning the perch and keeping the pieces oriented.

The feeder bottom has a recess for the plastic seed tube. The outer perch ring is ready to be sawn free.

The perch, separated from the feeder bottom, is ready to be sanded.

Center the feeder bottom and perch, aligning holes; then glue dowels to anchor the rim to the feeder bottom.



Two small disks anchor the feeder in the post. A dowel and screws connect the pieces.

A restraining ring is turned from scrap and the center is sawn away.

Turn the two disks from scrap, making one to fit the bell end and the other to fit the straight section of pipe. Turn them about ⅛" smaller than the inside diameters of the pipe, to allow for seasonal expansion of the wood. Then drill a ⅝" hole through each for the dowel.

Drill two ¼" holes near the end of the dowel for wooden pins to hold the lower disk in place. Drill three pilot holes in the upper disk, so you can screw it to the underside of the feeder bottom. (I used brass screws throughout both for looks and corrosion resistance.)

Next, drill a hole centered on the rim of the upper disk for a 2" (50 mm) screw. Screw the disk to the feeder bottom, using the dowel to keep the two pieces aligned. Then drive a screw through the hole in the edge to anchor the disk to the dowel.

Shape the top and add two rings

Mount the remaining 12" disk onto a faceplate and turn a deep recess about ¾" from the outer edge. This makes a drip ring, which prevents rainwater from traveling along the underside of the top and getting into the seed reservoir. Sand the feeder top and drill a ⅝" hole through the center for the lifting post.

Next, make the lower restraining ring. It helps ensure that the top will not blow off in a stiff wind. Make it from clear stock ¾" to 1" thick and turned to a 7" (18 cm) diameter disk. Use a parting tool to make a groove ½" from the edge. Remove the piece from the lathe and drill four evenly spaced ⅛" (3 mm) holes for dowels that hold it in place *(Photo 6)*. Use a scrollsaw or coping saw to cut the ring free from the center, then smooth the inside of the ring with a sanding drum on the drill press. Round over the inside and outside of the ring.

Next, add a positioning ring to the underside of the top, which helps you replace the top after you fill the seed reservoir. It is connected to the restraining ring. To make the positioning ring, glue together two pieces of ¾" stock about 7" square. Rough out the ring on a bandsaw, center it on the underside of the feeder top, and glue it in place. Let the glue cure overnight, then mount the feeder top onto the lathe and turn the ring to its final size and shape inside and out. Use the restraining ring to check the size. You want the ring to have a wall about ¾" thick and to be a loose fit over the plastic seed tube *(Photo 7)*.

Place the restraining ring over the positioning ring and drill through the holes in the restraining ring to make mating holes in the positioning ring. Try not to drill into the feeder top. Connect the two rings with four ⅛" dowels, cut long enough to leave 4½" to 5" (114 to 127 mm) of space between the rings.

Lifting post and seed diverter

The lifting post is a ⅝" dowel 13" (33 cm) long. Turn one end for a ferrule made from a 1"-long piece of ½" copper plumbing pipe. Push on the ferrule, then drill a pilot hole in that end for a large screw eye. (The ferrule keeps the dowel from splitting.) Put a drop of glue in the hole before screwing in the eye. At the opposite end, drill a ¼" hole through the dowel about 1" from the end; it will hold another dowel to keep the post from pulling out.

The cone-shaped diverter cuts down on seed accumulating in the bottom of the feeder, out of the birds' reach. Make a blank from six scraps of ¾" stock. Cut the pieces roughly to size, ranging from a maximum of 6" (150 mm) down to 2" in diameter *(Photo 8)*.

Drill a ¾" hole in the center of each blank. Glue them together, using a ¾" dowel to keep them aligned. Try to keep glue away from the dowel, and twist it frequently to be sure it is not glued in place. Clamp the blocks and remove the dowel. Glue a piece of scrap over the dowel hole at the top. After the glue is cured, attach the blank to a faceplate and turn its profile *(Photo 9)*. Sand it while it's on the lathe, then give it a coat of white paint; that will help you gauge when the feeder needs refilling.

Drill the seed reservoir

The seed reservoir is a 6"-diameter cast acrylic tube. I bought mine from TAP Plastics (tapplastics.com), where it is listed as 6" OD × 12" clear cast acrylic tubing (⅛" wall). Use a hole saw to cut feeding holes, which are ¾" in diameter. The top of the tube has six ventilation holes, ¼" in diameter.

Prepare two drilling guides by laying out center points for the holes on strips of paper 1½" wide by 19" long (38 mm by 48 cm). The feeding holes' centers should be at least ¼" from the bottom of the tube after it has been inserted into its groove. Mark that dimension along the length of one drilling guide. Mark a starting point on that line about 1" from one end. Place the end of a metric ruler at that point and mark vertical lines at 80, 160, 240, 320, and 400 mm. Mark the second drilling guide the same way for ventilation holes, centered 1" from the top.

Place the tube on a level surface, wrap the paper guide around the bottom, and tape it to the tube at each of the six marks to prevent it from shifting when you drill. Attach the second strip to the other end of the tube *(Photo 10)*.

Use a wide-open drill press vise or a V-block to steady the tube for drilling. To avoid shattering the brittle plastic, cut a disk from ¾" scrap to fit inside the tube and support it. Drill a series of ever-larger pilot holes using your sharpest drill bits. Finish with a bit that is the same size as the pilot bit on the hole saw. Start slowly with the hole saw, watching for chips to appear. Push the hole saw gently into the plastic. Be very careful ▸


7
The feeder top has a groove to serve as a drip ring. Smaller disks glued to the top are turned to form a positioning ring.


8
Glue up blanks of scrap for the cone-shaped seed diverter.


9
The finished seed diverter. All it needs is a coat of white paint.

10

To locate feeder and ventilation holes, mark two strips of paper and tape them to the ends of the acrylic tube.

11

Measure from the feeder bottom to the center of the anchor disk to locate a screw to hold the feeder on its post.

when drilling the six ventilation holes near the top; use sharp bits and drill slowly to achieve the final diameter.

Our neighborhood has red-shouldered hawks that feed on the other birds, which is why I incorporated a hawk guard: an acrylic disk 2' (61 cm) in diameter and ¼" thick. (TAP Plastics sells this size ready-made.) Drill a ⅝" hole in the center for the lifting tube. Attach it directly to the feeder top with six to eight brass screws. Of course, if hawks are not present where you live, omit the guard.

Apply a finish

The exposed wooden parts of the feeder should have the most weather- and ultraviolet-resistant finish you can find because the sun and the rain will constantly work their mischief. I used three coats of Minwax Helmsman Spar Urethane Clear Semi-Gloss, which leaves a natural, glossy finish.

Apply finish to all surfaces of the feeder top, including the top of the lifting post. Finish all of the wooden feeder parts, except the painted seed diverter cone, before assembling the feeder.

Before finishing the completed bottom, remove the seed diverter cone. Don't allow finish to build up in the groove for the seed reservoir. Keep the finish away from the dowel that holds the seed diverter and anchor disks. Otherwise, apply three coats of finish to all surfaces.

Assemble

Lay down three evenly spaced, 1"-long beads of silicone adhesive into the groove for the seed reservoir. Press the reservoir into place with the feeder holes at the bottom. Use a flat toothpick or small putty knife to spread the squeeze-out along the groove. You don't need adhesive all the way around the groove. Let the adhesive cure overnight.

To attach the feeder to the mounting post, measure the distance from the bottom of the feeder bottom to the center of the lower anchor disk *(Photo 11)*. Transfer that measurement to the PVC pipe and drill a pilot hole. Insert the anchor assembly all the way into the pipe and drill through the pilot hole into the lower disk. Withdraw the bit and drive home a 1" brass screw.

Pick a spot in your yard for the feeder. Dig a hole 2½ to 3' (75 to 90 cm) deep. Drop in the PVC tube and fill up the hole, making sure the post is plumb.

Take a long pole and screw a large hook on one end so you can use it to remove the feeder top from the ground. I used an 8' (2.4 m) length of closet rod. With the feeder in place on its post, lift up the feeder top and lower it onto the seed chamber, getting a feel for how the restraining ring and positioning ring guide the top into place. If you did everything right, the top should be easy to remove and replace. Stand on a stepladder when adding seed to the reservoir.

Enjoying your feeder

Position the feeder where you can observe the birds, possibly from the room where you spend the most time.

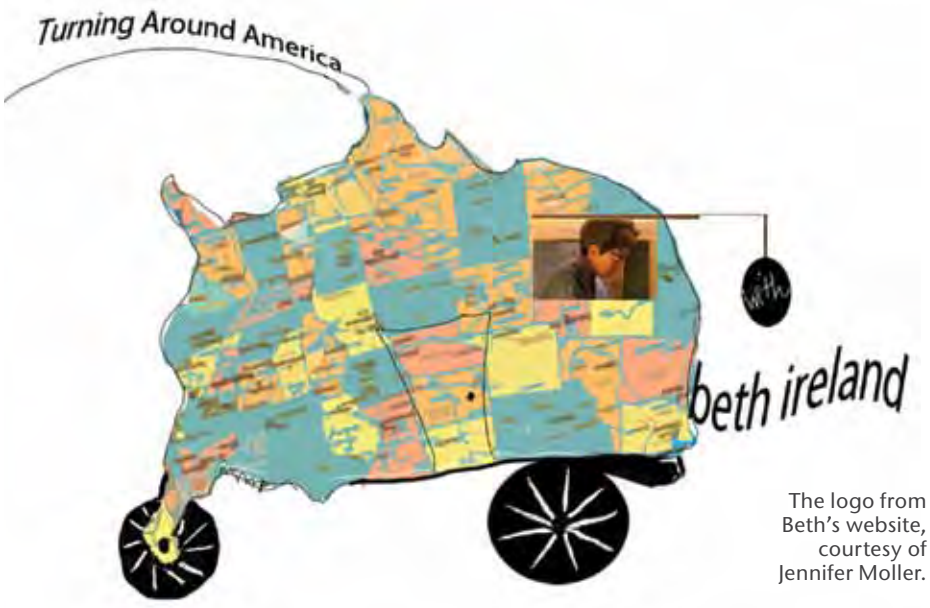
Buy a 50-lb (25-kg) bag of sunflower seeds, fill the feeder, and let the fun begin. You will be amazed at how quickly the seed level goes down, especially when the ground is snow-covered.

Clever squirrels can work their way up the post to feast on the seeds. To foil them, apply oil to the plastic pipe; any oil will do. It's amusing to watch the squirrels when they hit the oil and lose traction. When they try often enough, though, they wipe away the oil, so you will have to lubricate the post on a regular basis. ■

Rudi Franke is a retired chemist living in Indiana. Besides spending time in his shop and watching birds, he enjoys photography and goes kayaking in a local reservoir. He can be reached at aw66@att.net.

On October 30, 2010, woodturner Beth Ireland climbed into her specially equipped 2005 Chevrolet van and began an audacious 25,000-mile journey across the United States.

Beth labeled her trip *Turning Around America,* a provocative play on words. The purpose, she wrote on her blog, "is to empower people through the simple act of making an object in wood." She added, "This project consists of a seven-month journey around the country teaching hand skills through woodturning and woodworking to as many groups and individuals as I can come in contact with."



The logo from Beth's website, courtesy of Jennifer Moller.

Beth Ireland Hasn't Finished Turning Around America

David Heim

The van was both home and classroom. Ireland outfitted the rear of the cargo area with a bandsaw, tool storage, and two mini lathes that she could pull out and support on fold-down legs. Inside, the van held a sleeping bunk, clothing storage, cooking equipment, and the like.

Lifers at Leavenworth probably have roomier accommodations, but the living arrangements didn't faze Beth. She says she favors small spaces. Although she lives in a roomy three-story house on the outskirts of Boston, she recently built a sleeping loft barely larger than its mattress. A nearby room holds a large cabinet on casters that unfolds to become an all-purpose living/studying nook. Even her basement shop has an intimate feel although she can turn twelve-foot–long objects on her Nova 3000 lathe, eight-footers on her Oneway.

How the project began

The idea for Turning Around America first came to Beth when she was a graduate student at the Massachusetts College of Art and Design. Much of the work involved creating objects and building installations. "Everyone over forty knew how to do those things, but everyone under forty was just putting things together with duct tape and Foamcore," Beth says. When she asked some of the younger students about ▸

this, they said that no one ever taught them how to do the kind of construction Beth considered second nature. That's when she first realized that people needed hands-on training as well as intellectual learning.

That led Beth and her friend Jennifer Moller, a digital media maker and professor working in Massachusetts, to hatch Turning Around America. They finalized details in early 2010, shortly before Beth received her master's degree. Jennifer created the website for the project and updated it nearly every day. Beth raised most of the money for the project by selling copies of an instructional DVD and by soliciting contributions from individual donors; the AAW kicked in $1,000. Penn State Industries, Woodcraft, WoodturningOnline.com, and a local plywood dealer also contributed cash and equipment. Financially, though, the project did not break even. "I figure I'm about two thousand dollars in the hole," she says. Although she lived frugally—"I survived on Wendy's Southwest Salads," she jokes—the van did not. Ireland spent about $80 every time she filled the tank. At least she avoided speeding tickets and parking fines.

On the road

Before Beth began her trip, she contacted woodturning clubs and people from seminars and classes that she had conducted to set up demonstrations, letting her audiences turn whistles, pens, tool handles, and other objects. Then the grapevine took over.

Teachers, woodturning club members, and others soon heard about the trip and began contacting Beth to schedule visits. For example, Beth did one demonstration at a woodworking show in Clearwater, Florida. One of the men in the audience told his grandson in Atlanta about Turning Around America. The student relayed the message to his art teacher, who contacted Beth and easily persuaded her to come to the school. (It is a private elementary school for dyslexic children.) Beth got some help from the Classic City Woodturners and Atlanta Woodturners clubs: four members came to the school, each with two lathes. Beth was then able to work with 120 fourth and fifth graders.

Beth worked with adults as well as youth, ages five and up. Most had never seen a lathe and were thrilled to try some woodturning.

In Jacksonville, Florida, Beth spent three days working with at-risk teenagers at the Safe Harbor Maritime Academy, a private organization that aims to help the youngsters by teaching them seamanship and maritime skills. Members of the Northeast Florida Woodturners brought mini lathes, grinders, and tools to augment what Beth carried in her van. ▸

Beth carried a complete woodturning studio in the back of her van.

The van is packed, with everything stowed in its place.

Beth shows off the living quarters of her van, accessed through the side door.

(Far left) Cheering a job well done at the Healthy Learning Academy.

(Left) A student adds color to a turning at the Boys and Girls Clubs in Kingsport, Tennessee.

Beth explains some basics at the Schenck School in Atlanta.

Students at the Schenck School put the final touches on their turnings.

A volunteer helps a new woodturner at the Schenck School.

One of many notes Beth received from the kids she taught.

At-risk boys at Safe Harbor Maritime Academy in Jacksonville, Florida, learn the basics.

Beth leads an impromptu turning session with adults in New Mexico.

An impromptu turning session in Santa Fe.

Beth stages a turning demonstration at the farmer's market near her home in Massachusetts.

Two successful whistle-turners, at the Boys and Girls Clubs in Kingsport, Tennessee.

As club president Ed Malesky wrote in a blog: "Their first task was to turn a square piece of wood round, which the boys did with fearless exuberance. From then on, it was nonstop turning. Beth gave them license to use their imagination and they made some amazing things! One boy made a tool handle with hundreds of beads on it. Another made a simple, elegant tool handle. Real woodturning talent began to emerge among the group of seven boys. The three-day class was a *total* success from day one for both the boys and volunteers."

In early April 2011, Beth spent three days in Kingsport, Tennessee, in the northeast corner of the state. There, Bob Schrader works three days a week with kids at the four Boys and Girls Clubs in town. He has ten mini lathes at one club, which gives forty youth per day a chance to do some turning. When he heard about Beth's project, he arranged for her to visit and contacted the Tri Cities Woodturning club to help out and provide a stipend.

"The kids had a ball," says Schrader. "Everyone made at least one item, and some made two, excited about making something from scratch." There was only one small problem, "A couple of boys who had done a lot of turning felt they knew everything there was to know about woodturning. Beth was able to straighten them out easily."

For Beth, the trip entailed nearly nonstop demonstrations. "What a week!" she wrote in a January blog posting from California. "I have taught 510 people how to make an object in eight days. I am exhausted." In the end, she ran more than twenty consecutive days of teaching at schools and colleges around the state,

and conducted professional demonstrations as well.

In addition to the planned visits, she gave impromptu lessons at truck stops, campgrounds, or just about anywhere she could attract an audience. In Eureka Springs, Arkansas, where she spent five days, she stayed with friends of Doug Stowe, a noted woodworker and educator who hosted her visit. "She taught for one day at the Eureka Springs School of the Arts, three days at the Clear Spring School," Stowe says, "and she set up in the driveway, teaching people in the neighborhood."

Beth finished the trip almost a year to the day after she started, logging more than 25,000 miles on the road and lecturing to more than three thousand children and adults. By her count, 2,097 people had a chance to make something.

Beth had been home barely three months before she and Jennifer left again, this time to spend two weeks in a remote village in Guatemala, teaching basic woodworking. Among other things, they restored a lathe built from an automotive differential, which now runs on hand-crank power. The people they taught immediately turned around and trained other villagers. "This is what Turning Around America is to us," Beth wrote. "Empowering people to empower other people." She and Jennifer plan to return to the village in a year, this time with the gear needed to set up five bicycle-powered lathes so the villagers can make and sell their turnings in a market town two-and-a-half hours away. ▸

(Far right) Cub Scouts in California learned to turn whistles.

(Right) Teaching at Penland School of Crafts in North Carolina.

(Below) Beth and company put this lathe in working order on her trip to Guatemala. It's made from an auto differential, with a hand crank, and a tailstock that a colleague made with a chainsaw.

Jennifer Moller rigs up a lathe from next to nothing.

Maintaining momentum

By nearly any measure, Turning Around America was extraordinary. Consider, for example, that the youth turning sessions at an AAW symposium attract between fifty and seventy-five youngsters. That was a day's work for Beth, repeated dozens of times. David Ellsworth, like many teachers, works with a half-dozen students at a time and would have to run years of classes to teach the number of students Beth encountered in a few months.

Turning Around America had an unprecedented short-term impact—she wowed 'em. The long-term effect is harder to gauge. It will be up to parents, educators, and woodturning club members to maintain the enthusiasm Beth generated. She alluded to that in one of her final blog postings: "The experience and education I shared will get multiplied over time in so many ways. The objects that were made will be cherished for years to come. The woodturning guild members who worked with me are now teaching others. Some high school teachers are now ordering lathes to add to their curriculum."

True, places like the Safe Harbor Maritime Academy have set up an ongoing woodturning program (*see Florida Chapter sidebar*). But elsewhere, the realities of tight budgets and lack of manpower stymie the best of intentions. As Bob Schrader of the Boys and Girls Clubs of Kingsport says, "We have so many kids that want to come to woodshop and so few lathes that we do not get to grow their enthusiasm."

Beth dealt with those issues on her blog, in her characteristically upbeat fashion, "I have seen the frustration that public school teachers are facing every day. Many schools no longer had art or wood classes. I have seen a growing feeling of disempowerment in our country. Turning Around America started as a simple project created by two artists. It has turned into a vehicle for possibility and empowerment for so many people."

Beth hit the road again in May for a six-month stint of traveling and demonstrating. After that, she plans to spend another month in Guatemala. "I guess traveling is my new life," she says. To learn more about Beth Ireland's Turning Around America, visit turningaroundamerica.com. ■

David Heim is a hobbyist woodturner in Oxford, Connecticut. He can be reached at davidheim1@comcast.net.

Florida Chapter Connects with Turning Around America

When the Northeast Florida Woodturners Association learned about Beth Ireland's Turning Around America, I had been trying to get a youth program started within our club. I had received an education grant from our club to attend Arrowmont School of Arts and Crafts where I wanted to enhance my woodturning skills so I could work more effectively with youth.

Beth would be demonstrating at the Florida Woodturning Symposium and I was hoping we could link our efforts. As it turned out, Beth's program became the impetus for us to get more involved with young turners.

I found a youth group in the area that we could incorporate into Beth's program, one that our club could build a sustaining relationship with. Safe Harbor Maritime Academy, a home for at-risk boys, perfectly fit the bill. I contacted Dr. Robbie Smith, director of the home, and she readily accepted the idea. A dream of introducing young people to woodturning began to turn into a reality.

Beth agreed to come to Jacksonville for three days after the symposium to work with the boys and volunteers from the club. Seven boys participated in the program, along with Beth and eight club members. Beth's approach was to get the boys on the lathe making something as quickly as possible. We made simple tools from Allen wrenches so the boys could use them to make whistles, stick pens, small boxes, chessmen, and small vessels. The pride in their workmanship was evident in the boys' faces at the end of the week. Club members decided to continue working at Safe Harbor on a regular basis.

In our discussions with other AAW chapters that had youth programs, we realized that to keep interest and momentum, we would need to put together a weekly program. This fit well with Safe Harbor's vocational program, which would give us three hours to work with the boys every Friday morning. Further planning produced a schedule that would send at least two volunteers to work with three to four boys, once a week. After nearly ten months, the boys have turned mallets, candleholders, spurtles, snowman ornaments, fishing reels, eggs, offset cars, picture frames, magic wands, wooden and acrylic pens, and two outdoor games—King and Kubbs and Molkke. They turned ornaments and a Christmas tree, which was first exhibited at the Greater Jacksonville Fair and then donated to the local Woodcraft-sponsored Festival of Trees charity auction, where the tree raised more than $150.

The enthusiasm is strong and several of the boys remarked that our turning sessions were the highlight of their week. I think it's the highlight of the week for our volunteers, too. One regular volunteer's spouse remarked that she could always tell from the smile on her husband's face when he had been working with the boys at Safe Harbor. We are continuing this program with a new set of projects for the more experienced boys and a basics program for boys who enter the program as the senior members leave.

This rewarding experience was kicked off by Beth and is now maintained by the wonderful members of our club. Learn more about our program by visiting TurningArtsGroup.com.

—Kay Seivert, Outreach Coordinator, Northeast Florida Woodturners Association

Several boys from the Safe Harbor Maritime Academy practice turning at their regular Friday workshop.

Photo: Ed Malesky

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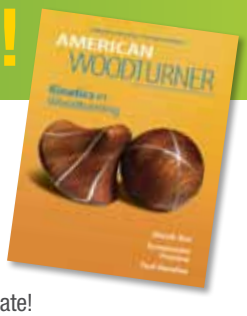

As of March 2011, all memberships in the AAW became renewable on the month you joined rather than on a calendar year. Your renewal date is located on *your* journal's mailing label on the front cover. To ensure that you do not miss any issues of *American Woodturner*, check your renewal date!

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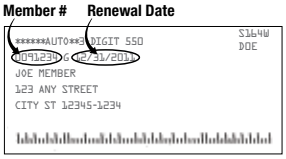

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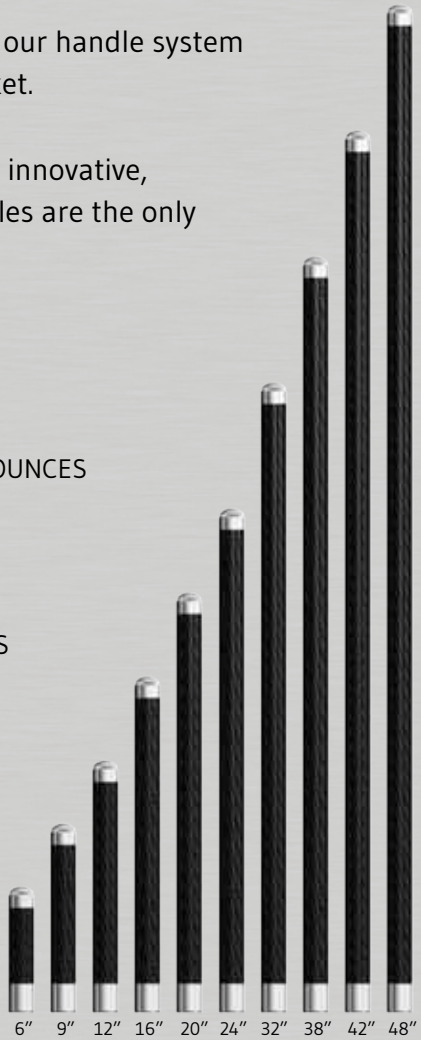

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JIM DUXBURY

FLOOR-MODEL KALEIDOSCOPE

Viewing magnificent multifaceted images contained inside a kaleidoscope has been a source of fascination since the kaleidoscope's invention almost two hundred years ago. The combination of exquisitely crafted exterior design, fine wood, and the magical clicking of precision wooden gears meshing as the crank is turned creates the full experience, bringing this unique creation to life.

During the design process, I envision refinements to incorporate into my next kaleidoscope, ones that will challenge my woodworking skills. In making this special model, I wanted it to be fully functional, stand out as a quality piece of furniture, and be easily disassembled and packed for safe shipping.

I scaled each piece for *Flowing Images* from a master drawing, then cut, sanded, and finished them to the precision required for smooth operation. The kaleidoscope has a three-mirror system (30-, 60-, 90- degree) with interior lighting that illuminates the viewing side of solid objects contained in removable oil-filled object boxes.

The object box rotates with wooden gears. The entire head of the kaleidoscope pivots up and down vertically and can be locked in eleven possible positions with a spring-operated wooden latch. The kaleidoscope also offers the ability to be rotated 360 degrees horizontally on a pivot below the vertical-latching mechanism. For portability, the rotating pivot has a release mechanism that allows the head assembly to be removed from the stand.
—Jim Duxbury

See some of Jim's other kaleidoscopes on his website, duxterity.com.

Flowing Images, 2012, Cherry, maple trim, 47" (120 cm) tall