

# American Woodturner

The Journal of the American Association of Woodturners

Fall 2001

\$7.50

Vol. 16, No. 3



*Dedicated to Providing Education, Information, and  
Organization To Those Interested in Woodturning*



## ONE GOOD SYMPOSIUM LEADS TO ANOTHER

The 2001 AAW Symposium that was held in Saint Paul, MN, on July 6, 7, and 8 is now history. Judging from the comments I have received from attendees and my own observations, it was a success. Check out the pictures and articles throughout this issue of *American Woodturner*.

The symposium was successful because of all the hard work done by everyone listed below: volunteers, local chapters and their members and spouses who helped with the setup, registration, instant gallery, and gathered the wood and miscellaneous items; the AAW staff who did all the paperwork and ordered all the merchandise; and the Board and spouses. Additionally, let's not forget the suppliers who provided the lathes. Finally a BIG thank you to the demonstrators who shared their techniques and tips to make us all better turners.

Yes, it was a lot of work but it is also very rewarding to see it all come

together. I would encourage you and your club to volunteer when the symposium comes to your part of the country and you can be a part of this rewarding experience.

The Education Fund got another boost from the Saturday night banquet and auction. There was a great selection of items up for bid. Auctioneer Willard Baxter and a lot of generous bidders raised more than \$32,000 for the fund.

The 16th annual AAW symposium will be held June 28 to 30, 2002 in Providence, RI and the work is already underway. The site has been chosen, most of the major demonstrators have been selected and special events are in the making.

We hope to make some improvements based on the comments and suggestions made by the attendees in St. Paul.

I hope you enjoy the new look in the *American Woodturner*. The Board

and Staff have been looking forward to adding color in the Journal for some time. However, we don't want to forget that it takes more than color to make a great publication -- it takes good content. Therefore, we will continue to offer a broad spectrum of articles, enhanced with color photographs, to help all of our members. We would like to hear your feedback.

I look forward to serving you as President of AAW.

I hope you will help me make AAW grow by encouraging others to join. I realize that you don't have to be a member to be a good woodturner, but AAW members are exposed to new and innovative tools and techniques at symposiums and in our publications and videos.

Feel free to share your thoughts and concerns with me any time.

— Bobby Clemons is president of AAW

## Thanks to our St. Paul Symposium 2001 volunteers

Richard Abram	John Engstrom	Wilfried Hein	Hal Malmlov	Mike Rohrer	Greg Smith
Steve Alguire	Linda Everett	Robert Henry	Robert Marshall	Gene Rajanen	Harold M Solberg
Carolyn Allard	Reuben Everett	Blake Hickerson	Jerry Martin	Jack Rolison	Frank Stepanski
Dan Anderson	Marvin Ewing	Dave Hill	Edward McCartney	Susan Rosand	Jon Stephenson
Marie Anderson	Charles Faucher	Duane Hill	Glen McMurray	Paul Rosen	Greg Streif
Boyd Annis	Nick Faymoville	John Hill	Ron Meilahn	Al Sadaj	Dennis Sullivan
Bruce Arones	Linda Ferber	Judy Hill	Gordon Miller	Gary Sanders	Ben Swartz
Joyce Arones	Tom Ferber	John Horn	Hershel Miller	Bill Sarver	Bev Swartz
Harris Barbier	Richard Fitch	Gerry Howard	Tom Mogford	Tom Savereide	Ken Tempero
Sonya Barriger	Bob Flaherty	Gary Hubbard	Sandy Moreno	Todd Schweim	Walter Thies
Sarah Baxter	Bill Floate	Bob Hunter	Jack Neuswanger	Robert Shiell	Ron Thomas
Dody Bemrick	Carole Floate	Marie Hunter	Tom Nichols	Connie Shiera	Mel Turcanik
Wayne Bernahl	Julienne Friday	Tom Irlen	Cathy Nicholson	Larry Shiera	Mir Verner
Don Bladow	Jack Frost	Larry Jensen	John Nicholson	Paul Shotola	Bob Waltz
Dick Breckon	Wayne Furr	Don Johnston	JoAnne Olson	Nick Silva	Don Wattenhofer
John Brewer	Del Fussell	Bob Jones	Rod Olson	Hal Simmons	David Whaley
Jack Brown	James Gaydos	Maryalice Jones	Frederick Park	Steve Sinner	Don Wynn
John Buehrer	Duane Gemelke	Bob Jungmann	Jeff Pohl	Chuck Sjodin	Bridget Zemlo
Oliver Buettner	Linda Gemelke	Ed Kosteck	Kip Powers	Chuck Smith	Dick Zemlo
Augie Capagna	Larry Genender	Greg Kulibert	Jim Prendergast		
Paul Cavanagh	Robb Glibbery	Alan Lacer	Paul Pyrcik		
Greg Champlin	George Haack	Bob Landorf	Darrell Rader		
Doris Clemons	Terry Hallback	Robert M Larson	Ken Rajspis		
Joe Cornell	Jon Hanson	Alan Leland	Bill Ramsey		
Barbara Crockett	Leonard Hartline	Roy Lindley	Amelia Redig		
Doug Davenport	Larry Hasiak	Gail Lossing	Carl Reid		
George Dupre	Mary Hasiak	Kevin Machacek	Joe Rodriguez		

### Local Chapters

Chicago Woodturners  
Minnesota Woodturners Association  
Northern Illinois Woodturners

# American Woodturner



AMERICAN WOODTURNER  
is published quarterly by the  
American Association of Woodturners  
3499 Lexington Ave. N, Suite 103  
Shoreview, MN 55126.  
Periodicals postage paid at St. Paul, MN  
and additional mailing offices.

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

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

**Editor-in-Chief** Dick Burrows  
929 Maynard Ave.  
Knoxville, TN 37917  
865 689-8798  
FAX 865 281-2347  
sharpridge@earthlink.net

**Contributing Editors** Alan Lacer  
Ken Keoughan

**Administrator** Mary Lacer  
Eunice Wynn, Assistant  
651/484-9094  
fax 651/484-1724  
aaw@citilink.com

#### AAW Board of Directors

**President** Bobby Clemons  
**Vice President** Bob Rosand  
**Treasurer** Willard Baxter  
**Secretary** Norm Hinman  
**Members**

Dave Barriger  
Lee Carter  
Bonnie Klein  
Mark St Leger  
Linda VanGehuchten

#### AAW Board of Advisors

Clay Foster  
Larry Hasiak

**WWW:** <http://www.woodturner.org>

#### A Note about your Safety

An accident at the lathe can happen with blinding suddenness; respiratory problems can build over years. Take appropriate precautions when you turn. Safety guidelines are published in the AAW Resource Directory. Following them will help ensure that you can continue to enjoy woodturning.



**On the cover:** Patience Stewart shows the delight of a youngster discovering the magic of turning, thanks to former board member Larry Hasiak at the opening of the "Nature Takes A Turn" show before this year's symposium in St. Paul, MN. See more photos from the symposium on Pages 28-33. Cover Photo by Larry Mart.

**Submissions to American Woodturner are encouraged.**  
Please contact the editor with articles or proposals.

Vol. 16, No.3

Fall 2001

- 2 LETTERS
- 4 CANDIDATES FOR AAW BOARD OF DIRECTORS
- 7 REMEMBERING DR. IRVING LIPTON
- 8 NEW CHAPTER COLLABORATIVE RULES FOR 2002
- 9 CHAPTERS SHINE IN FLORIDA AND OHIO
- 12 TURNERS' TIPS
- 14 A SIMPLE SEAT by David W. Scott  
*Turning three-legged stools.*
- 19 TURNING FLOWERS by Jim Rinde  
*Blossoming excitement in your shop.*
- 22 TRENT BOSCH by Ken Keoughan  
*"Getting there" — honestly and decently.*
- 26 TURNING SPHERES by Brian Simmons  
*A simple method with ring gauges.*
- 28 A FEW OF OUR FAVORITES  
*Ray Key and Jacques Vesery look at the Instant Gallery.*
- 30 A TURN FOR THE BETTER by Larry Mart  
*A photographer's tour of the 2001 Chapter Collaborative.*
- 34 MEMBERS' GALLERY  
*Work from the mailbag and our authors.*
- 36 TRAPPED BORING BARS by Steve Sinner  
*Make your own high-efficiency system.*
- 40 IS IT HEAVY ENOUGH by Dale Hupp  
*Designing your boring bar.*
- 43 FREE-FORM CARVING by Mike Kornblum  
*Jazz up your pieces with drum sanders.*
- 46 COLLABORATING WITH NATURE by Virginia Dotson  
*Patterns, textures and shapes for artists.*
- 48 KIDS AND LATHES by Judy Ditmer  
*An enthusiastic teacher makes the difference.*
- 50 UTAH SYMPOSIUM 2001 BY Scott Greaves  
*Tips and ideas from some demonstrators.*
- 53 BOOK REVIEWS
- 57 TOOLS FOR DEEP TURNING

*American Woodturner* (ISSN 0895-9005) is published quarterly, Spring, Summer, Fall, and Winter, by the American Association of Woodturners. Yearly membership in the American Association of Woodturners is \$35 U.S.A., \$40 Canada, and \$60 overseas and includes a subscription to *American Woodturner*. Send dues to Mary Lacer, AAW Administrator, 3499 Lexington Avenue N., Suite 103, Shoreview, MN 55126, U.S.A. Send articles and advertising to the Editor. Copyright 2001 by the American Association of Woodturners. CPC IPM Product Sales Agreement No. 1580647. Canadian Mail Distributor Information: EMI, P.O. Box 25058, London BC, Ontario, Canada N6C 6A8 Printed in the U.S.A. by Ovid Bell Press, Inc., Fulton, MO, 65251.

**Subscribers:** If your issue arrives damaged through the mail, please contact the Administrator.

POSTMASTER: Send address changes to AAW, 3499 Lexington Avenue North, Suite 103, Shoreview, MN 55126



### Thanks from Ray Key

Just a quick letter of thanks to those responsible for nominating me for this award as AAW honorary life member; it is something I am very honored to receive.

I am not usually lost for words, as most people who know me will testify.

Despite having more than six months notice of the award, when the presentation was made on the night of July 7th, a few things I had planned to say just went out of my head.

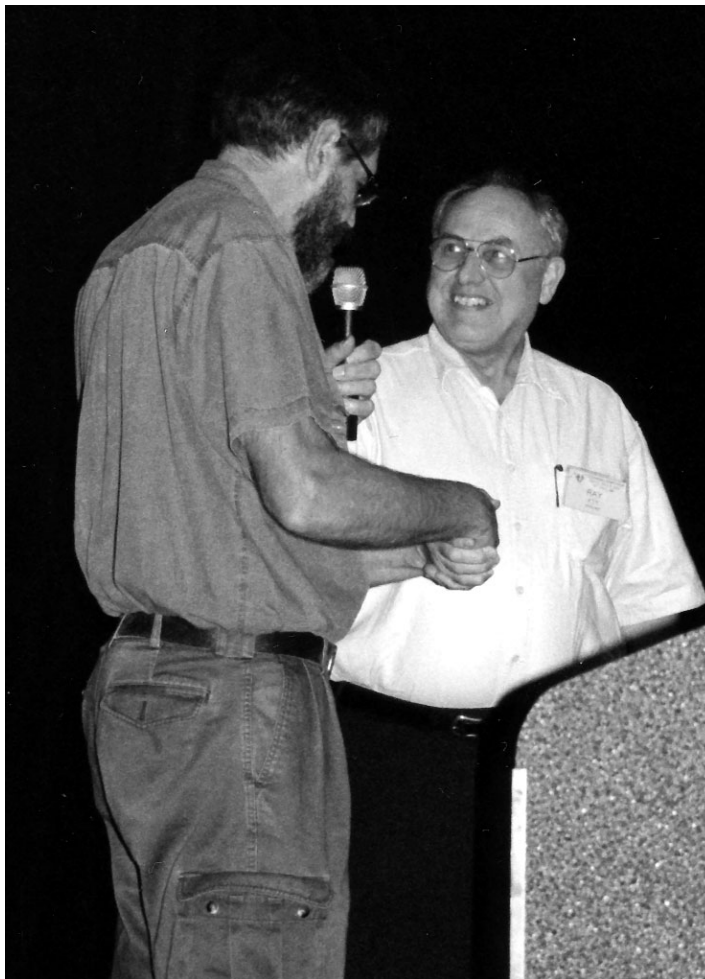
I have many many memories from numerous visits to the USA but these are some that have been a little special.

1) On my first visit to the USA in 1981 after a very convivial evening in the bar, David Ellsworth put his arms round the shoulders of Richard Raffan and me and said it was great having the two of us out there. That meant a lot to us both (In retrospect I guess he needed our support to get him back to his room. Just kidding.)

2) Anyone who was at the 1988 AAW Symposium in Philadelphia could not fail to remember the emotional roller coaster of a ride we all had in the Auction held in memory of Daphne Osolnik.

3) That same Symposium provided me with a memory that will live forever.

As we made our way to the International Turned Object Show being held at the Port of History Museum, Dave Hout was our driver. In the front with him was his wife Debbie. Dale Nish was with my wife Liz, who sat on his lap. In the back seat were Mel Lindquist, James Prestini



Ray Key received his AAW lifetime award from President Dave Barriger at the banquet during the annual symposium in St. Paul, MN. Photo by Gary Dickey

and their minder Rude Osolnik.

#### AAW Volunteers Cited

The Board of Directors and Staff would like to recognize several members for their contributions to the American Association of Woodturners. A certificate of appreciation signed by the board members will be sent to each.

Jean LeGwin  
Phil Brown  
Charlie Hoffman  
Willard Baxter  
Blake Hickerson  
Larry Mart

Then in the back, where you put the dogs, were my son Darren and me. What a carload? You can't buy memories like that.

4) Arrowmont 1994 saw the 'Tribute to Osolnik' Symposium. Anyone who was there will always have some wonderful memory to recall. It was an event that had everything; it tugged at our emotions for three days. Who could ever forget that incredible Auction and Roast of Rude?

I could go on and on, but the above are memories to savor.

5) Finally my own Presentation, which I nearly missed.

I had nipped back to my room at the end of the meal to get some work for someone. I returned to hear Dave Barriger calling my name. What looked like a grand entrance in fact was the embarrassed walk of a recipient that nearly missed out.

Thank you AAW. I am honored to be a Life Member of such a wonderful organization.

— Ray Key, England

#### Art And Woodturning

I want to personally thank Connie Mississippi for her response to my recent article about art. Since the article appeared in the Journal, I've had many calls and emails from turners who also voiced their appreciation. Connie pointed out that the short list of artists in the article lacked mention of women artists. She's right, and I stand corrected. The article was not intended to be a comprehensive art history survey; however, the women she mentioned,



## A New Look For the Journal

The Board and Staff of the AAW hope everyone likes the new look of our Fall issue as we begin our gradual transition to a color publication.

We have high hopes for our first effort. We hope that you will be patient with us and help us work through the conversion.

The transition will be gradual because of several factors. Money is an issue; color work is more expensive and requires a much greater investment of time, which can be a problem for an organization with a small staff that must depend heavily on the work contributed by members and other volunteers. As you know, most of the photos in the Journals are taken by amateurs who donate their time, materials and talents. We all have a lot to learn.

The work in this issue is in large part the result of Larry Mart's photography at the St. Paul symposium. You might have seen him with his homemade "Official AAW Photographer" name plate, and he earned the title for this show. A retired professional photographer, he did the photos for the "East meets West" show in Tacoma and has contributed much of our symposium coverage in the last few years.

Also, we would like to thank JJ Tracy, a graphic designer in Knoxville, TN, who helped guide us through some of the darker nooks of Photoshop and other computer jungles. We quickly found out that taking photos

from numerous sources, shot under all sorts of lighting conditions and various depths of wood shavings, and then fitting them together so they appear to belong with each other is not a simple task.

For now, we will concentrate on showing color photos of good turnings from members, exhibits and other sources. The more photos we have, the better our chances of putting together good pages. Many of you have been clamoring that color is the only way to present woodturning. Now is your chance to help prove your point. Send us your best photos. We will plan on publishing articles to help you perfect your photography, as well.

Though it seems clear that many of you want to see the finished work in color, it's not as easy to gauge how many people want to see every article in color. Many of you have told me that you don't see the need for full color in how-to articles. The board receives similar mixed messages. Now would be a good time to clarify your thinking and convey your ideas to the board or to the editor. We also plan to canvass our advertisers to see if they would be interested in offering color ads in the future.

We would appreciate your help as we work to improve the Journal.

— Dick Burrows, Editor

Hepworth, Nevelson, Duckworth and Bourgeois are well worth study. Bourgeois is especially an interesting and intriguing figure. I would like to add to Connie's list. Sculptors Chryssa, Nancy Graves, Lynda Benglis, Beverly Pepper, Marisol Escobar and Niki de Saint-Phalle have all certainly contributed their own unique vision to the world of art. Look them up; and while you have an art history book in front of you, a few of many, many painters who produced significant bodies of work include Mary Cassatt, Georgia O'Keefe, Helen Frankenthaler and Bridget Riley. Thank you Connie for helping continue the dialog.

Ron Fleming's article in the last Journal ended with a suggestion that we might "look into your past" for ideas and inspiration. My article also referred to a similar act. "Art is

a visual expression created by an individual. Each of us experiences life in our own unique way. We catalog the things we see, hear, and feel in our brains. We process that accumulative information which becomes part of who we are. Artists express those experiences." Both thoughts and Connie Mississippi's observation of the tremendous domination of technique oriented teaching sessions compared with more discussion of ideas and creativity suggest a re-examination of the teaching methodology of our organization.

— Gene Kangas, artist, Concord, OH

### Update on boring Bar Article

I've modified my method of making boring bars since I wrote my article (Page 36). I now use a 5/8-in. hole instead of 1/2-in. That allows the use of a wider range of cutting and scraping tools. For example, the Hamlet deep hollowing tool and the Kelton medium hollower set (much heavier than the 1/2-in. set). We use a bushing to provide for use of either 1/2-in. or 5/8-in. diameter tools. In 1-in. bars, the hole must be located 1/8-in. below center to allow enough metal for the set screw threads.

— Steve Sinner, Bettendorf, IA

### Replace your Nature Takes a Turn Catalog

The "Nature Takes a Turn" exhibit catalog has been reprinted. If you purchased one of the original copies and would like a new one, please return your copy to the main office and a replacement will be shipped to you, postage paid. Your return postage costs will be reimbursed by AAW.

## IRV LIPTON, COLLECTOR AND FRIEND TO TURNERS, DIES

Irv Lipton was a very good friend. He was also the first of the major collectors of wood turnings, and certainly one of the most passionate.

I had always corresponded with Irving by mail, so the first time I visited his home in Encino, California, I was stunned to see so many of my friends living in his house, as it seemed that every horizontal surface was covered with turnings. "I have more," he said, "but you'll have to come down to my office to see the rest." There was a cherubic child-like gleam in his eye, almost as if he knew he had more baseball cards than the kid down the block. He did. And the best quality, too.

On another visit years later, he took me to his new condominium that he had purchased solely for the purpose of displaying his collection. Again, every surface was covered ... including pieces in the bathroom, the closets - even inside the kitchen stove. He would later convert the condo to a stunning gallery, and then buy the adjacent condo so there would be a place for turners and other interested guests to stay when they came to town!

Generosity was obviously a natural part of Irv's make up, and I always knew he was as much interested in the people behind the work in his collection as he was the work itself. It was a feeling that all of us shared, for he was a wonderful man and very easy to get to know. I think of him often.

— David Ellsworth

He is a great person, a great friend... I'll miss him!

— Bernard Blain

I think it's no exaggeration to say that Irv touched our lives deeply, far beyond the obvious area of wood and art.

— Ron and Myra Kent

I'm grateful for the chance to speak today, this feels like honoring a second father. We have lost a



Dr. Lipton in his condo gallery. Photo by Bernard Blain (Bernard did the video series "Beyond Wood" on various turning artists financed by Lipton.)

great friend, a fine doctor and a true benefactor of the arts. When I can look past the immediate sorrow we all feel today, I'm flooded with positive thoughts in his memory: that twinkle in his eyes, warm smile and vitality for life, friends and family

will be among my lasting images of Irv.

I will always take great pleasure in knowing his spirit and vision will live on forever due to his kindness, encouragement and generosity.

— Bill Hunter in his eulogy

### A MEMORIAL FOR DR. LIPTON

Dr. Irving Lipton passed away July 4th. Testimonials from friends called him one of the first great collectors of contemporary woodturning, a person whose effect upon the field is profound. He nurtured the field in its infancy with his boundless enthusiasm and support for the artists and their explorations and maturation. He was the perfect patron, they said, offering financial support coupled with artistic freedom and fatherly concern for his artists.

Over the years he put together a breath taking collection — following the development of particular artists for more than 20 years. This unique record of an art form development is part of his legacy.

Bill and Marianne Hunter will be compiling a hand bound, wood covered memory book filled with people's favorite "Irv stories," "good byes", or whatever to be presented to his wife Mari. A book will be available at Chicago SOFA, CWA in Minneapolis and del Mano Gallery for people to write in.

Also, you can send comments and reminiscences on an 8 1/2-in. X 11-in. sheet to Bill and Marianne (31 Narcissa Dr, Rancho Palos Verdes, CA 90275) and they will incorporate these into the book. For further information call 310-377-1871 or e-mail: hunter2@inreach.com.

A fund is also being planned and will be administered by the Decorative Arts Council of LACMA (Los Angeles County Museum of Art) to promote the educational value of the Lipton collection. A flyer with further details will be available at SOFA and CWA.

## WANT TO JOIN OUR MAJOR DEMONSTRATORS?

The AAW Board of Directors has selected eight major demonstrators for next year's annual symposium in Providence, RI, June 28-30, and is looking for other top-notch demonstrators who would like to share their skills and enthusiasm for turning.

If you have a new idea or a unique approach to design or great techniques for turning, carving and other related disciplines, Providence might be perfect for you.

The four featured national demonstrators selected by the board are Michael Hosaluk, Canada; Michael Lee, Hawaii; Frank Sudol, Canada; and Al Stirt, VT.

International demonstrators will be Masaaki Hiroi, Japan; Stuart Mortimer, Great Britain; Graeme Priddle, New Zealand. Christoff Guttermann of Germany also has been asked to participate.

Other symposium activities are now being planned. Watch upcoming Journals for details.

To obtain an application to demonstrate, please contact:

Mary Lacer, Administrator, 651-484-9094.

Bobby Clemons, Conference Committee, 423-447-6994.

### Design A New AAW Shirt

Looking for a design project that's a little different from the ones you normally find on your lathe or workbench?

The AAW is planning on coming out with a new shirt design. The new model will still feature our familiar curling chip logo, and perhaps a shot of panache — that's the part you provide. Just to make the exercise a little more challenging, the board would like a design that would look great on any type of shirt— T-shirt, Polo, sweat shirt or dress.

Send a drawing illustrating your design to Mary Lacer, AAW Administrator.



TV monitors helped Steve Worcester of Texas make a point..

Demonstrators are a key to the success and popularity of the AAW annual symposiums. In addition to teaching a great deal, the demonstrators say they usually learn a lot from the audience of enthusiastic turners and have a bit of fun sharing their passions at the same time. Photos from this year's Symposium in St. Paul, MN. by Larry Mart.



Demonstrator Brian Simmons from Georgia.

### New Research Grants Now Part Of EOG program

Most AAW members are familiar with the range of EOG grants offered by the AAW to members and chapters — seminars and workshops, school programs, providing equipment for worthy programs and so on. See the article on pages 48-49 in this Journal for examples of two grants.

In light of the immense growth of turning and the efforts of more and more talented individuals working to take both the art and craft of turning to higher levels, the board has decided to offer grants for more in-depth study and

research programs that deal with topics beyond the confines of the shop, but which might eventually lead to new ideas and techniques that will benefit us all.

If you feel you have an idea that would lead to discoveries that would advance woodturning, outline your proposal to the EOG committee. An application is in the front of this Journal. Please clearly indicate you are applying for a special grant.

If you have questions, please contact the AAW office or Norm Hinman, EOG Chair, 530-673-5056.



## OHIO VALLEY WOODTURNERS ANNUAL BBQ AND CONTEST

In 1990, Dick and Donna Zeller decided to host a Spring barbecue for fellow Ohio Valley Woodturners Guild members at their scenic home near Peebles, Ohio. It was a major success, with about 30 members and spouses attending. It has since become an annual event eagerly anticipated by club members. Unfortunately it finally outgrew the Zeller homeplace after 1999 when upwards of 100 folks attended.

This year the event was held in Cincinnati at a fine outdoor facility in Symmes Township on May 19th. There was plenty of enthusiasm this year, although attendance was affected a bit by the rain the day of the event. This didn't dampen the fun and camaraderie, and the food, brought by members, and the ribeyes were exceptional as usual.

After the food, the highlight of the event has always been the semi-annual club contest. In past contests each entrant has been required to make a box, a hollow form (1-in hole or less), or in one of the most popular contests, anything made from a 2X2X18-in. piece of walnut supplied by the club.

This year the challenge was to make an offset or eccentric turning using two or more axes. This was a bit tougher challenge, but members responded with entries remarkable in their diversity and ingenuity.

For a number of years the contest had all members competing head-to-head. As the club grew and skill levels broadened, three categories were developed to sharpen the competition and encourage all members to participate.

Now entries are submitted in three classes: Master Turner — any turner who has won first place two or more times; Advanced Turner — any member who has won first, second or third place, and Novice Turner — all remaining entrants. First, second and third prizes are awarded in each class as voted on



Winners in this year's competition at the Ohio Valley Woodturners Guild annual barbecue showed a remarkable degree of diversity and ingenuity. Photo by Lowell Converse.

by the members. In addition, a single People's choice award is presented as voted by all the non-members attending.

Prizes are gift certificates at the best woodworking stores in Cincinnati. These gift certificates are given to the club in return for turning demonstrations at the stores by OVWG members. This arrangement has been in place for several years, and is a winner for all involved.

This year the voting in all of the classes was very close, indicative of the competitiveness of the members. To prove this, Ed Smith, winner in the Novice class, also won the People's Choice award with his eccentric turned ducks mounted on a stand and which bobbed and turned when the crank attached to an eccentric cam was turned. Barb Crockett and Arnie Hallbach took second and third.

In the advanced class John Lannom turned three bowls in a single piece of wood, and mounted

them on a nice stand. Bruce Gibson and Rene' Keyzer-Andre' were second and third. In the Master class, which is always hotly contested, Jim Burrowes won with his eccentric decanter and two identical (!) eccentric goblets, all dyed black, on an elevated curly maple platter. Second and third were won by Lowell Converse and Ralph Easley.

Another highlight of the meeting was the unanimous re-election of Earl Choromokos as president of OVWG after his recovery from recent heart surgery.

He encouraged the membership to attend and support the Turning 2001 Symposium which the club will once again present at the Higher Ground Conference Center in southern Indiana October 19-21, 2001.

More information about the symposium can be found at the club's website [w3.one.net/~ovwg](http://w3.one.net/~ovwg) or by calling Joe Keeler at 513-233-0493.

*Lowell Converse, Beaver Creek, OH*

## A SMALL CHAPTER WITH A MAJOR IMPACT

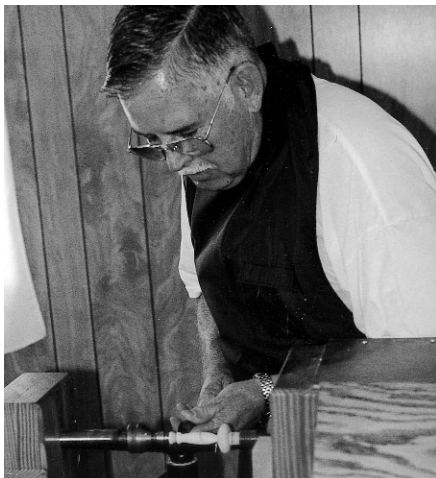
Don't think your chapter can make a difference, because it's new and doesn't have many members?

The members of the Bell Wood Turners in Bell, FL (eight, when this event was planned), could give you a strong argument against that point of view. With a little help from turners in neighboring chapters and their own enthusiasm they sponsored a turning demonstration last July that drew 300-to-350 people to their local community center in the rural town in western central Florida. Their goal was to raise money for an education fund for local youths and let other turners know they were there.

"All-in-all this demonstration was a great demonstration," said Van Johnson, vice-president of the Bell Turners. The group offered door prizes each hour during the day — lamps bowls and weed pots — plus a series of demonstrations, both indoors and outdoors, and a gallery. They sold baked goods and items donated by local businesses.

"This club is only five months old and growing. It looks like 18-to-30 new people will be coming to our next meeting. We had 64 people sign up at the door who wanted to know more about turning."

For more information about the Bell Turners, you can contact Van at 352-463-1129 or at [van-65@juno.com](mailto:van-65@juno.com)



Gary Taylor, president of Bell Turners



Instant Gallery pieces at the Bell Turners' demonstration.



A treadle lathe was set up so the general public could experience turning.



Visitors enjoying the Instant Gallery. All photos by Van Johnson



## Lathe Billiards

Many turners have their lathes placed parallel to the wall and those who have mini lathes often set them on a workbench parallel to the wall behind. These are accidents waiting to happen and not just for beginners. I know a very experienced turner that was knocked cold when a bowling ball sized burl came off the lathe, hit the wall behind, the ceiling above and the top of his head. He didn't see it happen, they figured it out from the marks on the wall and ceiling.

To avoid this, position the lathe so it is about a 20° angle to the wall behind it. Hopefully the wood will bounce off the wall and away from you. Maple burl in the corner pocket.

— Jim Duxbury,  
North Royalton, Ohio

## Mouse Pad Chuck

I have had very good success lately by reverse mounting my work directly on the chuck padded with a disk made from the same material that is used to make a computer mouse pad. Place the pad over the chuck and mount the bowl on the lathe. Then bring up the tailstock with the live center and put a leather button over the center to protect the bowl. The button was punched out of scrap pieces of leather with a gasket punch. Then I use the tool rest as a guide to center the work by rotating the work and tapping it until the space between the tool rest and the work is uniform all around. Then take light cuts with the gouge and finish the bottom. This leaves a small nub about the size of a dime that needs to be carved away.

— Wayne Wolfe, Prescott, AZ

## Non-slip for mini lathe

I found a product we use in our RV to keep things from moving around while on the road to be

useful in woodturning as well. The product is called "Non-Slip Line It", as listed in Camping World. Also, it is available at Walmart, Home Depot, Lowe's, etc.

It comes in rolls and in woodturning can be used as the interface between a jam chuck and a bowl interior; but what I find useful is to place a section under each end of a small lathe to keep it from sliding around the workbench. It really improves safety as well as not having to chase the lathe across the workbench surface.

— Don Walworth, Gilmer, TX

## Cheap Velcro Sanding Discs

For whatever size discs I may need, I have simply bought a pipe nipple of the appropriate size, along with a cap to fit one end. You can get 1, 2 or 3-in. sizes.

Screw the cap on one end and take the nipple to the grinder and sharpen the other end. Place the Velcro paper on the end of a large wooden block or section of a tree. End-grain works best.

I cut at least five sheets at a time, usually without removing them from the pack. Then I place the capped nipple on the paper, strike it sharply with a shop hammer and you have five discs cut.

I use a lot of 2-in. discs, so it is possible to get 100 discs out of a five sheet pack with very little waste. I have one turning friend who uses cut offs

from exhaust pipes, sharpened in the same manner.

— Gariel Sauls Oklahoma City, OK

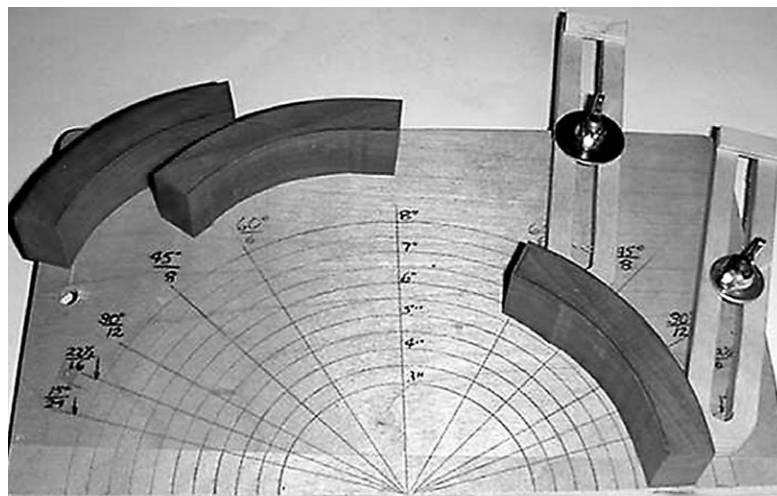
## Segmented Ring Sanding Jig

I often use a bandsaw to cut the pieces for my segmented vessels. This allows me to select the grain direction and color to enhance the turning. I have been trying for years to figure out a way to sand the angle on the ends of a narrow ring of segments fairly close, so the circle would be round. I draw a full size drawing and then cut out a cardboard template to match the segments. This pattern is transferred to the wood and then cut out on the bandsaw. Sand the outside diameter of your segments as close to the line as possible. Each segment is then placed on the jig to sand the ends for a very close fit.

To build the jig, take a piece of plywood big enough to fit your disc sanding table and glue a piece of wood on the under side that exactly fits the slot in your sanding table. Draw half circles 1/2-in. apart to act as guides for aligning the segment pieces. Draw angles from the center point for 30, 45, and 60° for 6, 8, and 12 segment rings.

See photo below.

Make 2 slotted fingers with



Segmented ring sanding jig.



rounded tips to act as stops for aligning the segment pieces. These fingers are adjusted and locked in place for the size ring that you need. Hold each segment against these fingers with the end just over the edge of the jig and slide the jig past the sanding disc. This will sand the ends fairly accurately. By assembling the ring in sections of 90 or 180° you can sand these "groups" to increase the accuracy of the final ring.

— George "Sonnie" Sharrar  
Independence, MO

## Great Sanding Sticks

When turning the spindles from hardwood stock of  $1\frac{1}{2}$  to  $2\frac{1}{2}$ , I always cut the corners off. It takes very little time to tilt the bandsaw table to 45° and run the pieces through. I know it wouldn't take any more effort to turn the corners off, but I want the corner strips. By gluing sandpaper to one or more surfaces these triangular shaped pieces are great sanding sticks for tight corners. I like them about one foot long. If I have more than I need, they also make good stir sticks.

— Dave Barriger, Apopka, FL

## Self Storing Gouge Sharpening Jig

There are lots of gouge sharpening jigs available for sale. They all work much the same way, by rotating the gouge on an axis at an angle to the axis of the gouge. The drawback is there are so many steps you have to go through. First you have to find the jig, restore the jig to the setting you used last time (assuming you remember), set the position of the jig on the gouge, then set the V-block or otherwise align the jig to your grinder. Thinking about all those steps "might" tempt you to work with a dull gouge. Here's a way to cut down the number of steps and save some money besides.



Self storing gouge sharpening jig.

The "jig" (a piece of dowel rod or drill rod) stores in the handle of your gouge. All you have to do to set it up is pull the rod out, insert it in a hole, and set your V-block.

First clamp your gouge horizontally in a vise with the flute opening down. Using a  $\frac{3}{8}$ -in. drill bit (a regular HSS bit, not a brad point, as you may contact the shank of the gouge) drill a hole in the handle swept back about 20° from perpendicular. Insert a piece of rod in the hole. Wooden  $\frac{3}{8}$ -in. dowel will work fine for spindle gouges, but use  $\frac{23}{64}$ -in. drill rod for bowl gouges. Lay the gouge on your bench so that the tip is aligned with the edge and the axis of the gouge is at an angle to the edge. Use about 20° for a spindle gouge, about 30° for a bowl gouge, more if you favor a radical grind. The steeper the angle the more you can sweep back the wings of the flute and the more you can change the sharpening angle between the tip and the wings. Mark the rod where it crosses the

edge of the bench and cut it there. Use a long  $\frac{3}{8}$ -in. drill bit and drill into the base of the handle about an inch less than the rod is long. If you used  $\frac{23}{64}$ -in. drill rod, wrap a little tape around the end so that it fits snugly in both holes. See photo above.

— David Reed Smith  
Hampstead, MD

## General 260 "Fix"

Recently I purchased a new General 260 lathe. One small irritation was that the tailstock handle would drop down and jam against the leg when it was moved back out of the way. To fix the problem I drilled a  $\frac{5}{32}$  hole in the tailstock locking shaft and inserted a 1-in. rolled pin, which holds the handle from falling down too far.

Roy Fisher Graham, NC

Send your tips to:

John Lucas  
PO Box 1292  
Cookeville, TN 38503  
jlucas@tntech.edu

# A SIMPLE SEAT

## Turning three-legged stools

DAVID W. SCOTT

**T**HE THREE-LEGGED STOOL HAS been a signature piece of mine for 20 years; I make 60 or so per year, along with other furniture and accessory items. I have also used the stool as a teaching project in workshops. My stool design can be a friendly introduction to the lathe, as it is a combination of simple faceplate and spindle turnings resulting in a very useful piece of furniture. The tripod design, never rocking on an uneven floor as four legs may, is spare and efficient, supporting even the heaviest customer.

I can build stools to any height, but generally I make full-size stools with rungs in 22-, 24- and 26-in. heights (measuring from floor to the top of the seat). Probably the most commonly ordered height is 24-in., perhaps because this works so well with 36-in. counter heights. These stools have a seat diameter of at least 12-in., though I prefer a more generous 13-in., if the material allows. I also build smaller stools without rungs in 15- and 17-in. heights. Stools

more than 18-in. high need rungs to add structural strength.

The inside angle of leg to floor is 75°, resulting in a footprint about 21-in. across. As that angle increases, so the legs are more perpendicular to the floor, the structure becomes less stable, and as it decreases the footprint gets wider to the point of taking up too much floor space. I have chosen 75° as the best compromise.

Stock for my seats, legs and rungs is  $\frac{8}{4}$ . I often combine two woods within one stool for contrast and visual interest, though one wood looks fine.

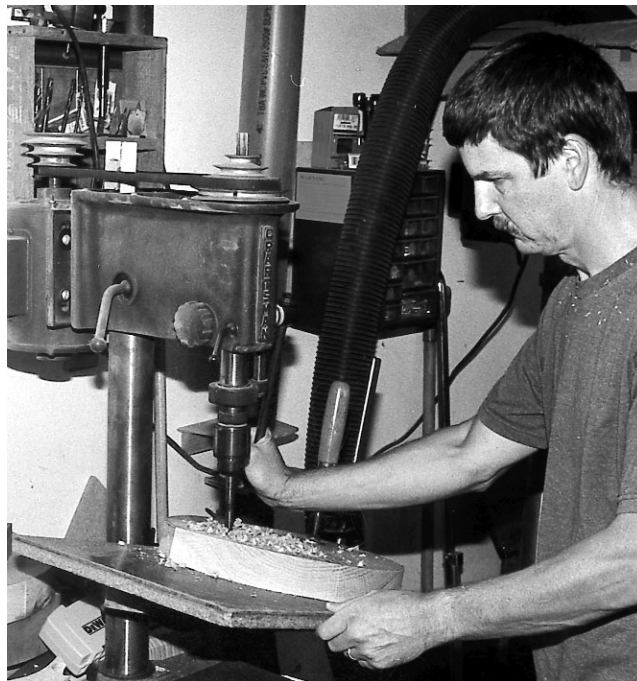
Maple (figured and plain), walnut, cherry, ash, red and white oak, and pecan are the ones I use most, though any durable, beautiful wood should suffice.

### Shaping the seat

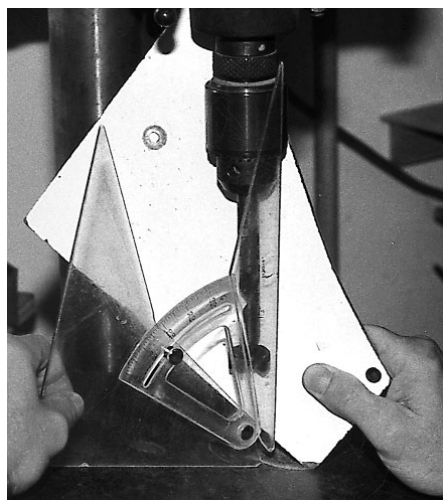
I begin with the seat, the foundation of the stool structure. As a business, I can absorb the high cost of purchasing  $\frac{8}{4}$  boards, 13-in.-wide, when I can find them, and I try to keep a supply of seat blanks on hand. However, gluing up two or more pieces to make the width works fine also. On a roughly planed blank, I lay out the maximum diameter circle with protractor or trammel points on the side I choose to be the bottom, and bandsaw the circle. I draw a line through the center point in line with the grain direction and two more radius lines, using a com-

pass, to divide the circle into three 120° sections. Then, I mark a second circle with a radius of  $4\frac{1}{2}$ -to-5 in. The intersection of this circle and the three radius lines will mark the points to drill for the leg holes. To drill these holes, I angle the drill press table to 75°, and drill 1-in. diameter holes  $1\frac{1}{4}$ -in. deep using a multi-spur bit. I take care to not drill too deeply, as I don't want to cut into the holes when I turn the top side of the seat. I make sure each hole angles out in a plane from the center point of the seat by visually lining up the radius line with the front edge of the drill press table. These holes could be drilled after turning the seat, but I prefer to make them before turning when tear out around the hole edges isn't a concern.

I attach to the lathe using a Glaser



The author tilts his drill press table to 75°, then clamps an unturned seat blank down to bore the three leg holes, which are about  $1\frac{1}{4}$ -in. deep. A color photo of the stools is on Page 34. Photos: Dick Burrows, except as noted.



Scott sets the drill press angle with an adjustable triangle, backed by a piece of Formica to improve visibility in setting the table angle.



**Stools and details:** The author's stools are sturdy and elegant, with smooth flowing lines. Adding to their appeal are little touches, such as the contrasting color button over the brads used to peg the tenons, above left; the laminated back rests used on some styles, plus the center button which conceals the screw center mounting and makes it possible to remount the top for refinishing, if ever necessary, top, and the gently round bottom of the legs, which makes stools sit well on most surfaces. Photo at right of the author's walnut and maple stools by Tim Barnwell.

screw chuck, so I need a  $1\frac{1}{4}$ -in. diameter hole in the exact center of the seat underside to accommodate the screw length. This is a large piece of wood to turn with just one attachment, so if you're not confident of being able to turn smoothly, without "digs," go with a larger screw center or a small faceplate. Before I drill for the center screw, I make a shallow 1-in. hole about  $1\frac{1}{4}$ -in. deep. This will accept a turned button to finish off the seat, after final glue up.

The seats I turn are simple and rounded in a continuous line from top to underside, with a shallow dishing on top, generally to a maximum depth of  $\frac{3}{8}$ -to- $\frac{1}{2}$ -in. Though I've tried many variations on this, the smooth, rounded form is both the most comfortable to the rear end and thighs, and is also the easiest to turn and power sand. I turn the seat from roughing out to final pass using only

one tool, a high-speed steel 1-in.-wide round nose scraper; then I sand using 5-in. diameter discs in an electric drill with variable speeds up to 2500 rpm. I believe that power sanding with an electric drill is every bit as much of a "hand tool" skill as using a skew; there is a lot of learning involved in proper procedure that is best worked out through trial-and-error, but the error part is quite forgiving. I begin with 100-grit; then 180 and 220; then hand sand as needed to remove any disc swirls, but rarely beyond 240-grit. Finer sanding isn't warranted on a turning destined to be appreciated most by the customer's butt. Then I apply a first finish coat and put the seat aside.

### Turning the legs

For a 24-in. high stool, I rip out 2x2x24-in. billets on the tablesaw,

and then set the blade at 45° to rip off the corners so that I begin turning with octagonal cross-section lengths. The legs will be turned between centers without waste at either end.

In my shop, I rough out several dozen legs at a time with a Hegner duplicator which leaves a copy that requires light finishing passes of the gouge and careful turning of the tenon at the top end to be ready to sand and finish. Without the duplicator, there is just the matter of turning three matching legs; mine are a simple form, leaving good thickness where the rungs will join, with a couple of easy-to-reference diameter points. Most of my leg turning is done using a large,  $1\frac{3}{4}$ -in. roughing out gouge from start to final finish, followed by disc and hand sanding. Special attention must go to turning a precise 1-in. diameter for the  $1\frac{1}{4}$ -in. long tenon; a snug fit is essential.





Turning leg tenons: the author uses calipers to set the diameter of the tenon, above left; next he uses a parting tool to set the length of the tenon and establish its diameter at the point, center; and finishes with a skew, right.

I tell students to “sneak up” on the final diameter, but we all overdo it from time to time and end up with a too-loose fit. This can be salvaged by making a sleeve. Cut a square of the leg material  $1\frac{1}{4}$ -in.-long and drill a  $\frac{7}{8}$ -in. hole through the end grain; then cut a rough circle, larger than 1-in.-diameter around that hole. Then turn the tenon down to a precise  $\frac{7}{8}$ -in., slide the sleeve over it and glue in place, matching grain direction. When dry, re-turn, this time to a precise 1-in.-diameter. This patch is strong and invisible. As with the seat, I apply a first coat of finish and

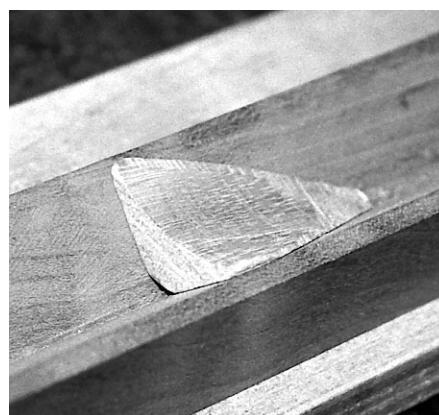
set the legs aside for a day. The next day, I buff lightly with 0000 steel wool, and then I’m ready to drill the legs to accept the rungs.

### Boring for rungs

I make two rung patterns: the standard three rungs, all parallel to the floor; and two rungs in the shape of a “T”, with a horizontal front rung and a rear rung elevated to meet the back leg at 90°. I use the T-rung on most stools up to 26-in.-high; on stools taller than that, the legs really need the support of three rungs, and the sitter benefits from more places

to rest the feet.

I now dry assemble legs to seat, and visually determine how high above the floor to place the front rung, usually in the range of 9-to-10-in. Now I must set my drill press to produce matching  $\frac{5}{8}$ -in.-diameter holes. The legs will rest in a V-shaped cradle on the angled table with a stop-block to determine the distance from the bottom (floor) end. The angle of the table is not the same as the angle of the leg holes in the seat, but is slightly greater. This is because the leg-to-rung angle is not in the same plane as the leg-to-



Scott bores the legs for rungs using a tilted table on his drill press, left. To add stability to the v-shaped cradle, he slides a shaped, tapered wedge, above, under the leg.

seat-center angle. With the rung-less stool assembled, I measure the angle from floor to leg in the plane formed by the two front legs, and this will be the angle at which to set the drill press table. On a T-rung stool, I drill two holes at this setting, one in each of the front legs.

All that is left now is to determine the finished length of the front rung, which I measure with the dry-assembled stool. I cut a 2x2-in. square blank to that exact length and proceed to turn, aiming for precise  $\frac{5}{8}$ -in.-diameter ends with a full-diameter middle. I tend to keep this piece simple, as it will literally be “under foot”. When turned and sanded, I apply finish, being careful to stop short of the ends, since the finish would interfere with glue adhesion when the pieces are assembled.

If I am making a three-rung stool, I now drill the next two holes, changing the stop block by 1-to  $1\frac{1}{2}$ -in to offset the next rung slightly higher. This is done to avoid weakening the legs with tenon holes. When viewed from above, the three rungs form a triangle with  $60^\circ$  angles. The drill press table angle remains the same, but the mark for the second rung relative to the first will be determined by eye, with the stool dry-assembled.

With a T-rung stool, the drill press table is now returned to its standard  $90^\circ$  setting, as the rear rung meets the rear leg and the center of the front rung at right angles. The  $\frac{5}{8}$ -in.-diameter hole in the center of the front rung is measured out; to determine the placement of the hole in the rear leg, I dry assemble seat, three legs and front rung and place a steel ruler from the rear center point of the front rung back to meet the rear leg at a  $90^\circ$  angle. With that point marked, I then drill that hole, reassemble and measure to determine the exact length for the rear rung. I use the rear rung as an opportunity to add a

little more ornamentation, as this rung is a bit more protected from foot wear.

### Assembly

The joints of the stool rely on good, snug fit and yellow glue. I also pin each rung through the legs using a 1-in.-long panel nail countersunk in a shallow  $\frac{1}{4}$ -in diameter hole, which will be capped with a small turned  $\frac{1}{4}$ -in.-diameter button. Measuring from the edge of the  $\frac{5}{8}$ -in.-diameter hole to ensure consistency, I now drill these shallow  $\frac{1}{4}$ -in.-diameter holes, one on each of the front sides of the front legs, and one on each side of the rear rung in the rear leg. The rear rung is only pinned from one side, but visually needs the appearance of two buttons.

At this point I dry assemble the entire stool to make sure there are no unforeseen problems, then tap everything apart with a rubber mallet. I now apply glue to the inside of each hole, using a syringe to keep



Find the angle between the leg and floor with an adjustable triangle. It will be slightly greater than the leg-to-seat angle.



Locate the center rung with a straight edge run from the cross rung to the third leg and mark the location with an awl.



After boring holes in the legs for rungs, Scott determines the rung length with a simple story stick – two pieces of stock that slip into the holes and can be marked in the center, above.



things neat, and tap all joints together with the rubber mallet. Then I drill a  $\frac{3}{32}$ -in.-diameter hole in the shallow  $\frac{1}{4}$ -in. holes and through the rungs within the legs and push in the panel nail pins.

The four  $\frac{1}{4}$ -in. domed buttons are turned using short dowel pieces held in a Jacobs chuck. A skew and brief sanding accomplishes this quickly. Then, to finish off the shallow 1-in. recess on the seat underside, I turn a contrasting wood, face grain button and glue in place.

When all glue is dry, I apply additional finish coats to the entire stool. I am currently using Minwax Wipe-On Poly, though I've gotten nice results with Waterlox and other oil finishes. I aim for a minimum of three coats with a day of drying between each, finishing with a coat of Watco Satin Wax.

### Adding a low back

On a taller, bar-type stool, I sometimes add a low back which locates the sitter and provides a bit of support. My backs consist of three laminated pieces, attached to each other and to the seat underside with countersunk screws.

The horizontal rail of the back is about 18-in.-long and at least 1-in.-thick, and made up of seven plies. I rip the  $3 \times 20 \times \frac{3}{16}$ -in. plies out on the tablesaw with a high-quality blade that leaves a glueable surface, then stack them up and glue to a one-piece form. This is a shallow curve, but it takes a lot of clamps to pull this bend to the form. Yellow glue tends to "creep" on the ends, due to the continuous curve of the bend, so I use polyurethane glue here. After drying, the back rail is shaped and gently rounded.

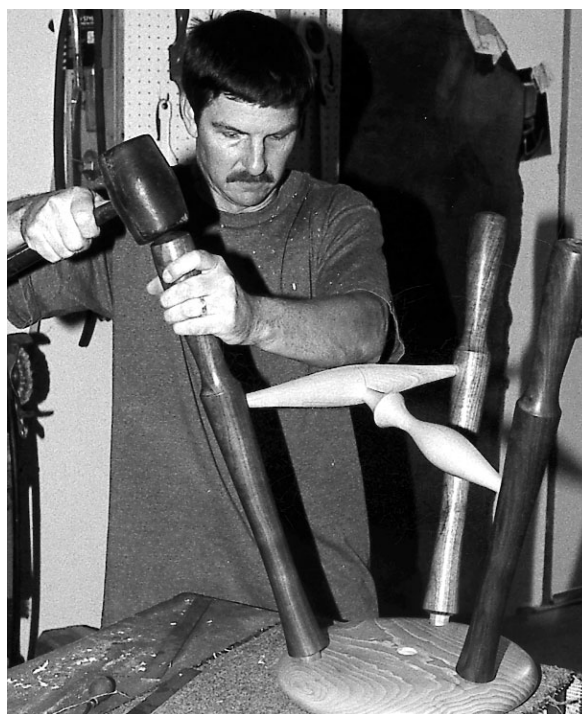
The two uprights are right angle bends, made of ten to twelve plies of laminating veneers, aiming for a finished thickness of not less than  $\frac{5}{8}$ -in. These  $\frac{1}{16}$ -to- $\frac{1}{20}$ -in. "special thick-



**The two sides of stool making:** Pleasant, graceful curves at the lathe, above, and a more violent approach to assembly, right. The trick is a tight fit without splits.

ness" veneers can be hard to find, but they are just right for making the sharp bend. I glue up a stack of 2x 20-in. veneers using yellow glue and a roller, and clamp to a one-piece form to dry overnight. Yellow glue works fine on this lamination; the long flat areas on either side of the 90° bend don't seem to allow creep. These bent pieces are then shaped and sanded, with  $\frac{1}{2}$ -in. recesses for the countersunk screws. Then, they are glued and screwed to the horizontal rail, and the whole back as a unit can be attached to the stool. All countersunk screw holes are capped with turned contrasting wood buttons.

My stool design has evolved slowly over the years, shaped by customers' needs and by my desire for efficiency in use of materials and



production time. I encourage students to take this design and elaborate on it; alternate rung patterns, more embellished turnings and laminated seats are all possible areas to explore.

*David W. Scott is a full time woodworker and workshop teacher living in Clyde, NC. He can be reached at: david\_w\_scott@hotmail.com*



# TURNING FLOWERS

## *Blossoming Excitement in Woodturning*

JIM RINDE

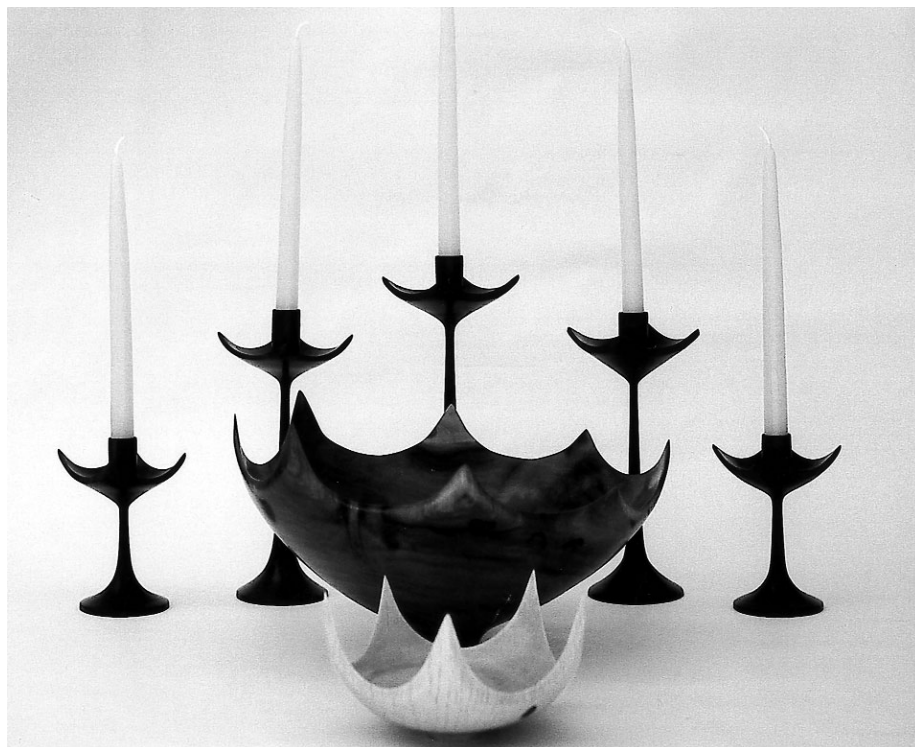
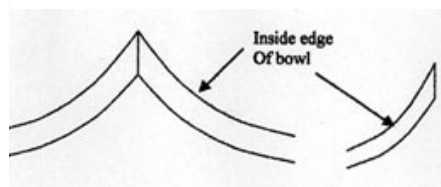
I HAVE ALWAYS THOUGHT OF WOOD turning as a rewarding activity with the major payback coming from the pleasure of the act of turning itself and of the object turned. The only exciting times had been when the tool caught and went flying off in the wrong direction. Recently I started turning "Flowers," which are bowls that have a distinctive edge shape that was inspired by the petals on flowers. While turning a flower, it occurred to me that this is exciting; it gets the adrenaline going. You ask yourself, "Can I do this? Will it hold together?" At times the tension is palpable.

What is a "flower"? The basic shape of the "petals" on the bowl edge is shown in the drawing below. The points and the inside edges are knife sharp. The wall thickness at this point is essentially zero and the challenge is to retain this natural shape. Note: this shape results from turning and no carving is required! When turning the petal part of the bowl, I think of the points and edges as spinning razor blades. Be extremely careful — this is not a project for a novice turner or the faint of heart.

### **Laying out the petals**

Flowers come with many petals. The first task is to decide how many petals you want; the number of petals determines the starting shape of the wood block. For example, to produce five petals I start with a pen-

#### **Detail Of "Flower petals"**



The author's technique can be applied to many designs, from various sizes of vessels to elegant candlesticks.

tagon. So far I have made flower bowls with three, four, five, six and eight petals. As a general rule the larger the diameter, the more petals are needed to make the most pleasing shape.

To start with, pick a section of a log with good strength, green or dry. In the turning I describe in this article the wood is green live oak. Flowers are turned endgrain because you need the strength that comes when the wood fibers are parallel with the petal axis. Put the log on the lathe with the centers located in the pith and turn the ends parallel. Remove the wood block from the lathe and draw a circle the size of the bowl you want to turn, keeping track of the center. Now draw within that circle the starting shape, in this example a pentagon. To get the correct angles for the pentagon, 72°, I used my

computer to draw the pentagon centered within a circle of the correct size. After printing, I transferred the design to one end of the log. You could also divide the circle with a protractor or some other geometric method.

I carefully cut the pentagon on a bandsaw. Since the bandsawn areas will form part of the outer surface of the finished bowl, I next smooth and true up the sawn surfaces on a 120-grit sanding disk. Using the center as a guide, I mount the woodblock on a faceplate. Work carefully here. Keep in mind that the more accurately the block is centered, the more uniform in height and the more symmetrical will be the peaks on the finished bowl.

### **Turning the flower**

Turn the inside of the block first,

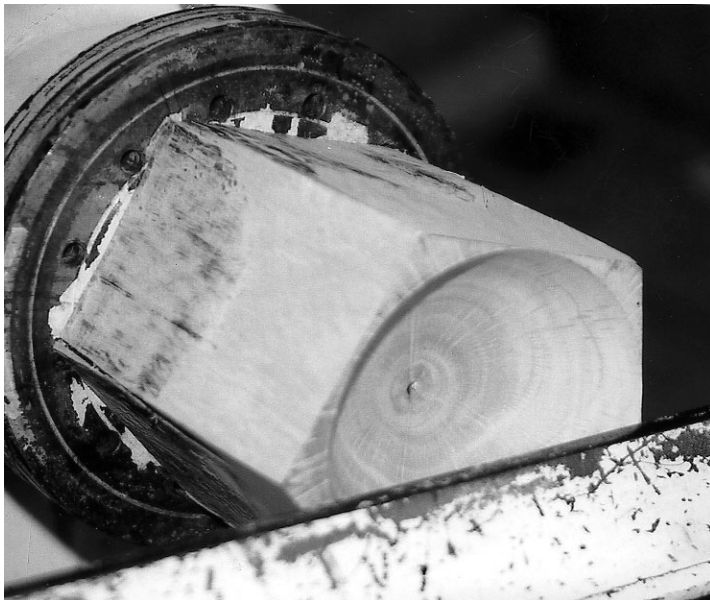


PHOTO 1: Block mounted on faceplate and hollowed out to near the edges.



PHOTO 2: Inside almost finished. Note the tip of the peaks still have flat ends and uncut fibers on outside surface.



PHOTO 3: The inside finished and sanded and the first outside cuts made. Note: wall thickness is about  $\frac{1}{2}$ -in. at this point.



PHOTO 4: Outside finished and ready for parting off. All photos by the author.

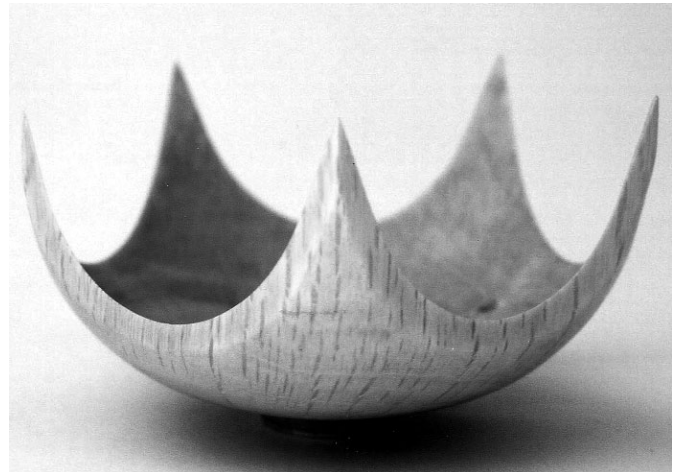
starting at the center and work outward in steps. I start my cuts at the top surface of the block and carry the cuts to the center. At some point you will begin cutting where there is no wood. In essence you will be turning a natural edge bowl, but in this case

it has to be called an un-natural edge bowl.

I use a  $\frac{1}{4}$ -in. bowl gouge with a long fingernail grind. It needs to be sharp, so don't hesitate to resharpen as needed during the turning. Even with a sharp tool, you will find that

when turning green wood, not all the fibers will be completely cut off at the trailing edge of the "petals." I use scissors to cut them free and then take a piece of sandpaper and blunt the sharp edges. For up to 6-in. diameter bowls I turn at a high speed,





Two of the author's Flowers: Pistache at left, and green live oak bowl demonstrated in this article, above right

about 2000 RPM's.

### Working in the ghost region

When you begin cutting in the "ghost region," take light cuts. To get high peaks on the edge of the bowl you have to cut into the block at a fairly steep angle, about 70-to-80°. To get uniform curved edges on the "petals" the inside shape of the bowl must be a smooth curve. This is the time where the edges are spinning razor blades. I wear leather gloves. To smooth out the tool marks that invariably are left by the bowl gouge I take a light shear scraping cut using a 1-in. round nose scraper. After shear scraping I power sand the inside surface where there is solid wood while the lathe is turning and power and hand sand the petals with the lathe stopped.

### And for the excitement

Now the excitement begins – the turning of the outside surfaces of the petals. Since we are turning the outside surface there is not room for supporting tape or other restraints.

But have heart; none of the bowls I have turned have broken ...yet! Set up a light so that you can see the "ghost image" well. Start turning some distance down from the peak and remove some of the excess (sup-

porting) material so that you have a section where the wall thickness is uniform, but thick. Then start near the tip of the peak and make light shear cuts parallel to the inside surface until you arrive at the wall thickness desired. Stop often to check the wall thickness.

Now the true shape of the "petals" emerges. There is a three-dimensional quality to the peaks that tells me the thickness should not be too thin. The thinnest wall I have turned is 1/8-in.-thick, but I think 3/16-in. looks better. Continue turning the outside surface in short sections until you are into solid wood and the diameter is significantly reduced. I then power and hand sand to achieve the surface finish desired before final shaping of the bowl foot and parting it off.

I dry the bowl before a final sanding to 400-grit and finishing. I will typically apply a thin coating of clear hard epoxy resin that has been diluted with methyl ethyl ketone (MEK) to reduce the viscosity and allow greater penetration. I allow this to soak in and then wipe off the excess.

**SAFETY NOTE: Wear rubber gloves when working with epoxy resins.**

I cure the epoxy resin overnight at

room temperature, which is generally 50-to-70° F. To finish the cure I will put the bowl in an oven with the light on for 3-to-24 hours at a temperature of approximately 130° F. The final finish is a coating of wax.

### The pith problem.

Since these turnings are end grain, the pith must be dealt with. If the pith is small and the cracks around it are small, I will generally saturate the area with low viscosity Cyanoacrylate glue and fill the cracks with wood dust. However, in one case the pith was large and cracks were long. In this case I drilled out the pith area with a 1 1/2-in.-diameter Forstner bit before parting off the bowl. After drying I turned a plug to fit this hole and glued the turning onto the plug. That way I could re-turn the inside bottom of the bowl and finish the outside and foot. Making the plug from Ebony while the "petals" were made from Elm gave a good contrast. Because of its resemblance to a real-life flower, I just had to call that bowl "Black-eyed Susan."

*Jim Rinde is a recently retired research chemist who spent 25 years working in the area of epoxy resins and adhesion science. He began wood turning about 10 years ago and lives in Fremont, CA.*

# TRENT BOSCH

*"Getting there" – Honestly and Decently*

KEN KEOUGHAN

THE MOST STRIKING THING ABOUT Trent Bosch is that he is "going to get there" ... wherever he decides "there" is. He is going to do it honestly and decently. And when he gets "there," he won't dwell on it, and in fact he may not even realize it, because he'll already be excited and moving toward his next "there". His most immediate and treasured environment is and will be his family: his wife and three kids. But for the rest of the world he will have sincerely striven not to harm the ecological environment in which he lives and functions.

## A quiet risk taker

Trent is quiet, almost but not quite shy. Yet he is a risk-taker. He exudes a resilient confidence. He invents techniques, designs pieces he has no idea how to execute, is astonishingly good at gently, quietly saying "no." Talent? I'm not quite sure what talent is, but he's got it. More important by far, he uses it, works industriously at using it. Trent doesn't work hard; he works smart. Everything about his studio, his processes, his pieces has been thought out. There is the same effortlessness about him in his studio that one sees in Olympic track athletes.

He is only 30-years old. Yet he has assisted David Ellsworth at Arrowmont, been a Graduate Teaching Assistant at Colorado State University, birthed and breathed life into his own prospering company, (the Rescued Wood Bowl Company), and developed, organized and taught a woodworking program for men in the early stages of Alzheimer's disease (the Eagles Club Respite Program). He has been a demonstrator at the AAW Symposium in Charlotte (2000), Akron (1998) and San Antonio (1997), Texas Turn or Two (2000), Rocky



Trent Bosch takes a break in his Fort Collins, CO, shop. Photo: Ken Keoughan

Mountain Woodturners Symposium (1999) and the Utah Symposium (1999).

And at these symposia he has taught his vessel within a vessel technique; surface treatments including sand blasting and dying; and green wood turning — everything you ever want to know. And since one of his undergraduate majors was photography he has taught "Photographing Your Own Work/Setting up Your Own Photography Studio."

In his spare time he has been graduated from Colorado State University with a degree in fine arts; and pursued and dropped out of a master's program in teaching, since the replacement of woodworking with computer activities would have left him with nothing he wanted to teach; married and sired three beautiful children, Kailee, Sienna and Treden. He was there for each birth and each is reflected in his work.

I could go on with this litany of where he has gone with wood turning. Suffice it to say his work is in 50

galleries, including del Mano; has appeared at SOFA New York and Chicago, and is in the Bohlen collection at the Detroit Institute of Arts. He is also in many private collections.

## Functional and sculptural

Let's talk about his work. As an overview he creates both "functional" and "sculptural" pieces. It would be easy to say that the "functional" pieces, sold through his Rescued Wood Bowl Company are pretty straightforward, but they are not. They are carved, painted, textured, sculpted ... even though they are "functional." Within the framework of his "sculptural" pieces there are six separate bodies of work, four of which he is actively producing and selling, two of which are in developmental stages.

First, the "functional" series. Rescued wood is what he uses, rescued from the tree surgeons or the landfill ... taken down due to old age, urban development, and snow and wind storms. Among the woods he finds



## Illusion, Birth and Beyond



Clockwise from top left: Vessel of Illusion, which appears to be a vessel rising from a vessel and two series related to the birth of Trent's daughters — Kailee series, named after his first daughter; and two from the Sienna Series, his second daughter, which he says reflect the easier birth of the second child. Photos by Trent Bosch

are silver maple, box elder, honey locust, elm, ash, walnut and ailanthus. In addition to rescuing these trees, he has rescued a 1961 truck with a crane on the bed to pick them up.

From truck to studio is routine, if you're used to schlepping the wet logs around the foothills of the Rockies. Chainsaw, bandsaw, wet turned — nothing new here. Into the kilns,

he's built two with very large capacities. They dry in a month to about 7 % moisture content or so. Re-mounted on the lathe they finish-turned into virtually generic, and very comfort-

able shapes, sanded to 320 grit, reverse turned and sanded again using a vacuum chuck that he built.

After that they go in one of two directions. The first is to the mineral oil bath where they are soaked overnight. If on the second path, they are painted or carved or both and marketed as "Hand Crafted for

Daily Use." The oil process takes place last. These products are bowls of varying sizes ranging from 10-to-16-in., platters in three sizes, and hollow forms in three styles. The newest among the bowls is the "Mountain Series." They are quite striking.

### Vessel within a vessel

But it is Bosch's sculptural work, and within that context, the "vessel within a vessel" concept that brought him to our spotlight at the 1997 AAW symposium in San Antonio.

The idea, of course, was to create the illusion of one form emerging from another. The technique came out of working with and studying under Lee Carter at Colorado State University. He taught and I think still teaches "bending" techniques. Lee, now an AAW board member, is retired from Colorado State University and conducts private workshops in all phases of woodturning including "36 ways to chuck a piece of wood on the lathe."

Talking about the process, Trent says, "The first step is to create the outer hollow form. Once I have achieved exactly the shape I want, I remove it from the lathe and carve and sand to create the "opening up



Mountain Series by the author.

from within" feeling. When I am pleased with the form of the outer vessel, the surface texture is created. This is done by a number of techniques from carving to indenting the wood. I do whatever is necessary to give the effect that I am looking for.

"Once I have the outer form, I'm able to visualize what the insert will look like. The insert is about 2-in.-larger than the opening in the hollow form. It is turned very thin,  $1/16$ -in. or so. The insert is then boiled to plasticise the wood, which allows me to bend the piece enough to insert it into the vessel. Once in the vessel, I use a balloon to hold it up against the inside of the vessel. When the insert is dry, I can then glue it into place and remove the balloon giving me the seamless effect of a vessel within a vessel."

### Gimmick or innovation?

I've heard someone say, someone who has not yet created an innovation of this magnitude in turning, "It's really just a gimmick, this insert deal." Yes, I guess that's true. So is the pneumatic tire, the word processor and the airplane. This is not a gimmick. This is a breakthrough, an adaptation of a technique from another discipline.

We don't yet know where it will go or lead us. But we owe Trent our thanks for coming up with it and our thanks for his willingness to share with us how he does it. What we don't owe him is a jealous put down.

Of the six bodies of "sculptural" work, the first is the Vessel of Illusion. In these pieces he uses two widely divergent types of wood for contrast and tension. The Kailee Series is an extension of the Vessel

of Illusion series. However here we see more. We see the process of creation, the emergence from within of something new, clean, innocent. The texture and coloration on the outside of the vessel represents the mother, a little spent and worn from the gestation and birthing process. It was inspired by the birth of Kailee, his oldest daughter. And this series will evolve and grow as Kailee evolves and grows.

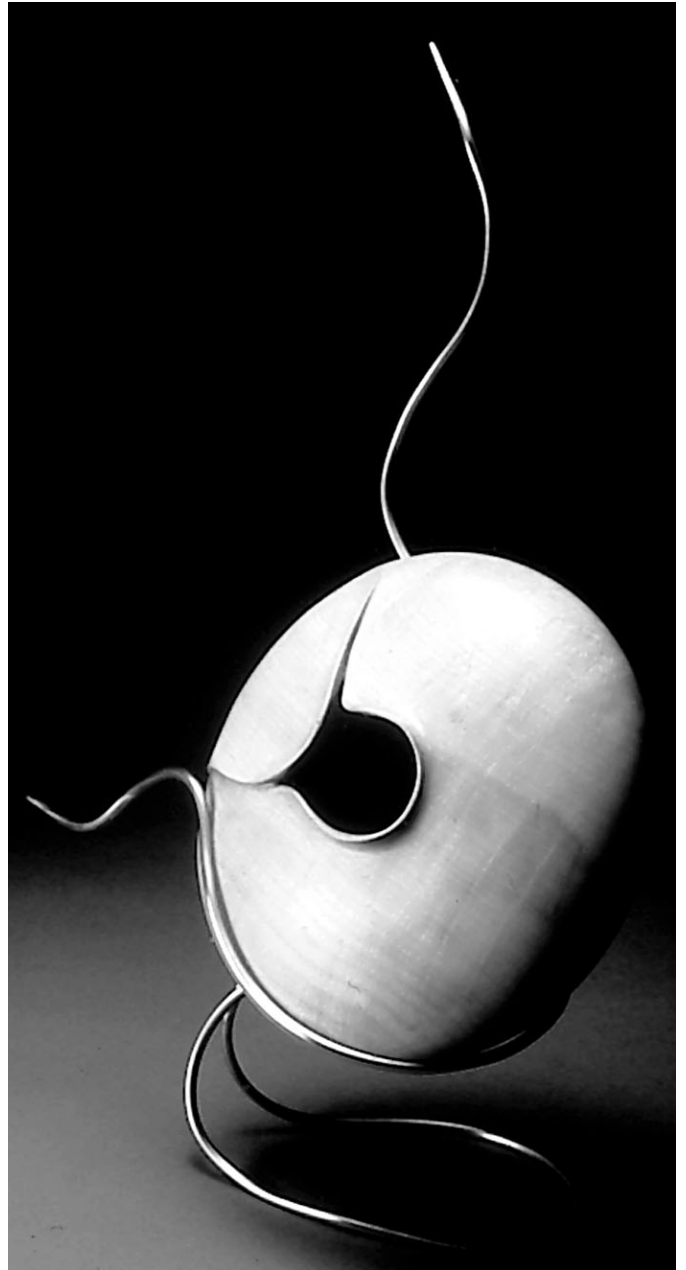
The Sienna Series has the outward appearance of a vessel within a vessel. It is not. It is one piece of wood, turned, hollowed, carved and textured. It is clearly Bosch expressing himself as he expressed himself in the Vessel of Illusion series. Here he has named the body of work after his second daughter, Sienna. And here the exterior is less beaten, less distorted. More a weathered appearance, created by sand blasting. The pieces seem to flow languidly with the grain. Sienna's birth was easier than Kailee's.

This series too will be ongoing just as Sienna will be emerging through life's passages. The Carved Rim Series attempts to lead the eye out of the center opening to the edge of the rim and from there out into the surround-





Bosch's Range of Vision: A stack of painted and carved functional pieces, above, left; and a more fluid, sculptural piece. Carved rim with metal stand.



ing area. This surrounding area is as much a part of the sculpture as the space within a vessel or bowl is a part of the sculpture.

### The Wonder of Creation

All four of these series are indelibly Bosch. They are elegant, full of tension, and filled with the wonder of creation. The developmental ones, Vortex and Treden hold nothing but promise.

More about Trent. He is male-model handsome, 6-ft. 4-in. tall and at peace with himself. He's ambitious, financially ambitious. He has the temerity to think that a wood turner can make a living, a really good living and more, from turning wood. I made my living in marketing, so I challenged him to explain how he could do that as we drove to the Denver airport in a swirling snowstorm. He convinced me and I'm not easy.

As I said at the outset, the most striking thing about Trent Bosch is that he is going to get there. And he's going to do it honestly and decently. Trent is an artist willing to put out there for all of us to see "his expression of his world." He is also an inspiration.

*Ken Keoughan is a writer and turner in Friendship, ME, and a contributing editor for American Woodturner*

# TURNING SPHERES

## *A Simple Method with Ring Gauges*

**BRIAN SIMMONS**

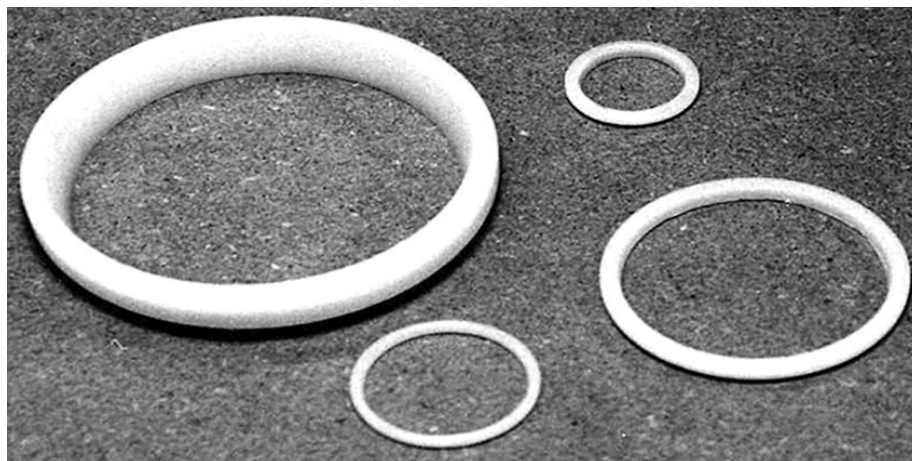
About two years ago I began turning spheres following the instruction of New Zealand turner Soren Berger. With a simple technique based on easily turned rings and lots of practice I am currently able to turn spheres of all sizes quicker, easier, and more accurately than many would believe possible.

The ability to create spheres is an extremely useful skill for turners. A sphere is a shape that looks great by itself and in conjunction with others. It is very popular among decorators today and can be incorporated into many other functional items.

The spherical shape is very pleasing to the eye and many feel that the shape enhances the natural beauty of the wood. Besides, they're a lot of fun to turn.

### **Making the Ring**

There is no specific rule to the size or thickness of the ring I use to help shape the sphere. However, I find that a good ring-to-sphere ratio is between 1:2 and 1:4. Thinner rings are more difficult to keep up with, but I



The author's turned plastic rings act as gauges to guide him as he shapes a wooden sphere. His favorite ring shape is shown at right.

### **Ring Cross Section**



prefer them because they allow me close access to the tenons on the ends that hold the blank on the lathe. I turn my own rings and use plastic, as it is very stable. Although any type of ring will work, I've found that using a shape with crisp corners and slightly tapered insides, as shown above right, works best. This form makes it easy to detect gaps, which would detract from a perfect sphere.

Rather than buying commercial washers or the like, I turn the rings to ensure accuracy and also to get the desired shape. Wood can be used for the rings, however, it will occasionally move or crack.

### **Using the Ring:**

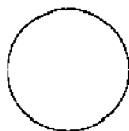
Using a ring to determine the accuracy of a sphere seems like a simple task. But, in order to use it effectively, you must understand a few ground rules and then practice. Anyone can place a ring on a sphere and see if there are any gaps between the two. The goal is for there to be no gaps. What should you do if there is a gap? It is crucial that the ring fit perfectly in the center before moving on. So, starting in the middle, you must determine where the gaps are in relation to the ring. If there are gaps at points A and C on the ring, as shown in the sketch at right, it is squashed (Fig.1) and you must reduce the diameter of the sphere and start over. If there is a gap at point 3, the sphere is elongated and more material must be removed from the

### **Sphere Turning Steps:**

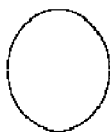
1. Turn blank into cylinder approximately 1-to-2 in. longer than its diameter.
2. Mark the center of the cylinder.
3. Measure the diameter of the cylinder and mark the radius to both sides of the centerline.
4. Make parting cuts down the outside lines to approximately  $\frac{1}{5}$  the diameter of the blank.
5. Rough out the general shape.
6. Place the ring in the center and begin making light smooth cuts until the ring fits perfectly onto the sphere without any gaps.
7. Move the ring down one side removing material until the ring fits perfectly.
8. Repeat on the other side.
9. Part the tenons off leaving excess material.
10. Vacuum chuck the blank in its same orientation and remove the tenons until the ring continues to fit perfectly all the way down the side.
11. Repeat the process for the other side.

**Fig. 1: Variations on spheres.**

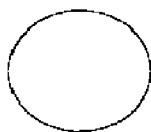
Perfect Sphere



Squashed Sphere



Elongated Sphere



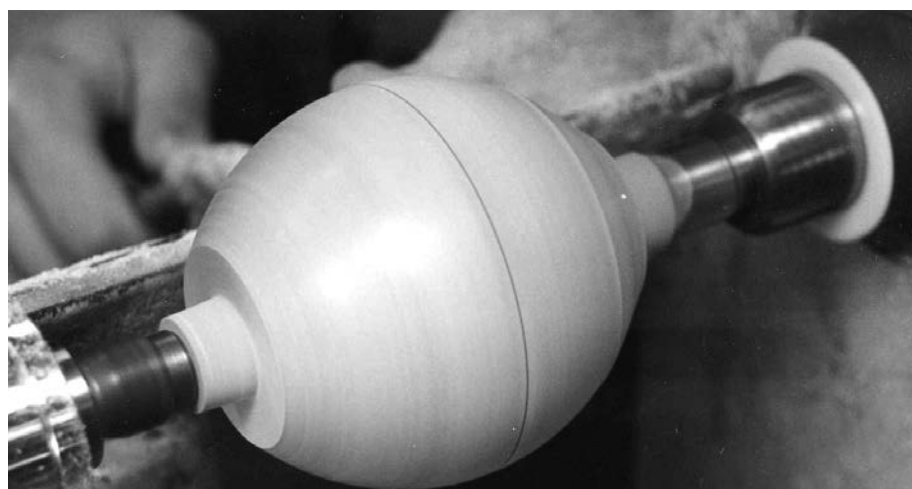
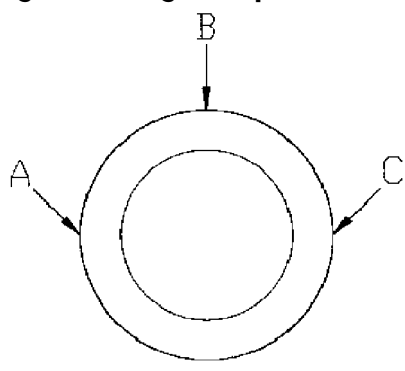
Simmons' goal is to shape a perfect sphere, shown above, rather than elongated or squashed shapes.

sides. Once the ring fits perfectly in the middle of the sphere. Continue the process down one side at a time, applying the same rules to the ring as before. It is important to make light cuts. Remember that it is easier to make an elongated sphere perfect than to convert one that is squashed.

### Turning the sphere

When turning the sphere, I find that a bowl gouge tends to work best, but in a nontraditional way. I

**Fig. 2: Turning checkpoints**



After turning the blank to a cylinder and marking its centerline, the author gauges roundness with a plastic ring (top photo). The visible gap shows the sphere is slightly elongated, requiring removal of more material (bottom photo). Photos by Hal Simmons

prefer a side-ground gouge, somewhere between a square grind and a fingernail. I start by laying the gouge on its side, the flute open to the right, if I'm turning the right side and vice versa if I'm turning the left. I lay the back of the bevel against the wood and raise the handle, much like using a skew. As soon as I begin to see a shaving, I stop raising the handle and then rotate the tool. When I finish the cut near the tenon, the flute should be completely inverted.

By riding the bevel of the gouge in this manner, I can remove a lot of material or take extremely light cuts and leave the wood super smooth,

equivalent to the surface that can be produced by a skew. By achieving the smoothest surface possible, very little sanding is needed. And because you're not actually using a skew, there isn't that dreaded toe to catch.

Though numerous methods exist for turning a sphere, I've found this to be the simplest and easiest. With good tool control and practice, you too can produce spheres.

*Brian Simmons, 19, is a student and woodturner in Atlanta, GA. He was a demonstrator at this year's AAW Symposium in St. Paul, MN.*



# A FEW OF OUR FAVORITES

## *Ray Key and Jacques Vesery Critique the Instant Gallery*



*"One of my favorites," said Key, in describing this piece by Avelino Samuel of St. John, VI.. "I like the movement and the use of material and the way the grain is integrated into the design."*



This year Gary Dickey asked Ray Key and Jacques Vesery to select some of their favorite pieces in the Instant Gallery at the St. Paul, MN, Symposium. Here are photos of the pieces, along with some of their comments. Above, Ray Key praises a piece by Canadian Marilyn Campbell for its design and sense of life and movement. Photo above: Gary Dickey. All others Larry Mart



*"Pewter Rising" by Steve Gleasner of Appleton, ME, is luminous with the use of aniline dyes and lacquer on the birch and rosewood. "I'm not a fan of shine, but here it's appropriate. The scallops give it a fine contrast and it works," said Vesery.*

*Vesery was attracted to a vessel by Dick Coddling of Leesburg, FL. The entire surface is covered with copper nails and treated to create a green patina. "I hope he takes this far enough that he sees the growth in it."*





Key liked the simplicity and attention to detail in works by Matthew Hill of Oklahoma City, OK. "These are strongly figured woods and the grain courses through; the execution is good. I can appreciate the work that goes into it." ►

Art Liestman of Coquitlam, BC, studied with Vesery under an AAW grant, so Jacques pointed out he has seen the piece in concept and was pleased at how it had evolved. "Humpty — it's a palette for endless growth." ◀

"I'm usually very critical of very busy segmented works, but this is some of the best I've ever seen. These three pieces are amazing. They go so well together," said Vesery. The pieces are by Curt Theobald of Pine Bluffs, WY. ►



In discussing the fossil vessel by Jim Christiansen of Moscow, ID, Vesery pointed out how well the skeleton matches the motif and texture idea of the piece. Much of this work is done after the turning is completed. "The lathe is the tool to prepare the canvas for the piece," said Vesery. ◀

Key called Germany's Hans Weissflog's boxes "absolutely top notch. He has original new ideas. He's probably the best box maker out there." At right, a Saturn Box. Photo: David Peters, courtesy of del Mano Gallery. ►





# A TURN FOR THE BETTER

*Winners of Chapter Collaborative 2001.*

PHOTOS BY LARRY MART

The annual Chapter Collaborative is always one of the must-see parts of the Instant Gallery area. This year's entries were both

ingenious and particularly colorful. Perhaps the local chapters had a hunch that we would be presenting color photos this year. The photos of

the Chapter Collaborative entries were all taken by Larry Mart of Carrollton, TX. We hope you enjoy his work. – Editor.



## **Best of Show**

**1st Place Technical  
1935 Morgan**

*West Bay Area Woodturners*





**1st Place Fantasy  
Octopus Midwesternus**  
*Woodturners of St. Louis*



**1st Place Artistic  
Artistic Coloring Set**  
*Capital Area Woodturners*



# BEAUTY IN THE DETAILS

*A closer look through the photographer's eye.*

LARRY MART



**1st Runner Up Fantasy  
Slick Quilly**



**1st Runner Up  
Artistic  
Ascension**



**1st Runner Up Tech-  
nical  
The General Store**





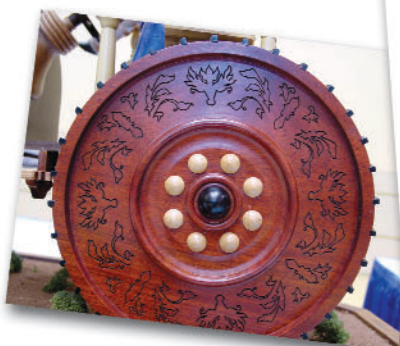


**2nd Runner Up Technical  
Bobbin Lace**



**2nd Runner Up Fantasy  
Turning Back To The Country**  
*Woodturners of North Texas*

**2nd Runner Up Artistic  
Veedawoo Spirit**





# MEMBERS GALLERY

*Work From The Mailbag And Authors In This Issue.*

The world of turning gradually has become more and more lush and vibrant with colors and textures that many artists employ as they explore the range of our art and their own imaginations. Here is our first attempt to show some of the pieces developed by members of the AAW.

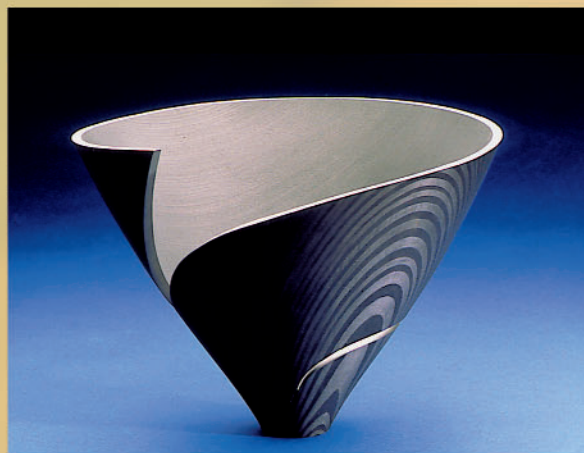
Some are photos sent to us by the members for our "From the Mailbag" section.

Others are photos of work by the authors and subjects of articles in this Journal. As we move from a black-and-white to a color Journal we will try to present the work of our authors, as well as contributions from the membership.

The best way to ensure the success

of our color Gallery pages is to send us photos. It is your Gallery and we want it to represent our best work. We can work from 35-mm. slides, color transparencies and photos.

When you shoot your work, concentrate on obtaining well-focused photos, with adequate lighting. Choose backgrounds that are uncluttered, free from distractions. Like any good gallery exhibit, the presentation should honor and showcase your work, nothing else. We are planning articles to help you master photography. — Dick Burrows, Editor



"Silver Lining #7" by Virginia Dotson, Scottsdale, AZ. Pau Marfim plywood, aniline dye, acrylic paint. (11.25-in. high X 14.74-in. diameter). An article on how Virginia develops design ideas starts on Page 46. Photo by Al Abrams.



Stools by David W. Scott of Clyde, NC. Scott describes how he turns and assembles his stools in an article on Page 14.



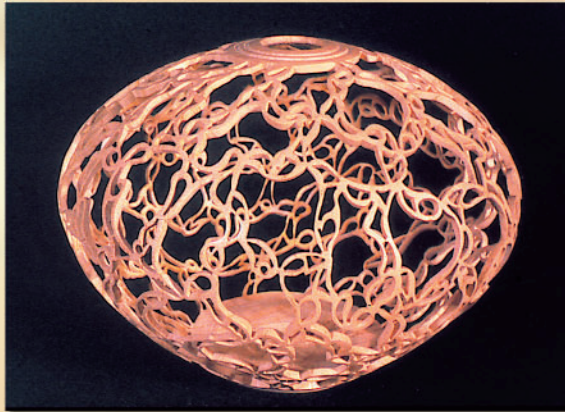
"Wrapped in Leaves II" by Brenda Behrens of Chino Valley, AZ. Turned-and-carved carob. (6-in. high X 4.5-in. diameter).



Hollow vessel by Darrell L. Rhudy of Raleigh, NC. Oak burl. (13-in. high X 22-in. diameter).



A hollow vessel in the "Sienna Series" by Trent Bosch of Fort Collins, CO, who also did the stack of painted and carved bowls, (shown below) A profile of Bosch is on Page 22.



Carved and pierced vessel by Ron Pessolano of Brimfield, MA



Lidded container with wooden stand by Ron Overholtz of Bishop, CA. Bocote, padauk and box elder. (5-in. high X 7-in. diameter)



# TRAPPED BORING BARS

*Make your Own High-Efficiency System*

STEVE SINNER

**T**raditional methods for deep hollowing vessels can be very time consuming. They also can be dangerous when the inevitable catch happens. Tools that brace against the turner's arm or body may deliver sudden impacts or thrusts that result in permanent injury. Maximum cutting depths are limited by the turner's physical characteristics. For these and other reasons, "trapped" boring bars that use an apparatus to maintain the bar in a given plane have gained a considerable following in recent years. Lyle Jamieson, Hugh McKay, and Frank Sudol, among others, have popularized trapped systems.

Since I enjoy making deep hollow vessels, and I'm not interested in tearing apart my muscles and joints, I had adopted their tools and methods. Still, scraping my way to the bottom of a 24-in.-deep vase was not my idea of a good time. There had to be a better way.

I had used an Exocet system for hollowing before switching to a trapped boring bar. Made in New Zealand, Exocet has an adjustable cover, or guard, to limit the depth of cut by what might otherwise be called a ring tool. The Exocet is a well-made and very efficient tool. But, after switching to a trapped boring bar system for hollowing, my Exocet was used infrequently.

Then the idea of marrying the Exocet to the trapped boring bar came to mind. I cut the cutter assembly off the shaft and mounted it in my homemade Jamieson-style boring bar. Suddenly I had the most efficient boring system I'd ever used. Some find the Exocet difficult to master, since it is sensitive to position. Ask it to work a bit above or below center and it quits cutting. A trapped boring bar system totally eliminates that problem by



Boring bars and components: Top to bottom, left to right: Homemade holder with 3/16-in. metal working tool bit, round Exocet cutter, standard Exocet cutter; next line: Exocet assembly, homemade holder with teardrop scraper made from a planer blade; bottom section, set of 1/2-in. Kelton Hollowers.

keeping the cutter in the optimum cutting plane. Another Exocet problem is that it sometimes plugs with tightly packed chips. A little judicious use of a polishing point in a Dremel tool will reduce that: I'll discuss that idea in the sidebar on the final page of my article. Exocet's maker, Link Technologies, is producing a video to assist woodturners with learning how to best utilize the tool under various conditions.

There are other brands of guarded ring tools besides Exocet. I cannot speak for their capabilities, since I've not used them. And there are other types of cutters that will also work on a trapped boring bar. I use the 1/2-in. Kelton Hollowers, as well as a teardrop scraper made from an old planer blade, and a 3/16-in. metal lathe tool bit holder. All of these are interchangeable in my boring bar, and each has its own advantages. The Kelton Hollower works well on the inside shoulder of a vase. Teardrop scrapers are best at smoothing interior walls. And the 3/16-in. tool bit takes

care of those occasional tough spots that the other cutters and scrapers find troublesome.

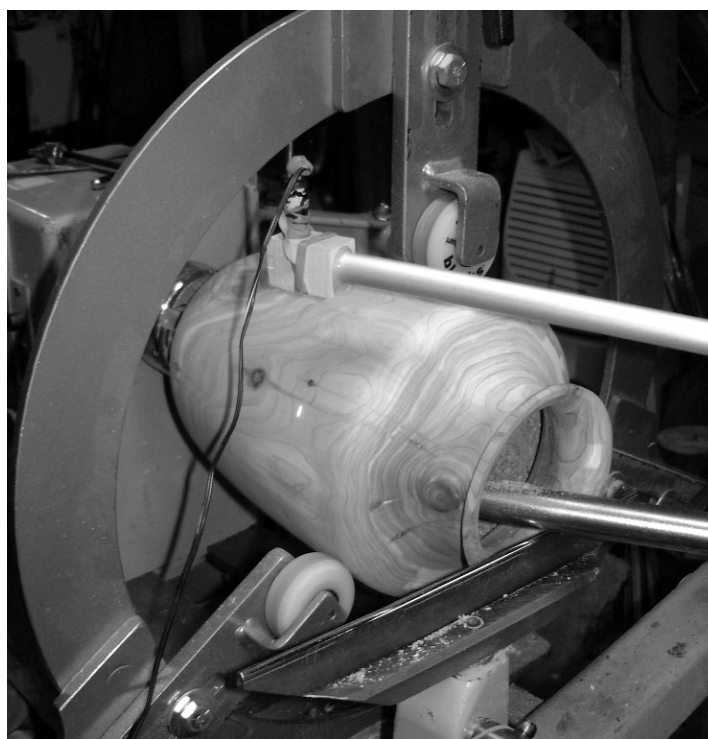
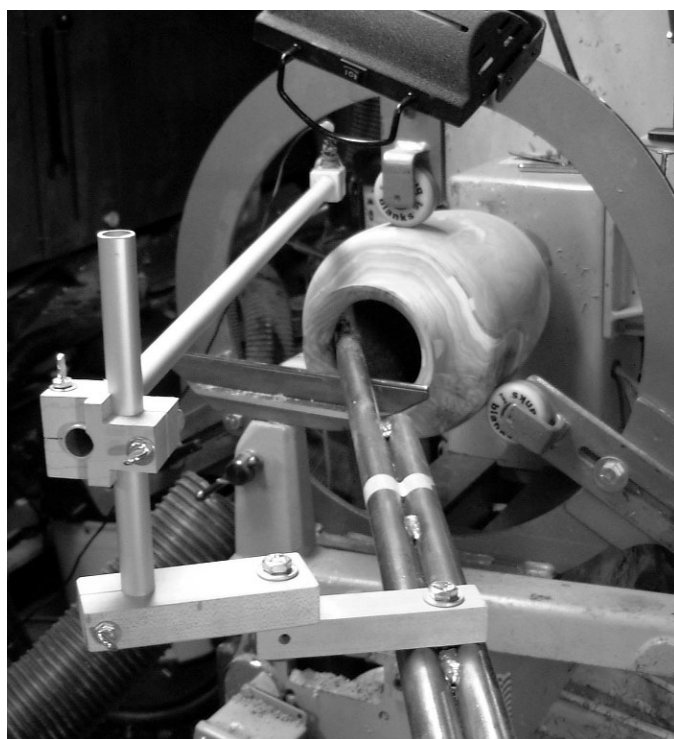
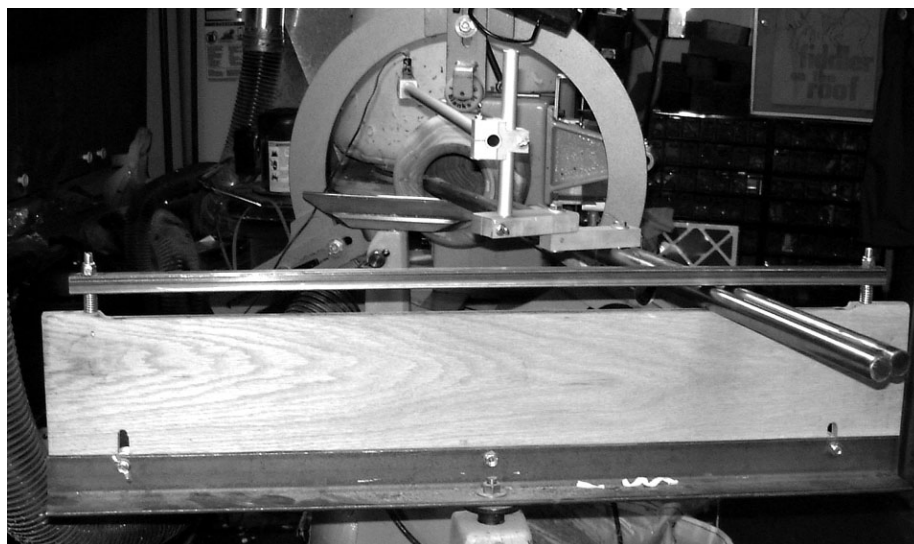
An annoyance with the traditional trapped boring bar design was that the wide outrigger restricted the amount of swing available to steer the cutter inside vessels. When a friend asked me to make him a boring bar, I changed the design by welding the outrigger against the main bar. My friend did the welding, and we made one for me, too. When I tried the new bar, I was delighted. Welding the outrigger directly to the main bar provides increased stiffness. With the same cutter, the new style bar cuts several inches deeper than the old one.

Since then, several versions and sizes of the new style have been made. The outriggers have been lengthened in relation to the main bar. See Dale Hupp's companion article detailing his engineering analysis of the optimum relationships of diameter and length of bars made from mild steel.



The author's trapped boring bar system: at right, a view of the hollowing system from the outboard end, showing the trap. The device mounted on the boring bar is a laser thickness indicating system made from aluminum tube and maple blocks. A detail view of the laser indicator system mount is shown, below left.

The detail, below right, shows the laser, 12-volt power supply line and laser's spot on a vessel. Photos and drawings by Steve Sinner



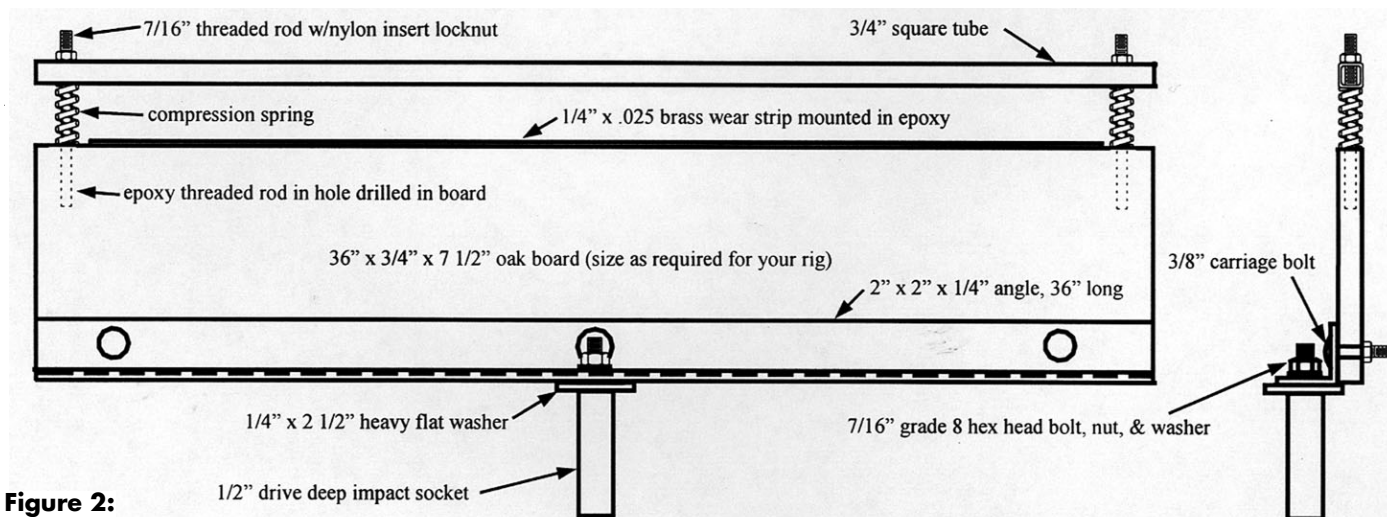
Most lathes are powerful enough to hollow up to inside diameters of about 6-or-8 inches with these systems. The trapped systems, especially with the Exocet, can cut a healthy chip, and we're usually cutting end grain here, so plenty of power is an advantage. Your lathe will let you know if you have exceeded its capacity by slowing or stopping. If that happens, you may have to adjust the cover for less depth of cut, or limit the inside diameter of your work. Ultimate hollowing depth, of course, is limited by the diameter of the boring bar and has nothing to do with the

lathe's power.

If you'd like to try deep hollowing, it is easy to make your own bar. You'll need to be able to drill and tap steel, and to weld. If your welding skills are as poor as mine, you'll want to farm that out to a friend or a pro. Your first decision is what size bar to make. See Dale's article for help, and remember that the larger bars are more difficult to handle. I prefer to begin my projects with a 1-in. bar, then switch to a larger diameter when the depth exceeds the small bar's capacity.

Three-quarters, seven-eighths and

one inch mild steel may often be found at hardware stores or farm and industrial supply stores in three or four foot lengths. For the larger sizes and lengths of steel, you may have to seek out a steel supply company. But first, try a surplus yard if one is near. We have found all the sizes we need at such a place, and the prices are quite reasonable. Surplus steel is often rusty, but can be cleaned up with a wire brush driven by a drill or angle grinder. Surplus steel may be alloy steel, some of which may become brittle when welded, or be difficult to drill and tap. Ask for mild steel or



**Figure 2:**

Sketch of the author's trap, which fits in his lathe's heavy outboard tool rest support. Gap is adjustable for different diameters of boring bars. Compression springs hold tube up against locknuts. Brass strip (waxed with paraffin) assures easy sliding of bars. Holes for carriage bolts in each end of board are slotted to allow board to pivot on center carriage bolt, necessary for leveling trap. Impact socket fits in outboard support. Hex head bolt is inserted up through socket. Heavy flat washer distributes torsional load to angle's vertical element. All of these parts were purchased from a local hardware store.

cold rolled steel.

Once you have chosen your size and obtained the steel, cut it to length according to Dale's charts. Weld the two pieces together, being certain to offset the end of the outrigger about 2-in from the nonworking end of the main bar (see Dale's drawing). This is an important safety device – if you should move your boring bar too far forward while in use, it should flip over and stop cutting before leaving the trap. In use, attach a clamp to the outboard end to prevent the bar from being pulled through the trap. In addition, always mark the maximum depth you plan to cut on the bar with tape and check to be certain that the bar will still be in the trap at full depth of cut.

Take care when doing the welding. It is mandatory that you line up the two pieces in the same plane, and keep them there while welding. Misaligned bars will cause trouble with changing cutter position, and will teeter on the tool rest and trap. They may also bind in the trap. Not having both trap and tool rest level may cause the same problems.

Assuming you have a properly welded bar, the next step is to drill the hole in the working end to receive the cutter assemblies. If you have access to a drill press with enough capacity to handle the length of the bar,

simply line it up and drill a 1/2-in. hole 1 1/2-in. deep into the center of the end. Use a low RPM and don't try to rush this job if you're not too familiar with deep drilling in steel. It's easy to overheat or break a drill bit. If your bar is too long for the available drill press, set up to do the drilling horizontally on your lathe.

Now, back to the drill press. You'll need to drill and tap two holes on the top center of the bar for the setscrews. Size 1/4-28 works well. Carefully center punch the locations, then drill using the correct tap drill. About 3/8-in. and 3/4-in. are good distances from the end for them. Tap the holes and insert the screws.

Your bar will work better if you taper the working end so that it is less likely to rub on the interior of your turnings. Taper it to your satisfaction, using hacksaws, grinders, files, or whatever. Two things to be concerned about are strength (do not taper too much), and bottom flatness (avoid tapering the bottom, since it will cause the cutter to run below center when the taper is on the tool rest). See Figure 1 on the next page.

To use an Exocet cutter, you'll need to purchase an unhandled Exocet tool. The price at this writing is \$150. Be sure to specify the round cutter and cover. When you receive the Exocet, cut it off about 1 1/4-in behind

the adjusting nut on the cover. File or grind a flat on the top where the setscrews will seat. It is now ready to lock into your boring bar.

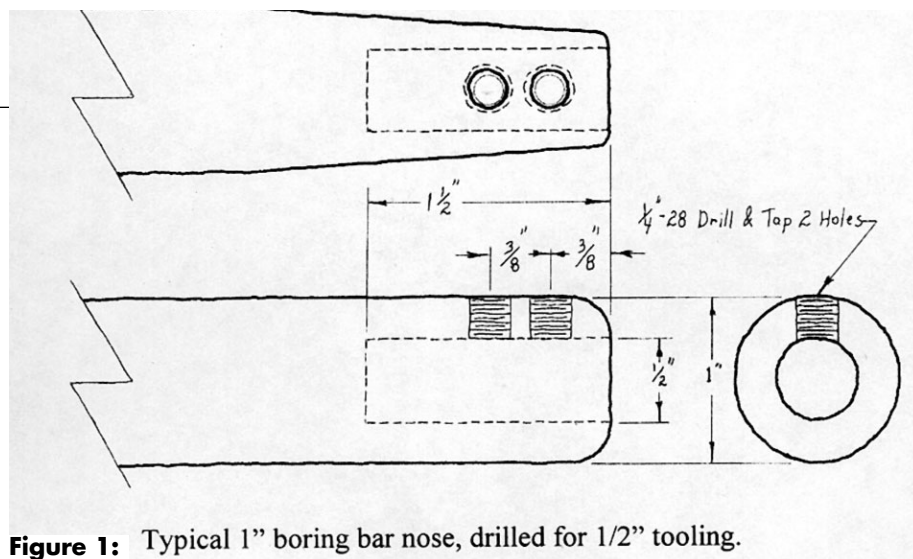
Other tips may be made for your bar. Scraper holders may be made by cutting a flat on a 1/2-in. diameter bar of steel and drilling and tapping a hole for a locking screw. Make your own scraper cutter from HSS steel (an old planer blade, for example), or buy a Sorby Large HSS Scraper Cutter from a woodturning tool supplier. Another type of scraper is the 3/16-in. square metal lathe tool bit. A holder may be made by drilling through a 1/2-in. round bar at 45-or-90°. Again, drill and tap for a setscrew to hold the bit. Both the 3/16-in. bit and the teardrop scraper are available as parts of the Dennis Stewart System. Offset holders for scrapers or the Exocet may be made. Limit the amount of offset, though, since too much torque may cause the bar or the outboard support to turn over. I prefer the offset to be no more than the diameter of the boring bar. If you need more offset, make or use a Jamieson-style bar, with its widely spaced outrigger.

A trap (outboard support) must also be made. It can be made of wood, steel, or whatever you wish. It could be as simple as a piece of plywood with a slot cut in it. Figure 2 is a drawing of my trap. It's made of an



oak board supported by angle iron. Above the board, a  $\frac{3}{4}$ -in.-square tube rides on two pieces of threaded rod set into the board. Springs around the rods hold the tube up against stop nuts. This allows the gap between the board and the tube to be adjusted for any size of boring bar. The angle iron is attached to a deep impact socket, which fits into my outboard tool rest stand. The socket is attached with a grade 8 bolt and nut, and a heavy washer helps spread the forces out to the angle iron. Note that the oak board is attached to the vertical face of the angle iron with three bolts. The center one is a pivot point. The two outer bolt holes are slotted in the board. This allows for adjusting the trap to level. If it is not level, your cutter will not remain in the same plane as the bar is swung from side to side in the trap.

Although my trap is mounted on a very heavy and strong base, that is not necessary. Some of the supports I've seen for some very large, long, and heavy bars are simply made of



**Figure 1:** Typical 1" boring bar nose, drilled for 1/2" tooling.

lightweight square tube steel. Center columns are vertically adjustable by slipping a smaller size inside a larger one and locking with setscrews. Columns are mounted on crossed tubing, and through bolts are used as adjustable feet for leveling. You could even build your entire outboard support of wood if you wished.

Traps will work well if they are made to mount on the lathe bed, but that tends to limit the available working depth of the system. Check out your setup carefully to see if this would be the case before choosing this route.

Cutting and scraping tools mentioned here may be purchased from most of the woodturning suppliers, except the Exocets. They may be ordered from Link Technologies in New Zealand by email at [linktech.ihug.co.nz](mailto:linktech.ihug.co.nz), or at their web site at [linktechnology2000.com](http://linktechnology2000.com).

I think you'll be pleasantly surprised at the ease with which you can turn out deep hollow vessels with this system. If you have questions or comments, feel free to call or email.

*Steve Sinner is a professional turner in Bettendorf, IA. [ssinner@qconline.com](mailto:ssinner@qconline.com)*

## USING THE EXOCET

**STYLE:** Our experiments with Exocet cutters have shown that the round cutter works much better for deep hollowing green wood than the standard cutter. We believe this is because the standard cutter tends to present more cutting edge to the wood for a given depth of cut. This increases the pressure on the bar, while trying to force a wider chip through a smaller hole in the cutter. Some feel that the standard cutter works best on dry wood.

**SHARPENING:** Since the cutter is expensive, I take it to the grinder about every third sharpening. The other two times, I touch it up with a super fine diamond file. If you have a reversible lathe that permits locking the faceplate or chuck onto the spindle, you can get nearly double life from your cutter by doing half of your hollowing with the lathe running in reverse. Exocet suggests using a hard Arkansas stone to polish the outside edge after using a diamond file. Due to the cutter's special steel, this edge should give many hours of use with only an occa-

sional touch up with the Arkansas stone. Exocet can supply both the diamond file and the Arkansas stone.

**PLUGGING:** We find that polishing the rough inside of the cutter, as well as the underside of the cover reduces plugging. Also remove the sharp corner around the bottom of the hole through the cutter. A good tool for this job is the Dremel with the #427 rubber abrasive tip on the #424 mandrel. Exocet's manufacturer does not recommend polishing the inside of the cutter, fearing that its hardness may be affected. While simply forcing the cutter into the cut usually clears plugging, occasionally it is necessary to loosen the cover to clear a plug. The condition, moisture content, and species of wood will determine the amount of plugging. As your skill at using the tool increases, you will learn to avoid plugging almost entirely.

**CENTERING:** It is not necessary to drill out the center of your turning when using the Exocet. Just start cutting a little off center, and then ease the cutter toward the center. It will go right in. Repeat this operation as needed. Your lathe, tool rest, and trap must all be level, with the Exocet's cutting edge on horizontal center. — S.S.



# IS IT HEAVY ENOUGH?

## Designing Your Own boring Bar

DALE HUPP

STEVE SINNER EXPLAINS HOW TO build a system in "Making Your Own High Efficiency Trapped Boring Bar System." The boring bar is the heart of the system and must be built heavy enough to cut the depths required, but be light enough for ease of operation.

I hope the following will give you a feel for the size to make your bar.

The first thing you must decide is the inside depth of the vessel to be turned. The deeper you are planning to turn, the heavier cross section and the longer length bar you will need. Round bars overall are the best cross section to use.

First and most important is that it is easier on the hands to use. The round stock performs better to the torsional loading and will not catch the mouth of the turning like a rectangular bar will.

Solid bars are much better than hollow bars since the mass of the bar is also critical. The mass of the bar is very important because it deals with the dynamics of turning. The increased mass dampens the vibration created during the turning process.

The strength of the bar is very important because it determines how far you can cantilever the cutter beyond the tool rest. Our experience tells us that the maximum practical reach or depth for a 1-inch diameter bar is 14 to 16 inches past the tool rest.

Beyond 16 inches the deflection can become excessive causing too much chatter to control. However for every rule there are exceptions. Through experimentation we determined that the feed rate of the cutter greatly affects the maximum reach.

For example, we were able to cantilever 20 inches past the tool rest with a one inch diameter bar and successfully cut by very carefully advancing the cutter into the wood. For your best success, I would not go beyond the 16-inch reach.

The strength of the bar is the greatest factor that determines the deflection of the cantilevered section of the bar.

The deflection is determined by the "section modulus" of the cross section of the bar, the force imposed on the cutter from the turning, and the distance the bar is cantilevered beyond

the tool rest.

The section modulus is what we need to determine to design the bar and it can be calculated for a round bar as follows:

$$\text{Section modulus (I)} = .05 \times \text{Diameter} \times \text{Diameter} \times \text{Diameter} \times \text{Diameter}$$
$$\text{Or: } = .05 \times \text{Diameter}^4$$

The section modulus for a square or rectangular cross section can be calculated as follows:

$$\text{Section modulus (I)} = \frac{\text{Width} \times \text{Depth} \times \text{Depth} \times \text{Depth}}{12}$$

$$\text{Or: } I = \frac{\text{Width} \times \text{Depth}^3}{12}$$

(Note: The Diameters, Widths and Depths are to be measured in inches.)

The force imposed on the bar as mentioned above is much harder to calculate. Forces applied to the cutter are dynamic forces and are affected by a number of variables, such as: the RPM of the turning, the mass of the turning, the diameter the cutter is cut-

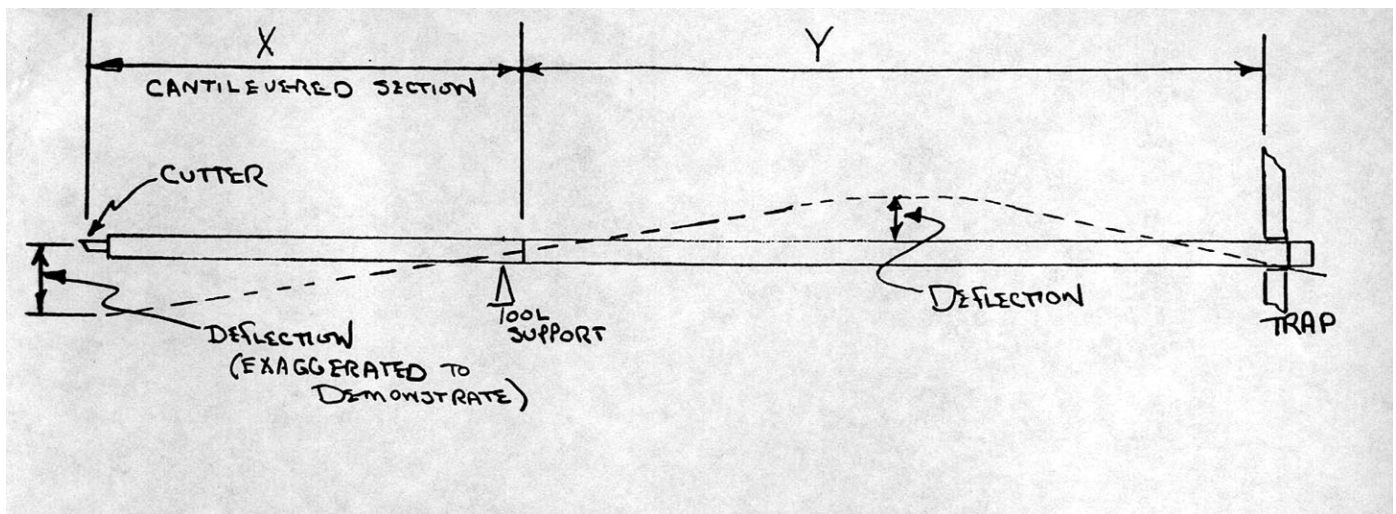
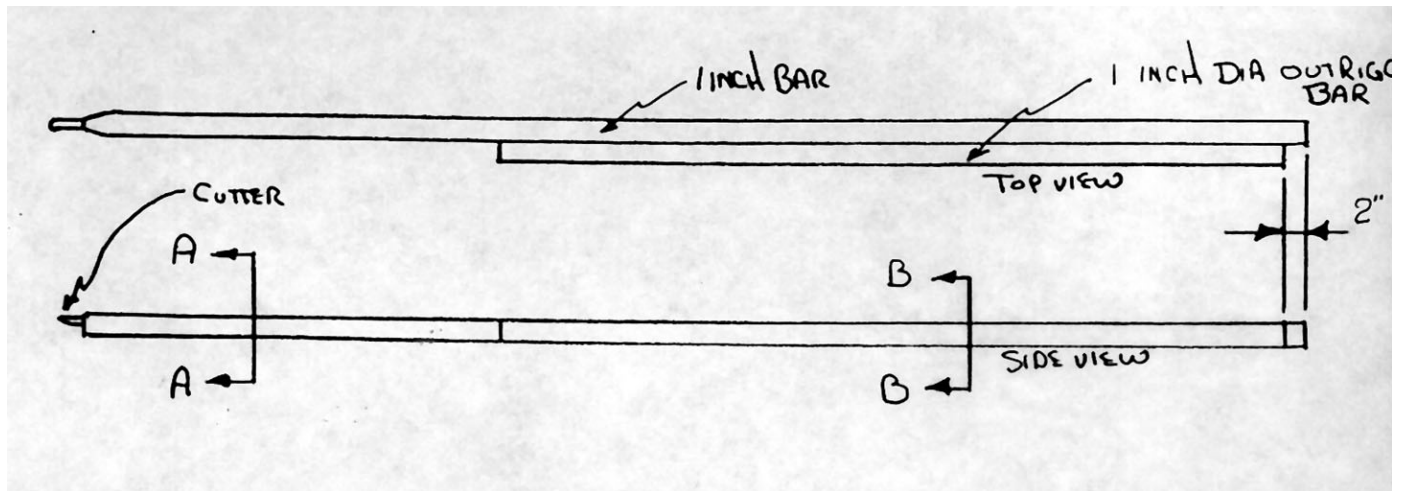


Figure 1: X is the cantilevered distance, the maximum reach or depth of the bar.



**Figure 2: Calculating the amount of deflection for a 1-in.-diameter round bar with 1-in.-diameter outrigger.**

ting at, the horsepower of the lathe, the sharpness of the cutter, the width of the cut, and the feed rate. Impact loading, as occurs during catches or cutting through the annular growth rings or knots in the wood, can increase the normal forces by 5 times.

Since the force has so many factors, we developed the equation based on the dynamic forces experienced with the 1-inch diameter bar and the strength of standard mild steel (A-36). Now using the section modulus of your bar as calculated above, the following equation will tell you how far to reach beyond your tool rest under normal cutting conditions.

Cantilevered distance (inches) =  $\sqrt{I \times 5139}$  (See Figure 1 on the previous page for an example)

As to the over all length of the bar, a good "rule of thumb" is to multiply the maximum cantilevered section of the bar by three, ( $\frac{1}{3}$  and  $\frac{2}{3}$  rule).

For example, if you design your bar to extend beyond the tool rest by 16 inches, the total bar length should be 48 inches. I presently am using a 1.5-inch diameter bar, extending 36 inches and the overall length is 9 feet.

The more distance you have between the tool rest and the trap (or as sometimes referred to as the back

support) the more upward deflection you will get in your bar. However the deflection is generally small enough that it does not pose a problem.

To increase the distance between the tool rest and the trap does result in less upward force on the trap. So as you can see it becomes a trade off. Since the longer bar requires a wider trap, one can quickly run out of shop space. Hence we have come back to the  $\frac{1}{3}$  and  $\frac{2}{3}$  rule.

If you would like to run the calculations to determine the deflection between the supports for the situation shown in Figure 1 on the previous page, the following formula can be used:

$$\text{Deflection} = \frac{\text{Force times X times Y squared}}{9X \sqrt{(3XEI)}}$$

Where E = the modulus of elasticity for steel and I = the section modulus.

Using the same forces and values used to calculate the cantilevered section the above formula can be simplified to the following:

$$\text{Deflection} = \frac{X \text{ times Y squared}}{10,875,348 \text{ times I (your section modulus)}}$$

You can calculate the section modulus using the same equations you used for the cantilevered section, except for this section of the bar you simply add the section modulus for your outrigger.

If you have a round bar with a square or rectangular outrigger, calculate the values for each and add them together. The following is an example of how to calculate the section modulus and deflection for a 1 inch round bar with a 1 inch round outrigger.

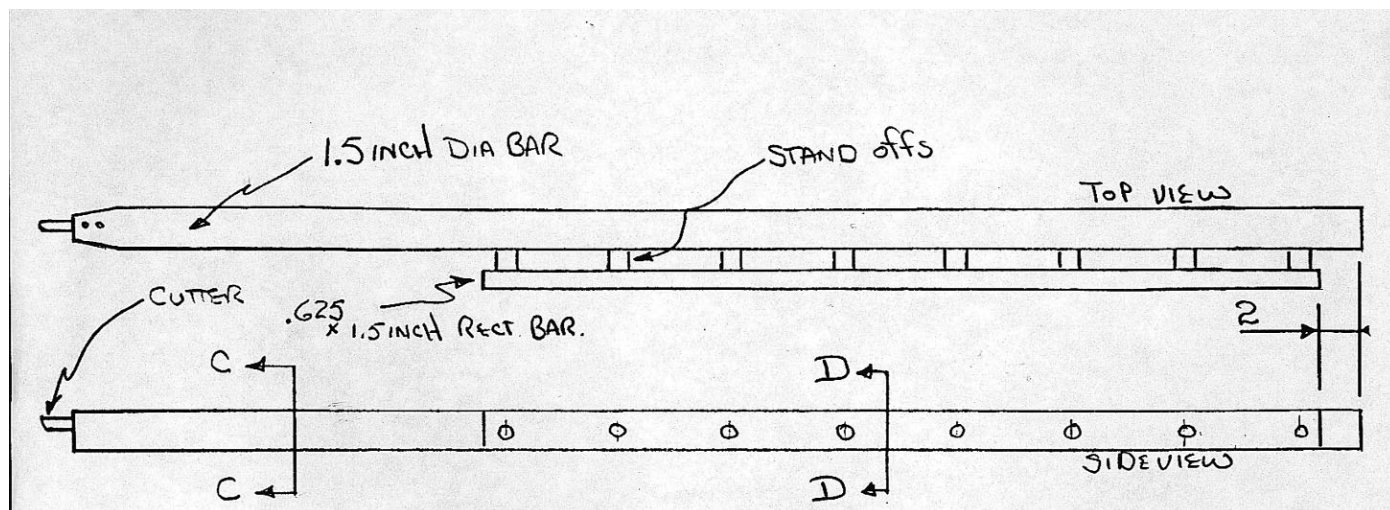
See Figure 2, above.

#### Section AA:

$$\begin{aligned} \text{Diameter} &= 1 \text{ inch} \\ I &= .05 \times 1.0^4 = .05 \\ \text{Cantilevered Dist.} &= \sqrt{.05 \times 5139} \\ &= 16 \text{ inches} \end{aligned}$$

#### Section BB:

$$\begin{aligned} \text{Diameter} &= 1 \text{ inch (for each bar)} \\ I &= .05 \text{ (for each bar)} \\ \text{Total} &= .1 \\ \text{Using } \frac{1}{3} \text{ and } \frac{2}{3} \text{ Rule} \\ X &= 16 \text{ inches} \\ Y &= 32 \text{ inches} \\ \text{Deflection between supports:} \\ \frac{16 \times 32^2}{10,875,348 \times .1} &= .015 \text{ inches} \end{aligned}$$



**Figure 3: Calculating the deflection for a 1.5-in.-diameter round bar with a rectangular outrigger bar.**

A 15 thousandths deflection is quite acceptable.

The following are the calculations showing the section modulus and deflections of my 1.5 inch diameter bar with the rectangular shaped outrigger bar, as shown in Figure 3, above

#### Section CC:

Diameter = 1.5 inches

$I = .05 \times 1.5^4 = .253$

Cantilevered Dist. =  $\sqrt{.253 \times 5139}$   
= 36 inches

#### Section DD:

Diameter = 1.5 inches

Rectangular shape .625 by 1.5 inches

$I = .253$  (Round bar)

$I = \frac{.625 \times 1.5^3}{12} = .176$  (Rectangular bar)

Total = .429

Using  $\frac{1}{3}$  and  $\frac{2}{3}$  Rule

$X = 36$  inches

$Y = 72$  inches

Deflection between supports:

$\frac{36 \times 72^2}{10,875,348 \times .429} = .040$  inches

40 thousands is about the maximum allowable deflection you should

design for.

As you can see from the wide range above, the  $\frac{1}{3}$  and  $\frac{2}{3}$  rule will give you allowable deflection values. The deflection of the bar between the tool rest and the trap can be decreased by shortening the distance "Y". However, I would not recommend that, since it will increase the upward force on your trap. You can apply pressure (your weight) to the bar but that only makes it more difficult to manipulate the bar.

In order to take advantage of the outrigger for bending, you must attach the two members at multiple points. You can weld or bolt the outrigger to the bar, but you should attach the two members every 5-to-6 inches. As Steve Sinner points out in his article, the two members **MUST** be in the same plane.

It is extremely important to note

#### Additional Articles On Tools For Deep Turning

Don Derry discusses his experiences with the Nichols Torque-Arresting boring bar, Page 57.

Frank Sudol talks about his first 38-in. tall vessel and a new cutter, Page 59.

that if you are planning to offset the cutter, which is mounted in the end of the bar, more than the distance to the centerline of the outrigger bar, you must space out your outrigger bar. Unless you can physically hold the bar, it will roll over.

On my 1.5-inch bar, I used a rectangular bar (.625 inch x 1.5 inch) for my outrigger and attached it with grade 8 socket head bolts. Due to the fact that two 1.5 inch round bars welded together would have given me a three inch wide bar to reach my hands around, I elected to use the rectangular outrigger and space it out with 1.5 inch long standoffs. The standoffs are 6 inches apart which allows me to grip the 1.5-inch bar between the standoffs. With this design I can offset the cutter from the centerline of the bar by a greater distance by using longer standoffs.

In sum, the configuration of your bar can vary as long as it has the strength to reach past your tool rest far enough to hollow your piece. I hope these equations and "Rules of Thumb" will get you on your way to building a trapped boring bar system.

*Dale Hupp is a mechanical engineer and turner in Riverdale, IA.*



# FREE-FORM CARVING

## *Jazz Up Your Pieces Using Drum Sanders*

MIKE KORNBLUM

Several years ago I discovered that carving the rims of some of my turnings gave my pieces a whole new look and allowed me to personalize and express myself in my work. Basically I turned a simple shape, then used drum sanders and my Dremel tool to create a kind of free-form carving on the rim. Despite the simplicity of the method, I found I could do many different styles of carving with the drum sander.

If you don't own a Dremel or similar tool, any drill will work. Drum sanders are available at most hardware or home building centers and from mail-order houses. The drums are available in a variety of diameters and grits. The size I use most in my Dremel is 1/2-in. diameter, in grits from 80-to-120.

I started carving the wavy edges after seeing blown glass pieces where the rims are bent into a wave shape. It'll take you a while to develop your own technique, but your first efforts will be easier if you work on designs



The author's turned and carved vessels; counterclockwise from top left: Sycamore 6"HX 12.5" dia; Cocobola 3.5"HX11" dia.; Red Maple 12"HX5.5" dia. Photos: Michael Crow



where both the upper and bottom sides of the rim are easily accessible.

The piece I'll demonstrate in this article, shown in the top left of the photo box on this page, is a simple enclosed vessel with the rim on a slight angle upwards. I'm using a piece of sycamore. The tree had been cut down about three weeks prior to my turning it. I had received a call from the lady that runs our parks department offering the wood. It pays to let people in the wood business know what you do. They call us frequently offering our club downed trees.

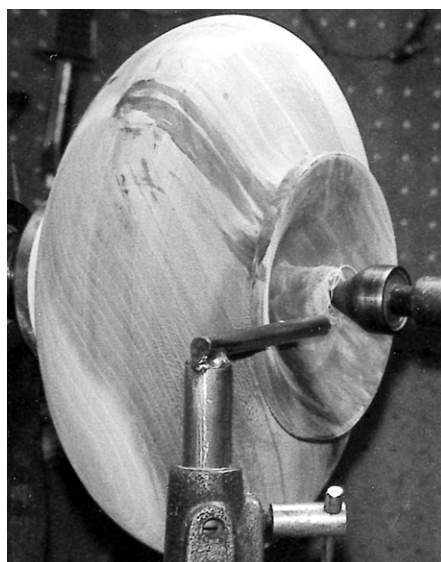
I started off between centers shaping the piece for an enclosed vessel, using a 1/2-in. bowl gouge. Between centers allows you the freedom to shift the piece around if you see something interesting in the wood or want to avoid something unwanted. I did the general shape and made a tenon for my faceplate. After mounting the piece on my faceplate, I final-

ized the shape and made a rim about 3-in.- wide. I left the rim in this piece about a 1/4-in. thick on the outer part and tapered it towards the opening, as shown in the photo below, left. The carving will take place on about 1-to-1 1/2-in. on the outer rim. After completing the outside shape and sanding, I oiled the surface with Danish oil. This keeps the surface damp and helps avoid cracking.

The inside was then hollowed out using Stewart tools and sanded. After sanding the inside I wiped on Danish oil and then stuffed a towel inside to keep out the dust created from the carving.

### **Marking the rim for carving**

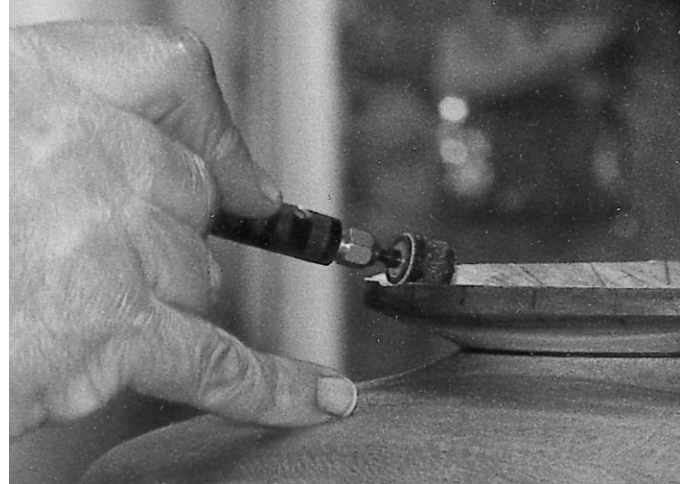
I use my tool rest and the lathe's indexing feature to mark out the divisions on the rim, as shown on the top of the next page. The "X" marked spaces are the ones I don't want to carve on top; they will be carved on



The rim is turned to about 1/4-in. thick and tapers toward the opening. The outer 1-1 1/2-in. will be carved.



The author uses the lathe's indexing head and tool rest to mark out divisions on the rim, above, then to create the wavy edge he carves the upper and lower surfaces with a small 1/2-in. diameter drum sander in a Dremel flexible shaft tool. The upward tilt of the rim makes it easier to carve the underside.



the underside. If you don't have an indexing head on your lathe, a ruler will work fine. The flutes can be any width. For deeper flutes just leave the rim thicker. Be sure to mark the underside. After marking out I'm ready to start sanding.

As you can see in the photos above, I take the vessel off the lathe and mount it upright for carving. I do this with a mandrel (a 3-inch shaft, with the same diameter as my tool rest post with male threads, same as my lathe spindle; so I can screw it into face plates or chucks and hold it vertically for carving. These fixtures are

available through Craft Supplies or HWB, Boring, OR. (See *American Woodturner*, Spring 2001, pp. 47-49, for a description of Bruce Mitchell's mandrel and a shop-built mandrel by King Heiple)

I started carving with the 80-grit sleeve. Hold the tool so the drum is on a slight angle (down towards the edge of the rim) so the flute will be tapered like the thickness of the rim. Don't sand too far down -- leave enough room for sanding with 120 and successive grits. I first sanded each flute only on the top with the 80 grit; then I went back and sanded

each one using 120 grit and at this time I rounded over the top-edge of each flute to blend in with the next flute. Next I used my power drill with a 1-in. Velcro sanding pad and started with 240-grit paper. In this case the 1-in.-pad was small enough to power sand the flutes. I then followed with 320, 400 and 600 grit. After sanding I put a light coat of Danish oil and checked for missed scratches using an incandescent light above the piece.

After the top portion was completed, I sanded the underside flutes with my Dremel and then put the piece back on the lathe to finish sand-



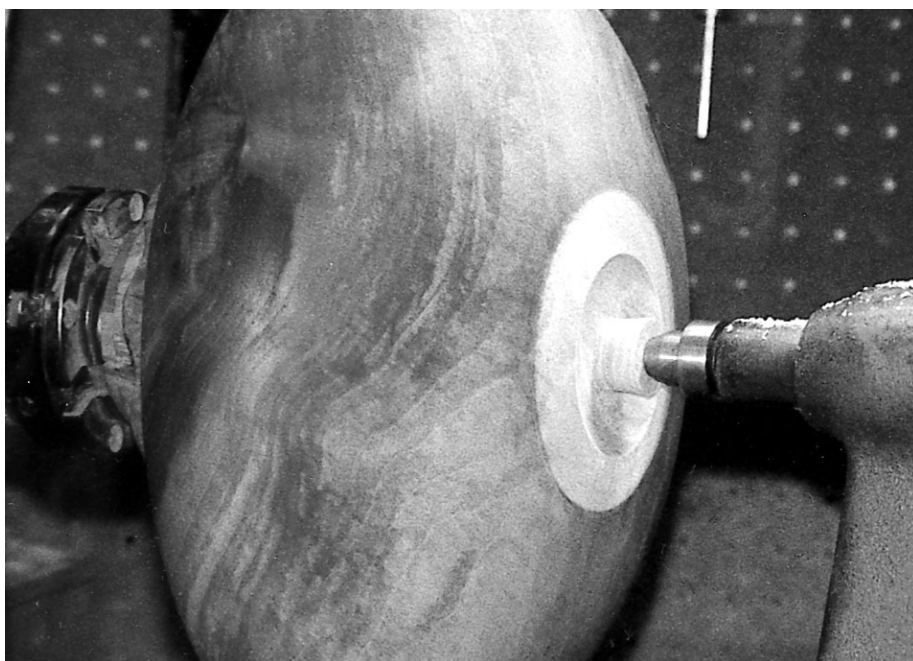
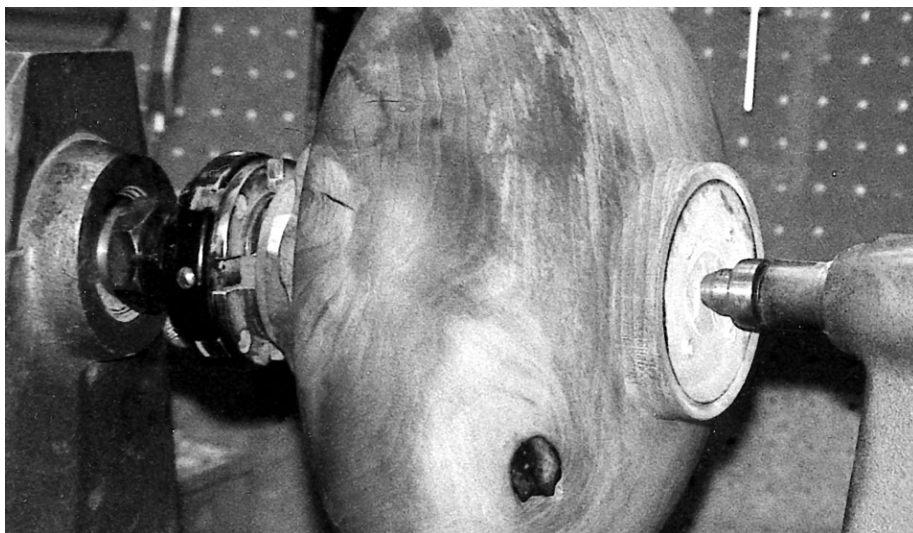
ing the flutes using my finger with sandpaper wrapped around it. In this particular piece it was easier to final sand the underside on the lathe. Note: when doing an open rim piece you can just reverse chuck the piece to give you free access to the underside. On very small flutes I use an appropriate size dowel wrapped with sandpaper; use whatever works.

After the piece was completed I removed the faceplate and used a caliper to find the center of the tenon. The piece was now reversed chucked, as shown at right, to finish the bottom. I followed through with the form. Note: the screws that held the faceplate were to the outside of the tenon, so that I was able to turn the screw holes away and maintain the shape of the piece with no holes in it. The screws were only about 1-in. in the wood and the tenon was 1 $\frac{1}{2}$ -in. long. I blended in the area where the tenon was with the rest of the piece and reoil it.

After taking the vessel off the lathe, I carved off the little tenon and sanded. You might also be able to see a black line under the rim on the finished piece. This was burned in with a wire to accent the rim.

A few notes: when I stop for lunch or don't finish a piece the same day I always cover the piece with an absorbent material (a bath towel also works well) and then cover it with a plastic bag while on the lathe. This insures the piece will be exactly as I left it when I resume working on it. Do not use a plastic bag alone or you will have black spots all over your piece, and they are not attractive.

When I complete a piece that is green wood or I have any doubt it's not completely dry I wrap the piece in absorbent materials (I use a material called "Cushion Pak": P-237-24 from Paper Mart (800-745-8800), Web: Papermart.COM. It's a white cellulose tissue 12 plies thick, a bit pricey.) I also use this material to pack my



The author reverse chucks the carved bowl, top above, then refines the bottom

work for shows. A large towel will also work fine to wrap the damp piece and put it in a plastic bag. I check the piece every few days; at this time the towel will be damp. I dry the towels and rewrap the piece. The procedure takes 4-to-6 weeks for a large piece about  $\frac{3}{16}$ -in. thick and much less for a smaller piece. Any method that slows the drying process will help avoid cracking and distortion. After the piece is completely dry I will

reoil it again, then wait 24-hours and hand lacquer it using padding lacquer and then wax. The paste wax cuts the shine to semi-gloss and adds a nice depth to the finish.

*Mike Kornblum is a full-time studio turner who sells his work at craft fairs and galleries. He lives in Mountain Home, AR, and is a member and founder of the Ozark Woodturners Club. In-Process by the author.*



# COLLABORATING WITH NATURE

*Patterns, textures and shapes for artists*

VIRGINIA DOTSON

I find a wealth of beauty in all the world, from its individual objects and living beings to its elaborate systems of interdependent parts working together in balance.

We are an inextricable part of such natural systems. As humans, we all have some understanding of these complex interrelationships. Our common understanding makes it possible to communicate an idea in "shorthand" by means of a metaphor or image that we all recognize as truth. Edward O. Wilson describes metaphors as "the building blocks of creative thought." A single image drawn from the natural world can convey a tremendous amount of information, and it often possesses great eloquence and power. Our language is filled with natural images, even though our contact with nature is much diminished from times past. There are a great number of forms, images, and processes to be found in the natural world, ranging from the subatomic to the cosmic in scale. As artists, we can draw from this rich source of imagery and create works that possess a vitality like that of the natural world.

Most of us no longer lead lives that are in harmony with nature, and the natural world is increasingly crowded out of our physical surroundings and daily lives. Because they are now threatened, natural systems are things of tremendous importance which must be protected and nurtured. For me, the value of such natural systems is heightened by their contrast with dysfunctional, urban environments. In order to maintain some sense of integration with nature, I try to find parallels be-

*During the making process, we can again follow natural examples to enliven our work and transform it into a more collaborative endeavor. I have found one thing that will surely deaden a work — that is to plan it out exhaustively and then execute it blindly in every last detail. Now I follow the living example of evolutionary change by letting my pieces develop and grow in their own unique way. I encourage variations and welcome random events, to which I respond. I enjoy this freedom to observe my work as it develops, and make choices throughout the process.*  
— Virginia Dotson

tween the natural world and the ideas and processes of my work.

The natural world offers an incredible array of inspirations for the artist. Most directly, there are millions of patterns, textures and shapes that can be translated into art works: feathers, scales, butterfly wings, leaves, seashells, ripple patterns, drying mud, and configurations of rock layers.

Less directly, the motion of birds in flight can suggest light vessel forms, and the curves or angles of plant growth can inspire outlines for new shapes.

There are some general natural principles that can serve as models for art works. For example, variations tend to occur within the same class of phenomena — as in the songs of mockingbirds which differ

slightly from one another while sharing basic rhythms and structures. There is a sense of natural unity among several interdependent parts working in balance with one another. In addition, many of the relationships that seem most apparent to us become more complicated when we look closely. Even the most obvious sort of bilateral symmetry is often a bit skewed (the two

sides of our faces and bodies don't quite match, for example). And the edges of geometric shapes tend to be softened and contoured by natural processes.

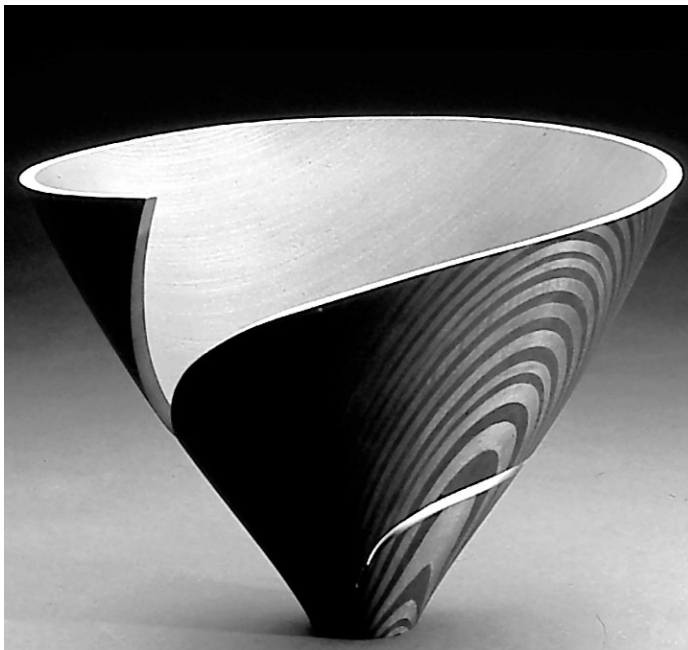
Dynamic forms of balance, including various types of counterbalancing, are another characteristic of living, growing things. A body must continually make adjusting movements to re-balance itself in mid-stride or mid-flight. Trees and plants use cantilevered structures. Sculpture students could learn to work more three-dimensionally by observing trees. Branches grow outward from the trunk with a kind of spiral spacing that lets each leaf receive the sunlight it needs.

The time scales of the natural world are vastly greater than our own, and are an especially rich and complex source of imagery. We can occasionally glimpse evolutionary time by contrasting fossilized life forms with those existing today. We can examine 225-million-year-old conifer logs, now turned to stone. We can read fragments of the Grand Canyon's 2-billion-year history in the chronological rock layers of its walls. The layers hold the records of past lives, atmospheric changes, the traces of ancient winds, and perhaps even

## REFERENCE SOURCES

Alden, Peter and Friederici, Peter, *National Audubon Society Field Guide to the Southwestern States*, Alfred A. Knopf, Inc., New York, 1999.

Wilson, Edward O., *Consilience: The Unity of Knowledge*; Vintage Books, New York, 1998.



Three by Virginia Dotson: Above, Silver Lining #5: Pau Marfim plywood, aniline dye, acrylic paint, 11.25"H X 14.75" D; Elements #12: Air, upper right: Poplar plywood, paint, 4.5"H X 17" D; Elements #9: Fire, lower right: Poplar plywood, dye, paint, 4"H X 16" D. Essay from the Nature Takes A Turn Show catalog, available from the AAW office in Shoreview MN. A color photo of Virginia's work is on Page 34.

collisions with asteroids. My layered vessels refer to these layers of rock and their imprint of history, as if they too were fragments taken from the Earth.

Our methods of working can affect the sense of animation in the pieces we produce. During the making process, we can again follow natural examples to enliven our work and transform it into a more collaborative endeavor. I have found one thing that will surely deaden a work — that is to plan it out exhaustively and then execute it blindly in every last detail. Now I follow the living example of evolutionary change by letting my pieces develop and grow in their own unique way. I encourage variations and welcome random events, to which I respond. I enjoy this freedom to observe my work as

it develops, and make choices throughout the process.

Leaving the working process open enough so that fortuitous events occur, as they do in the wild, changes my perspective on the objects I create. But I am only able to do this if my mind is fairly open and not focused solely on a particular outcome. Changing my viewpoint along the way can alter the interplay of the various elements at work in each object. By maintaining this open state of mind, I may find interesting intermediate stages or unplanned juxtapositions that point in new directions.

Carrying out each piece of my work in this way ensures that, as each leaf of a tree will differ from its companions, so each piece of work — even within the same class or series — will be different from the oth-

ers. When the process and the materials have a voice in the finished work, each piece will reflect its unique development.

My work is the sum of my life as a part of the natural world. Everything I have ever known or looked at, dreamt or thought about, is reflected in my work.

We are as firmly rooted in the Earth, the natural world, as a tree is rooted in the soil. We breathe its air, take in its water, grow and develop within its protective environment. We are shaped by its influences throughout our lives. We can gain great strength by working together with the systems of our world, in a collaborative way.

*Virginia Dotson is an artist who lives and works in Scottsdale, AZ.*

# KIDS AND LATHES

*An enthusiastic teacher makes the difference*

JUDY DITMER

IN THE COURSE OF DOING A SHOW IN Michigan a couple of years ago, I became acquainted with Karen Evans, who was then teaching woodworking at Southside School, a school for developmentally disabled children and young adults in Niles, MI. The students work on a variety of woodworking projects. This includes many items that are sold to raise money to put back into the program, which must largely support itself. The students represent a wide range of ages, abilities and skills.

Of course, I immediately thought how appropriate turning would be for this situation. Turning projects can be very quick and simple or enormously complex, and many such projects make very salable objects. Karen is an accomplished woodworker and internationally known toymaker, but did not have much experience with lathe work. We discussed the idea of having me come to the school to do some demos for the kids. and it quickly occurred to me that it would



Students at the Southside school watch Judy Ditmer help a student, while waiting for their turns at the lathe.

be nice to take along some tools and supplies to supplement the somewhat meager inventory already available at the school.

I wrote the proposal, and when the grant was awarded, contacted the school. Michael Carson, who was now the new woodworking teacher, responded enthusiastically. He indicated that some of the students had been pestering him about using "the old lathe in the corner" (Is there a woodworking shop anywhere without one of those?), but he had almost no experience with turning and was hesitant to proceed without some background. So I told him I would use the money to

purchase another lathe, tools and supplies, which would equip them to do a variety of turning projects. A date was set, and in due course (after several delays due to scheduling conflicts and a series of blizzards in southern Michigan), I loaded up the car with lathe, grinder, gouges, pen kits, finishes and other supplies, and headed to Michigan.

The first day was teach the teacher day. Michael had only a small amount of experience with lathe work, but I was very impressed with how quickly he learned. His wide experience with other aspects of woodworking gave him a good framework for the information we covered. The next day I did demos for several of the woodworking classes. The students were excited and eager to begin; some students in each class were able to get a turn on the lathe. As in every class, there were a few who took to turning like the proverbial duck to water; all seemed very pleased to have a chance to try. I believe that with Michael's capable instruction (I have no doubt that after a summer of practice, he will be a very



One-on-one instruction was an important part of Ditmer's EOG program



good turner) and their own willingness to work and learn, the students will be enjoying lathe work and producing many new items for sale in support of their program. I wish them well and thank them for the privilege of being of some small assistance.

I would like to thank the following people for their help: Karen Evans, whose dedication moved me to want to help out. Anne Collard of Shadow-Wood Tool, Karen Hilford of Shopsmith, Darrell Nish of Craft Supplies and Allen Ryan of Woodcraft in Centerville, Ohio - all of whom helped to make the money go farther. Terry Bruns of Woodwright and Lumber Company in Dayton, Ohio, who donated a stand for the jet lathe we purchased. Sharon Prestine, secretary at the school, who offered the use of her camera and helped out with arrangements. I especially thank Michael Carson, who is now teaching the woodworking classes at Southside and who endured my crash course in woodturning. And of course, appreciation to the Educational Opportunity Grant Committee and the members of AAW for making it possible to offer this assistance to the students of Southside, who are the reason for it all. May they enjoy the work and prosper.

*Judy Ditmer is a professional turner, teacher and writer living in Piqua, OH.*

### Applying for a Grant

Now is the time to apply for an EOG grant for a worthy project, such as an educational program for yourself, your chapter or local community group. Most previous grants have stressed projects like those described here, but new special grants also are available for in-depth research projects. See Page 9. An application is in the front of this Journal.

## Working with Jacques Vesery, thanks to EOG

Thank you for the wonderful study opportunity that the AAW grant allowed me. I did a two-day course with Jacques Vesery at his workshop in Damariscotta, ME. Although I had been looking forward to this for almost a year, the reality was pretty overwhelming. It was my first one-on-one course and was very intense.

I arrived at Jacques' workshop on the morning of October 2nd and was exhausted by the end of the day. For two days, he completely focused on me, giving me his full attention, making sure that I understood everything that we did and that all of my questions were answered. He showed me every step of his process for turning, carving and painting his hollow vessels. Along the way, we discussed design and he even made useful suggestions on how to display work for sale.

The first day, we began by discussing how best to cut a blank from the log for end-grain pieces and how to predict the distortions that will occur as the piece dries. He prefers to work with straight grained wood because it is easier to carve than wood with more "character." He then showed me how he turns the outside shape and hollows the form to an appropriate thickness. For hollowing, he primarily uses a bowl gouge ground with a pointy tip and with "knife edge" swept back wings. (For under the shoulder, he uses a cranked scraper with a small tip.) After parting off the piece, I then got to try it myself. My previous hollowing had mostly used the Jamieson tool, so I was a bit timid with the bowl gouge inside the form, but it seemed to work well.

After hollowing my piece, we had two pieces to carve. He showed me how he uses a reciprocating carver while the wood is still wet to do his leaf pieces and other textures. Although I had a small amount of

previous experience with the reciprocating carver in dry wood, the wet carving was much nicer! The next step was to dry the carved pieces in a microwave for finishing. The first day drew to a close and I returned to a sleepless night - thinking of all the stuff I had learned and listing questions to ask.

The next day we started with my questions. Most were things he planned to cover that day. We started carving again — first using the Turbocarver, an air powered tool similar to a dental drill. This was partly in response to a question about a piece I wanted to make. We then proceeded using a rotary carving tool. Jacques uses the Turbocarver and the rotary carvers primarily on dry wood. For his feather pieces, he turns and hollows the blanks, runs through several microwave cycles over a couple of days and then lets the pieces air dry in his shop for a few weeks. The feathers are then outlined with a rotary carver using a cutting bit and a sanding drum. Then, he uses a woodburner to "carve" the details on the feathers.

After carving, we discussed design, then coloring. Jacques uses acrylic paints and inks, putting the color on in layers to achieve different effects. Finally, he showed me how he turns the necks for his hollow forms. Having tried a few of these on my own, I enjoyed seeing a better way.

During our time together the discussions went back and forth from issues of design to technical points. I even got several useful shop tips just from looking over his shop. It is difficult to summarize, but my 30 pages of notes give me a lot of material to absorb. The experience has broadened my vision and opened up many options for my own work.

— Art Liestman, British Columbia

# UTAH SYMPOSIUM 2001

## *Tips and ideas from some demonstrators*

SCOTT GREAVES

**T**HE 2001 UTAH WOODTURNING Symposium at Brigham Young University was another feast of inspiration and instruction from some of the world's finest turning instructors. And like previous symposiums since Dale Nish organized the first event in 1979, it was a family reunion, as well.

Ten demonstration areas were set up in the two BYU Industrial Education buildings, which meant everyone had a wide choice of 105-minute rotations during the three-day event. While it was exciting having so much to choose from, there was no way to attend all the demonstrations available. The following is a description of the demonstrations I attended.

**Vic Wood** is a well-known woodturner from Australia. He demonstrated a bowl with a burnt edge, and described how he dries bowls by freezing them. He began by holding a maple blank against the jaws of the chuck using pressure from the tailstock. He turned a spigot in the face of the blank, then turned it around and attached it with the chuck. He first turned the bottom of the bowl, which was to be a flat bowl with a wide brim. After he obtained the shape he wanted, he sanded using a non-power disc sander he invented, which seemed to work just fine. The piece of wood was turned wet, so Vic used a small propane torch to dry the surface of the wood enough to sand it properly, and then rubbed in some urethane oil. He turned the bowl over and mounted the foot of the bowl in the chuck, so he could turn several low beads in the wide brim, then burnt the beads with the torch until they glowed slightly. When it cooled he dabbed on some shoe polish, Scuff Stuff. He emphasized using polish without a creme

ingredient. He said the shoe polish didn't penetrate the surface of the wood, and allowed him to cut contrasting areas next to the blackened areas. Another light coat of urethane oil finished the piece. At this point Vic usually puts his bowls in the freezer in a plastic bag for about 24 hours. Then it's removed from the freezer, and allowed to thaw for a couple of hours before it's put in the refrigerator uncovered for 12-to-18 days to dry. He explained that the freezing breaks down the cell structure in the wood somewhat so it dries quicker and more evenly, and the refrigerator draws the moisture from the bowl.

**Richard Raffan** demonstrated turning a lidded bowl. He used a couple pieces of walnut and let the shape of the bowl flow from the piece of wood. It was rounded on the bottom with a small foot. He used walnut oil while doing his finishing cuts and sanding to condition the wood fibers and keep dust down. For sanding he used one of Vic Wood's non-powered sanding disc devices. He said he had one for two years before he used it, and described that as a wasted two years! He now uses it most of the time. The lid was turned out of a second piece of walnut, which had more of a sloped, peaked shape to it. He turned the bottom of the lid first so it would fit the top of the bowl precisely, then reversed it on his chuck and finished the top. After sanding the finish was walnut oil.

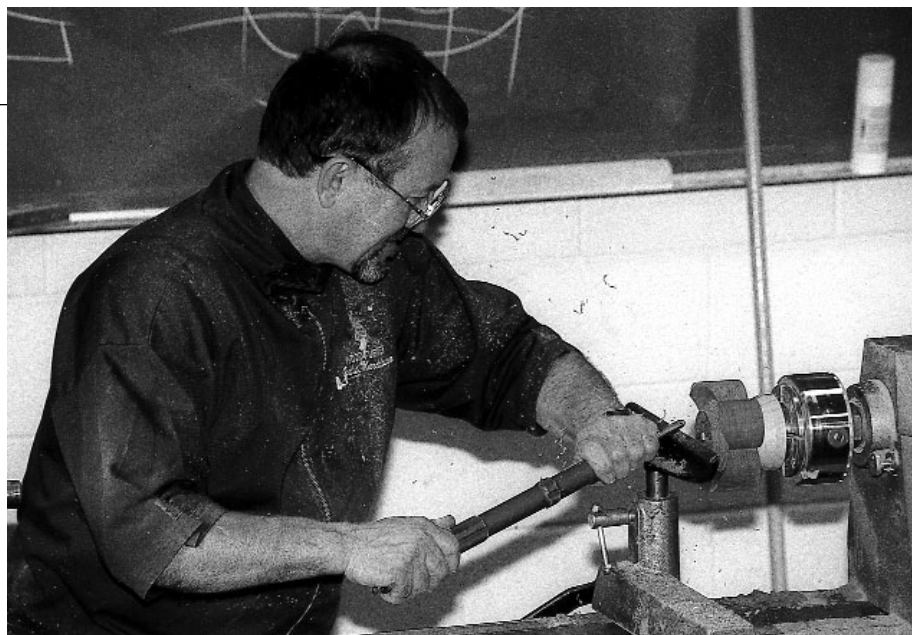
**Jason Marlow** is a studio woodturner from Canada. He presented techniques for "Developing your Turning System." Your turning system needs to reflect your individual turning style, the type of work you do, and the space where you turn, he said. His presentation was done

while turning a small bowl. He felt that the lathe should be set at a comfortable height for the turner, with the spindle height at about elbow height. He emphasized that you should have your grinder close by, and set at the same height as the lathe spindle. His reasoning is that sharpening of your tools should be handy or you will neglect doing it as often as you should. The height of the grinder should be the same as the lathe so that you get the tool sharpened at the same approach angle as you would present it to the wood. He relied heavily on the use of mineral oil in his turning. He says he buys the oil in bulk from a farm supply store, and uses it in a small spray bottle. He pumps it on liberally, saying it seems to condition the wood fiber so it cuts and especially scrapes easier and smoother. It also keeps the dust down while sanding.

**Dale Larson** from Oregon specializes in turning salad bowls from Pacific Madrone, a rich dark brown wood that grows in his state. He described how he rough turns the bowls to about 1 $\frac{1}{2}$ -in.-thick, then boils them to stabilize the wood. After drying the blank, he mounts it on a faceplate with four short screws. He turns the outside first. Often he will add a series of beads to his bowl, usually just three beads to the top outside surface of the bowl, but sometimes he will bead the entire surface of the bowl. To make the beads he uses two tools he made himself. One is just a small V-cutting tool he made from a rat-tail file. The metal is brittle but it sharpens easily. The other tool looks like a diamond point parting tool from a distance, but is actually a pointed scraper made from a piece of planer blade. He calls it his "Less Than 90" because the angle of the point is just

less than ninety degrees. The lower edge of the point is ground off so it will not mar adjacent surface while cutting the beads. After cutting a deep V with the first tool, he uses the pointed scraper to round over the beads in steps, first in one direction, then the other. Dale is a proponent of using walnut oil while turning and sanding, as he says it conditions the wood fibers. Before sanding he uses a straight cabinet scraper held below center to lightly scrape the bowl surface. He says this reduces the amount of sanding. When the outside of the bowl is finished, he turns the inside of the bowl using three steps to go down the sides and across the bottom. For most of his cuts he uses a Glaser gouge that appeared to be about  $\frac{3}{8}$ -in. He uses a scraper to clean up the inside of the bowl, then sands to finish. By using walnut oil while scraping he can see areas of imperfection by the differences in color after passing the scraper over the surface lightly. He also prefers walnut oil as his final finish because his pieces are used as salad bowls, and he wanted a non-toxic finish that would not go rancid.

**Todd Hoyer** is a woodturner from Arizona. He began doing production woodturning in the mid 70's, but now specializes in turned pieces that emphasize unique properties of the wood. His demonstration was on wood characteristics: Burls, Shrinkage and Spalting. He started with a thorough overview of how wood grows and what different types of cells are and their characteristics. The patterns in the wood growth and cell structure determine why wood shrinks in one direction more than another while drying. He showed slides illustrating why and how burls form, and what their structure is. He also explained spalting and how it occurs. The class then toured the gallery at the symposium with commentary from Todd Hoyer about the



Guilio Marcolongo demonstrated small bowls with very distinctive scalloped edges. Photos: Dick Burrows

unique properties of the wood used in the displayed pieces.

A major issue for any turner is sharpening the cutting tools. Because there is such a wide variety of opinions on the subject, one of the best attended demonstrations of the symposium was a panel discussion on sharpening. The panel consisted of Vic Wood, Allan Batty, Stuart Batty, Mike Mahoney and Richard Raffan. There were a number of things the panel agreed on. Most use a higher speed grinder, in the 3600 rpm range. White aluminum oxide wheels were favored, in grits of 60 and 80, or 60 and 120. The 120 grit was felt to be too slow by most. Safety issues of the grinder were addressed by Stuart Batty. The paper that is attached to the side of the grinding wheel is meant to be kept on the wheel as a kind of expansion layer. The label on the wheel will give the ratings of the wheel, the hardness and the friability, and the recommended speed. For hardness he recommended a letter in the range of G, H, I, J or K as best for high speed steel. Another point agreed upon by all was to clean the top surface or the flute of the tool before sharpening. This allows the grit and the metal shavings to be discarded

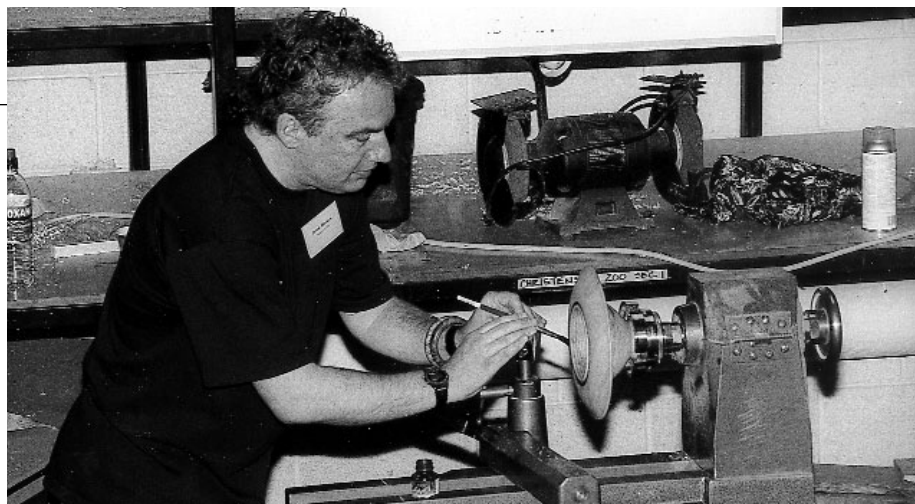
freely over the top of the tool rather than collecting there. Richard Raffan had a small stick with some fine sandpaper wrapped around it that he used to clean and hone the top of his skew. Allan Batty's tools were all meticulously clean, and he emphasized that no tool is clean and sharp from the factory, and they all require some work to get them ready to turn with. There was a lively discussion of how to sharpen a tool including the "proper" angle of the bevel. What the panel finally agreed upon is that regardless of the bevel, the edge was of greater importance. Richard Raffan passed his scraper around, and it appeared to actually have two bevels on it, steeper near the tip. None of the people on the panel used jigs to sharpen, but Vic Wood and Allan Batty emphasized that the use of jigs is appropriate for beginners, then once they learn about sharpening they can move beyond them. The final advice from the panel was that you should make sharpening easy and convenient, otherwise you will talk yourself out of sharpening as often as you should. Keep the grinder close to your lathe, and use it often.

**Ciaran Forbes** is a Benedictine Monk from Glenstal Abbey in Ire-



land. He specializes in bowls, and has won numerous awards for his turnings. He turned a small bowl with a wide, slightly curved brim, from a piece of rhododendron. As he turned he described his approach to turning, beginning with the tree, how he cuts the stock, and prepares it for turning. Angel-fine shavings flew from the bowl that was emerging from the hunk of wood spinning on his lathe, and he seemed to take real pleasure from coaxing the curves and flats into existence. He also seemed to enjoy talking about turning, the wood, and the people who turn in a series of anecdotes related in a most entertaining manner. The bowl was finished with a light coating of oil and passed around for all to see.

**Frank Nabrotzky** is a turner from Salt Lake City, Utah who demonstrated "Accent Inlay in Wood Hollow Forms." While three dots of silver were inlaid into the bowl he turned, most of the demonstration involved his turning of the small hollow-form bowl. When you look at the items Frank turns it is easy to look past the care given to the bowl or platter, and see only the silver, pewter or stone accents he skillfully adds to them. But Frank is a highly skilled turner with an eye for simple, beautiful shapes. The bowl he turned was of a light colored wood. He carefully rounded the sides, seeking the proper symmetry. Then he began turning what appeared to be a lid out of cocobolo. He carefully fit the rim to both the opening and the shape of the bowl, then quickly cut a neat ring that formed a collar to the bowl opening, rather than a lid. The collar was glued to the opening creating a beautiful contrast to the light wood of the bowl, and the dark cocobolo around the opening. What appeared to be a Dremel or a small jeweler's drill was used to drill three small holes near the edge of the col-



Jason Marlow used paint and other decorative techniques in discussing how to develop a personal style.

lar, and the pieces of silver rod were glued in using super glue. The dots were sanded flush, then the whole bowl was sanded and finished with oil.

Australian **Guilio Marcolongo** specializes in boxes and small bowls with very distinctive shapes and accents. He demonstrated a "Scalloped Rim and Foot Bowl" from Sheoak. He turned the outside of the bowl with what appeared to be a skirt at the base rather than a foot. After oiling the wood and sanding, he turned the inside of the bowl, leaving a very thin wall. He removed the bowl from the lathe, mounted a bland piece of maple, and quickly turned a compression chuck to precisely fit the rim of the bowl. Mounting the bowl again, and using a cup center in the tailstock to hold it in place, he carefully turned the base of the bowl and the wall of the skirt.

To sand he used what he called a "ripping idea" — lengths of various grits of sandpaper hung from a kind of necklace around his neck. The cord was designed to easily break in case anything got caught by the lathe, and the sandpaper could be torn off in bits, or used as it hung from his neck. This kept all the different grades of sandpaper handy and organized. He finished up with EEE Ultra Shine, a kind of polishing compound, then a coating of Shelawax. After removing the bowl, which still had no scallops, he

mounted a dowel covered with sandpaper in the lathe. He had turned a #2 Morse taper on one end to fit the spindle, and held the other end with a center in the tailstock. After making precisely spaced marks around the rim and skirt of the bowl, he ground out the scallops using this sanding dowel. Guilio is a high energy demonstrator with a fine wit and eye for detail.

You may notice that some of my descriptions are less detailed than others, and I attribute that not only to my poor notes, but also to the presentation being made. While watching Raffan I enjoyed watching the process, taking in his stance and approach to the wood, and listening to him. In other words, I had so much fun watching and listening that I failed to pay attention to how he chucked the wood onto the lathe, and other details. Ciaran Forbes is an equally engaging demonstrator; I was distracted by the smooth natural flow of his work, and his stories, to pay attention to the technical details.

The most disturbing aspect of this symposium is the education I did not obtain. There were a hundred demonstrations, and I only got to see a tenth of them! I could always come back next year, and I probably will, but next year there will be all new demonstrations to see.

*Scott Greaves is a turner in Blackfoot, ID*

# THOUGHTS TO INSPIRE AND CARRY TO THE SHOP

**Appearance & Reality** by Stephen Hogbin, 177 pages, \$29.95. Copyright 2000 by Cambium Press, Bethel, CT.

This is a most attractive book, nicely designed, excellently printed. The fonts are well chosen, although as in many other books the type size for the captions is reduced--does this mean their content is less important? The photographs are excellent, and the drawings pertinent.

This is not a book on the design of woodturnings, although it shows several. Neither is it an example of a lower species, a book of woodturning designs. It is "a visual handbook for artists, designers, and makers", and was written with the students of design courses in mind. The need to satisfy this critical readership to which Hogbin is constantly exposed has resulted in a design book which is crisp and clear, a rarity in the field.

Design is a difficult subject for so much is subjective and needs qualification for a thorough treatment. Hogbin uses a quadriform, a figure interconnecting four areas of discussion, as the organizing device-- in the main it succeeds. Another reason for his book's success is that he doesn't waste space stating the bleeding obvious, choosing instead to move briskly to the next topic.

Hogbin uses three ways to present the information: text, freehand explanatory drawings, and large photographs, usually in color. The latter are selected to complement the thrust of the text, but have their own often extensive captions: they also provide refreshing breaks from a text which because of its absence of waffle requires concentration.

There is an unfortunate expectation that knowledge can be gained effortlessly. Hogbin's text clearly explains concepts and jargon, but read it in manageable chunks -- be too ambitious and overload will result.

What should you expect from this book? Its intent is close to that of his 1980 *Wood Turning: The Purpose of the*

*Object*, but broader: it is to enable the reader to a heightened awareness of design, and through it an increased ability to design well. There is an unfortunate and wrong belief that if you don't have designer genes, good design is beyond you. The reality, as with most aspects of life, is that perspiration is a vital and major component. Work through *Appearance & Reality* and you won't regret it.

-- Mike Darlow is a professional woodturner and author in Australia.

**Skill Building Projects With Mark St Leger**, produced and filmed by Phil Pratt. © 2000. The American Association of Woodturners, 651-484-9094. Color. 90-min., \$24.95.

Fire up your VCR and let Mark St Leger introduce himself and his series of enjoyable projects designed to improve your turning techniques. Mark's tape is aimed squarely at beginner and intermediate level turners but has some good information for more advanced turners, such as thread chasing by hand.

He begins with a simple spindle turning that introduces the viewer to the importance of precise cuts and a dial caliper for measuring. The finished piece is a Morse taper jig that has the proverbial 101 uses, and you use it right away on the next project.

Throughout the tape Mark will use many different tools in a variety of ways so the beginner can learn about their intended use. Even a few shop-made tools are shown to help save you a few bucks and get you thinking of others you may want to try (just watch the background as you go along). An entire section is devoted to showing tool sharpening methods and related jigs to make this task more manageable for everyone. From fly houses for those pesky live-in friends, to little mushrooms, and on to wood spheres and methods of chasing threads; it's all here. Excellent video close-ups allow you to easily see skilled hands putting tools to safe and proper use. Now you can

head for the shop with a clear view of how to tackle that next project with a little extra enthusiasm as you sharpen your skills and increase your confidence level. — Bruce Hoover is a woodturner in Bloxom, VA

**Grain Of Truth** by Ross A. Laird, 2001. Macfarlane Walter & Ross, Toronto, / Walker and Co in USA. \$23.

When I picked up a book on woodcraft I did not expect to read something that would move my soul. *Grain Of Truth* inspires and fulfills those who love to create with their hands. While each chapter deals with a particular craft project it is more to connect to inspirational and mystical forces at work in their creation. The author accomplishes this through spiritual links with craftsmen of ancient times using symbols of Taoism and biblical phenomena.

Laird's idea that nature presents each of us with gifts of ideas and material is mentally compelling. My work is beginning to express something within me that I really never knew was there. My fear is that I will not live long enough to satisfy the revealed discoveries.

I see other artists' work much more profoundly. I look now for the inner passions expressed by their creators.

My tour of the Instant Gallery and *Nature Takes A Turn* at the AAW Symposium in St. Paul was an overwhelming experience. My senses were aroused so that I felt a new kinship with each artist. Their creations came alive, awakening a feeling of enlightenment.

Anyone who works to create products with their hands must read this rare thoughtful book that exposes us to our innermost feelings. Warning! You may experience new emotions that may be addictive and contagious.

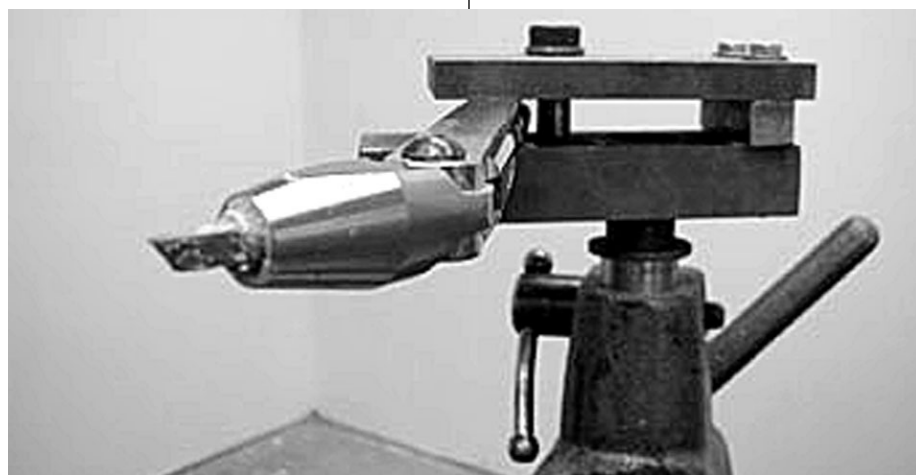
For more information go to <<http://www.rosslaird.com>> — Dan Braniff, Elmwood Ontario, Canada

# THE NICHOLS TORQUE ARRESTING BORING BAR SYSTEM

The tooling arrived only two days after I spoke with John Nichols about trying out his torque-arresting boring-bar setup. I was looking for a boring bar and tool holder that would lend itself easily to my particular style of hollow-form turning techniques. I use a reverse rotation of the lathe spindle when I am hollowing, and the majority of commercially available tooling is just opposite of what I need.

Since I've begun teaching these techniques, I've discovered that not all woodturners want to be tool-makers, so I needed to find an off-the-shelf system that I can recommend. I have given up on handheld-straight bars or arm-braced boring tools, because, at the ripe old age of 44, my body just can't take the abuse of holding an off-center tool bit straight and level while it is trying to pull me into a crocodile death roll at 400 rpm. It appeared to me that the Nichols system would be versatile enough to use either way and would solve the chronic problem of "boring bar abuse."

The bar and torque-arresting holder comes packaged with no less than 20 individual parts, including the bar with two articulating segments, the bit holder, a finish scraper-holder and even a simple, but effective sharpening jig for the 1-in. round scraper. The fit and finish quality is excellent, and easily equals the CNC milling machine that produces it. The kit also comes complete with every screw and Allen wrench needed and even an extra  $\frac{3}{16}$ -in. tool bit. The bar and all its snake-like articulating segments, shown at right, are 4140 tool steel, heat-treated and polished to a chrome-like finish, while the holder is cold rolled steel and finished by sand blasting with glass beads. The entire setup intrigued me in the same way as when I was a teenager opening the box of a model airplane kit and wondering how all the neat parts would fit together to become a model airplane.



The Nichols bar sandwich assembly fits in the lathe's tool post support.

The system works by sandwiching the flattened top and bottom of the  $\frac{7}{8}$ -in. boring bar between two heavy pieces of plate steel that comprise the holder and this takes the place of the lathe's removable tool rest, shown above. The clearance between the bar and the holder can easily be adjusted with one Allen screw by feel to around one 1000th of an inch and does not impede the lateral movement of the bar in any way, while retaining all the freedom of a hand-held bar. The holder arrests all the rotational torque of the cut and holds the bar absolutely parallel to the bed of the lathe. This takes all the headache and guesswork out of pre-

sending, orienting, and keeping track of the cutter on a hand-held boring bar. No longer must a turner put the tool into a rotating vessel and guess where he left off. The Nichols system allows you to leave the machine off, insert the tool, make a trial pass, and place the cutter just shy of where you wish to start the cut. You can then make a phone call or go to lunch, come back to the studio, start the lathe, and begin your cut with complete confidence.

This is a very aggressive cutting tool. Since I no longer use brute strength to fight the down force of rotation, all of my strength and focus is available to make a deeper, far more controlled cut. This reduces the time for me to waste out the interior of a hollow form by one half and I am far less fatigued, physically and mentally, by the process. Keeping with the theme of high quality, Nichols has supplied the very best  $\frac{3}{16}$ -in. Tantung machine tool bit for the cutter. These cutters are too good for me; however, I found that they would fracture when I tried to burnish a cabinet scraper-like burr on the edge. This problem was easily solved by switching to one of my own 10 %-Tungsten Cobalt tool bits. Also supplied with the bar is a 1-in. round particle-tool steel scraper, complete with a simple but effective sharpening jig. The scraper is used



The circular scraper cuts less aggressively than the narrow cutter at right.





The author recommends adjusting the tool rest base for added support.

for cleaning up the tool ridges left by the smaller  $\frac{3}{16}$  bulk cutter. It has a machined washer that is slightly smaller than, and fits on top of the scraper. Since the depth of cut of this much larger scraper is limited by the washer, it is easy to use and not as scary or aggressive as it first appears. Turners who choose hollow forms with large openings will appreciate how easy it is to change from the  $\frac{3}{16}$  bulk cutter to the finish scraper, and it will greatly improve the look and feel of the inside of their turnings.

All tools have their appropriate safety limitations, and the Nichols system is no exception. I could use the system to a depth of about 15 in., but 12 in. is all I recommend. I didn't test for a maximum diameter, but my guess is it would easily turn to a 16-in. diameter. Another safety issue I discovered is that the length of the tool-rest base should be placed as parallel to the lathe's bed ways as possible, as shown above. Normally, a tool-rest holder is perpendicular to the bed, but for this application, the width of the base doesn't present the maximum amount of area possible and therefore may not offset the increased downward force that this system can exert on the base. If you are cutting deep inside a vessel and you have a bad catch, the leveraged force exerted could break the holder base, bend the bar, or even tear a chunk of cast iron from the ways of a light-duty lathe. By positioning the base parallel to the ways, it not only

adds stability, but virtually eliminates this potential hazard. Remember that the rigidity of this system no longer requires using your biceps as shock absorbers; the force of the cut or a catch is absorbed totally by the tooling and machine, as it should be.

I believe that tooling should never dictate or limit the creativity of an artist, yet the majority of torque-arresting boring systems are so cumbersome or so restricted in movement that a turner is forced into limiting his choice of hollow forms. Roller stands and outriggers are fine if you wish to limit yourself to turning tall narrow forms with straight sides, but if you wish to explore low, fat, or flat-topped forms, I suggest you consider the versatility of the Nichols system. It is the least restrictive system I've discovered. Not only can the cutter be placed on the left side of the bar for common counter-clockwise rotation, but also on the right side of the bar for easier and more ergonomic reverse-rotation techniques. And the two articulating snake-like segments that hold the cutter allow easy positive-cutter adjustment, allowing any shape or form to be chased. I discovered one more unexpected benefit of the Nichols system. I no longer need to attend my very boring "Boring Bar Abuse Support Group," which leaves me more quality time to spend turning wood.

— Don Derry is a professional turner and teacher in Ellensburg, WA.

## A new cutter for deep boring

Guus Mauri of Hawaii invented a wonderful hogging tool that takes out, in flowing ribbons, the insides of deep vessels faster, easier, and more safely than anything I have ever used (this does not say that I have tried everything ever made for this kind of work). The tool, which looks a lot like a modified drill bit, (but is quite different), is used in a heavy, (usually about  $1\frac{1}{2}$ -in.-diameter by 5-ft.-long), boring bar. The back end of the bar is supported on a roller stand and the business end rests on a tool rest. A hole is drilled in the block which is to be the vase and the super tool begins cutting from the hole outward to the edge. When set "just right," beautiful ribbons stream out without effort.

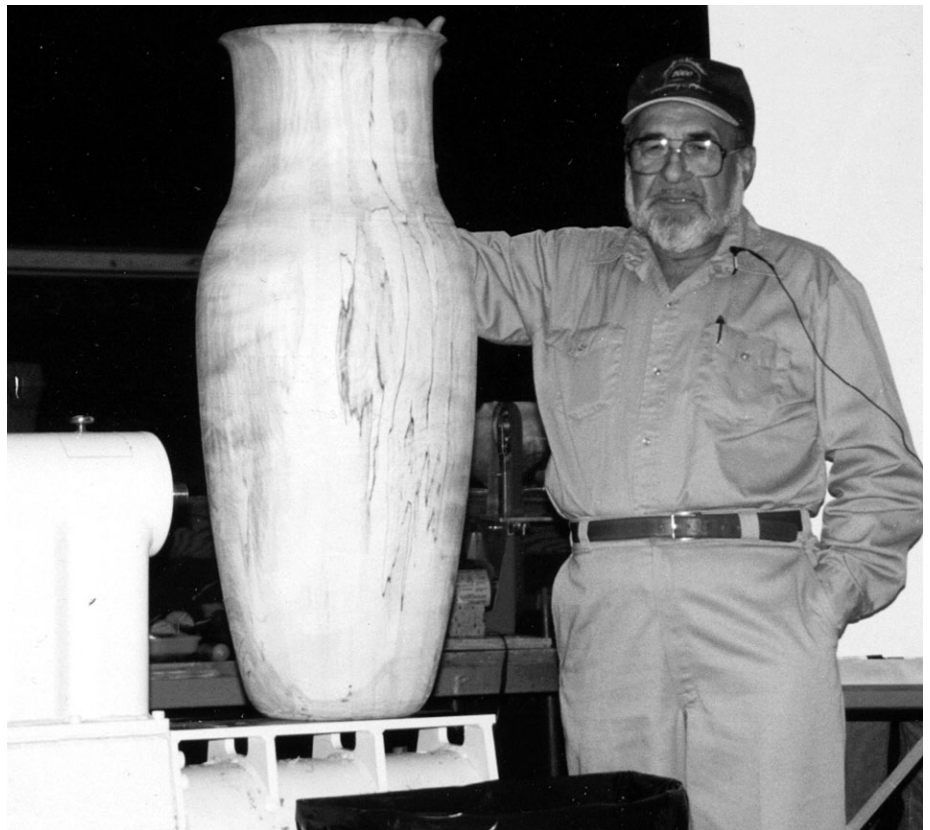
I have used mine mostly on green birch, and so I do not know how other woods will respond. Guus Mauri says he uses it on Hawaiian woods with great success. A few others who received the tool to try out have been generally pleased. All said that it takes a little getting used to —like most new tools. But once you get the hang of it, you will do all your major hogging with it. For example, I have used my teardrop cutter on my boring bar for years and believed it to be the fastest thing on the market, but the Guus Mauri tool blows my cutter away. What used to take me three hours to hollow with my cutter can be done in an hour or less with the Mauri cutter! The accompanying photo shows me with a 36-in.-deep vessel which I hollowed with the Mauri tool in 46 minutes — so help me God! I took a half inch cut each time and pulled out to the edge, (or near the edge) in about 25 seconds; 72 plus pulls later, I am at the bottom! I spent more time removing the streams of shavings than I did actual cutting.

The one thing I still cannot do with it is finish cut to a consistent

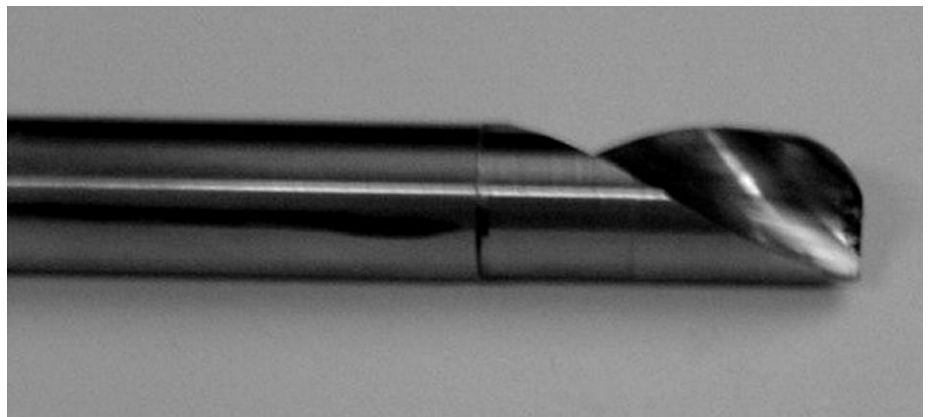
## A NEW CUTTER FOR DEEP BORING

thickness —especially thin turning for piercing. That I do easily with my teardrop cutter and an internal light or with the laser system. This tool is for people who have big lathes, large boring bar systems and who want to do large, very deep vessels. For open bowls, the bowl gouge is still the best. In my opinion, this tool is for the removal of large masses of material in a very big hurry. When it is set correctly, it is a wonder to behold—mountains of curly ribbons! It is good to know that for vessels taller than 20-in. and 9-in.-diameter one needs a steady rest and a 2-in. solid bar. Each thickness of bar has limits as to how far you can go in before vibration sets in. A general rule is that a 1 $\frac{1}{2}$ -in. solid bar will allow you trouble free entry to 15-to-17-in. A 2-in. solid bar will let you get in to about 26-in. over the tool rest. Anything deeper than that requires Guus Mauri's Telescoping tool rest. This tool requires a mouth opening of 9-in.-diameter or more. It will enter inside a vessel to a depth of up to 30-in. The bar rests on the internal end of the tool rest and can overhang that tool rest almost as far inside as it can on the outside too I rest. In other words with the telescoping rest extended to 30-in. and using the 2-in. bar which can extend to about 25-in., you can theoretically hollow out a vessel 55-in. deep! Trust me, it has been done many times — it really works. Your problem will be that the swing on your lathe isn't great enough to give you a well proportioned vessel with that kind of depth, or you can't get wood large enough in diameter, or you can't lift the block to the lathe even if you found a block big enough.

Such extra deep turning is a relatively new phenomenon. Much has to be learned about this work. Several of my students are trying different approaches and have discovered many interesting things. By sharing



Sudol with his first 36-in. high vessel. The Mauri cutter is shown below.



our experiences, we will come up with even easier ways to do deep turning and do things that are impossible today. Nothing we write about is final and forever; these are only beginnings to greater things and it never stops. That to me is why we don't stop exploring. It is so exiting to be breaking new ground. We thank Guus Mauri for injecting exiting new tool ideas for us to explore

and develop. This Mauri cutter is available on the mainland from Darrell Davis of Portland Oregon by phoning 503-244-2250 most evenings or at work at 503-720-2501. He can set you up with the bars and good advice. For Hawaii residents phone Guus Mauri at 808-572-8883. Both men are A.A.W. members.

— Frank Sudol,  
Paddockwood, SK Canada



# Absent Friends



1930 - 2000  
Yuma Arizona

Ray Allen, a man many consider to be one of the best segmented turners of all time, was honored with a special exhibit of 40 of his pieces at this year's Utah Symposium in Provo.

Dale Nish, who started the symposiums 20 years ago, paid tribute to his long-time friend and colleague.

"He was up front, friendly and outgoing. His passing is truly a loss for all of us."

Nish praised Allen's work as a turner and artist. "His craftsmanship was impeccable. His

designs were very good. He lived Southwestern forms."

Allen and Nish had also been working together on a book in recent years. Nish said he expected the book would be out in a year or so.

The photos shown here were taken from a CD prepared and available from The Utah Association of Woodturners, 245 East Wentworth Ave., Salt Lake City, UT 84115, 801-485-3154. The CD includes 1800 digital photographs from this year's symposium, in addition to coverage of the Ray Allen Gallery.