American Woodturner

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

Settling on Improvement

California is known for its earthquakes, and as those of you who have your ear to the ground already know, we experienced a bit of a shock last July in California. Our plan was to meet as a board immediately after the Davis symposium. We were expecting to address the problems that had characterized the first six months of our working relationship. There had been far too much time and energy devoted to procedural issues, cross communications, and the protocols of personal interaction. We were looking forward, also, to celebrating the success of the symposium, to congratulating Charlie Gabriel and Merryll Saylan, the two board members who had headed the event, and to critiquing it toward improvements in next year's event.

Merryll and Charlie did not join us for our meeting, sending letters of resignation instead. Their stated reasons were not identical, but I do not think it an oversimplification to say that they felt in common an incompatibility with most of the rest of the board. I say "most" because at the end of our three-day meeting (once again, by my reckoning a successful affair, once we had regained our feet) we received another letter of resignation, from Jack Aarsvold, citing the incompatibility of his management style with that of the rest of the board.

The board regrouped, even before Jack's resignation, electing me president and Nick Cook vice president. Phil Pratt remains our able secretary. We needed a treasurer, a person with experience overseeing increasingly large financial resources such as we have. We exercised an option in our by laws and asked Stephen Garavatti, a recently retired federal bank examiner now building a full-time production woodturning business, to fill out Charlie Gabriel's term. Steve garnered the next highest number of votes among those candidates for election last year. He enthusiastically accepted the appointment and we elected him treasurer.

In other changes I stepped down from a couple of committee chairs. Karen Moody now heads the Educational Opportunity Committee, overseeing an expanded program. By her initiative we added three new grants aimed at bringing young people to our field and, as you can tell from the insert at the back of this magazine, simplified the application process. (Improving the product, you will see, is what excites me.) Dan Ackerman took my place on the Nominating Committee and, along with Palmer Sharpless and Gary Brackett, presents the candidates for election to the board on pages 12–13. I encourage you to vote; we need a full, productive board.

Throughout these changes we have relied on our by laws. It has been evident for some time that they deserve updating to make them easier to understand and to apply to our current needs. Including the insightful revisions recommended by Jack Aarsvold and Phil Pratt, they will be published in the next directory, early next year.

I wish I had not come to the presidency in the manner I have. I have no taste for politics. My own background in corporate marketing defines my focus on productivity and responsiveness to the customer. From my first day as a board member I have stressed, Improve the product! That will be the theme of my presidency. Our product is the education, information, and organization that we provide to those interested in woodturning. Here are some of the other things we're moving forward on:

The journal will continue to grow, both in quality and quantity. The issue you're reading has four more pages than the last. We're exploring distribution through newsstand sales, which promises to expand our reach and our membership. New publications are in the works: the inside back cover announces our first calendar, we'll have video coverage of the 1995 symposium available before the end of the year, and we're working on a poster to commemorate our tenth anniversary (please see page 52 and respond, if you can, to the call for photos for this project).

Our tenth anniversary symposium is next year. We're planning an extra-special event in Greensboro, NC, June 22–24. Having outgrown most of the college campus facilities who host conventions, we are going to stage this symposium at the Koury Convention Center, one of the largest non-municipal meeting complexes in the country. Under one roof and in easy proximity, we'll have all demonstration rooms, a centralized trade show, a capacious auditorium and banquet hall, attractive space for our instant gallery, after-hours eating and meeting places, and hotel room accommodations for every participant who values being able to stumble out of bed and travel to a morning demonstration by elevator. (Off-site lodging and camping will also be available.)

A campus symposium site has its charm, but it usually requires hiking from building to building. After hours, participants disperse, some returning to dorm rooms, others to local motels and pubs. The feedback we've had calls for easier access to and better integration of the several components we've come to expect from an AAW symposium: state-of-the-art woodturning demonstrations, a bargain-filled trade show, an inspiring instant gallery, good society, and value-oriented food and lodging. Of course, keeping costs in line with those of previous symposiums is a priority. It's all part of improving the product.

—Charles Alvis, President of the American Association of Woodturners

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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.

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On the cover:

Nature is bountiful when it comes to inspiring woodturning projects. James Poppell's mushroom boxes grew out of an interest in utilizing branches of live oak. The decorative mushrooms of Fred Holder represent a somewhat simpler challenge. And the burl tree form is Phil Pratt's discovery on the way to turning another vessel. For details on how to take on these projects, see the articles beginning on page 14. Photos by Rick Mastelli and Deborah Fillion.

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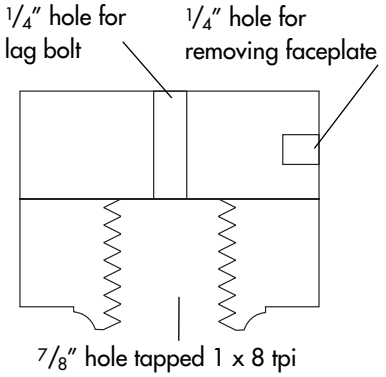
Another shop-built faceplate

The June issue arrived just in time to snap me out of my doldrums. For the past few months I have had no incentive to work on the lathe. After reading this issue, I now have a renewed interest.

Of special interest was the article on glue faceplates by Charles Brownold. I had developed a slightly different method of making shop-built faceplates. My lathe is an old beast, with 1-inch x 8-tpi threads. Initial experimentation with a nut brazed onto a 3-inch heavy steel washer worked fairly well, but it was difficult lining up the pieces to run true.

Finally, I used a disk of $^3/_4$-inch oak, drilled to $^7/_8$-inch and tapped to 1 inch x 8 tpi. Since I do not have a bottoming tap, I then glued on another similar disk and turned it true. Here I also drilled $^1/_4$-inch holes on the edge of the disk, for removal from the headstock. Additionally, there is a $^1/_4$-inch hole in the center of the second disk to accommodate a



lag bolt, which allows further use as a screw chuck.

This method of building faceplates is economical, once you have the 1-inch x 8-tpi tap. (Mine cost under $20 at the local hardware store.) So far, I have made over a dozen, using scrap lumber.

This system seems to work well with coarse 8 tpi, but does not work well with fine thread ($^3/_4$ inch x 16 tpi, for instance), which requires a steel nut, as in the article.

—Martin W. Meyer, Port Richey, FL

Save yourself

My apologies for directing people toward a commercial source for "The Pen Saver" in the March 1995 Letters column. The company is no longer able to fulfill orders. Truth is, you can make a pen saver yourself! If you've set the twist mechanism for your pen in too deeply, simply drill a $^1/_4$-inch hole in a block of wood, insert the twist mechanism/pen tube, and use a $^1/_4$-inch piece of dowel and vise to push the mechanism back out. It works great and doesn't damage the tube or mechanism.

—Steven Waterbury, San Diego, CA

Round and round

Re Mike Kornblum's "Shop-made sanding disks" in the June Tips column, I've come across a circle cutter (item #998) manufactured by Neil Enterprises, Inc., 940 Forrest Edge Dr., Vernon Hills, IL 60061, phone 800/621-5584. The cutter comes with extra blades and a glass square to place under the sandpaper being cut. The cutter costs $25 plus postage. A velcro pad cut from a 10-inch disk (purchased from Shopsmith) is added to the bottom of the cutter in order to prevent movement during rotation of the knife blade.

I admire Kornblum's desire to lower the cost of the disks as much as possible. I recommend calling Industrial Abrasives at 800/428-4868. Ask for the owner. You can purchase Rhynogrip hook-and-loop sandpaper in meter-wide strips by the yard. The cost of the 3-inch disks cut from these strips is 13 cents. For thrifty turners a 2-inch disk can be cut from the center of the used 3-inch circle. This reduces the cost to $6^1/_2$ cents per disk. The sandpaper has never separated from heat build-up. It has an excellent grip and seems to last longer than any other paper I have used.

—Michael L. Gordon, Cincinnati, OH

Color me coded

My thanks to Mike Kornblum for his sanding disk suggestion using felt backing. However, in his haste to run out for more Pringle Potato Chips he neglected to point out one of its greatest advantages! With some twenty-odd colors of felt available at the craft stores, we can all have our own individual color-coded grit system. (At last!)

—Jim Habermann, Joplin, MO

Doing right

As my turning career has progressed, I have thought a lot about what it means to be a "professional," as well as what my membership in the AAW means. The two are not always a good fit.

Turning wood is my profession, as it is for many of you. The majority of the members of AAW, however, turn wood for something exciting to do outside of their normal job or as a retirement hobby. There are excellent turners in both groups.

Over the years, I have heard people in the turning world talk about donating time/money/work "to the good of the cause." As much as possible, I have given and will continue to give to the AAW, to Arrowmont, to The Wood Turning Center, to the Osolnik Scholarship Fund, and to local chapter activities (as well as to others). I do this because I can and because I believe that combined efforts can create dramatic results.

I am troubled, though, by what I see as a pervasive belief, among professionals as well as hobbyists, that everyone *should! must!* sacrifice or give to the cause of AAW or local chapters. I have talked to a number of demonstrators who have been asked to reduce their fee or not to charge one or to forego charging

travel expenses when a group who wants to hire them cannot afford to pay or thinks that it should not have to pay.

I think there are several reasons for this practice, the two main ones being financial problems with young organizations and the mix of hobbyist and professional turners sharing the demonstration arenas. Five years ago the AAW was struggling to stay solvent, so I understood their need to ask minor demonstrators at their national conferences to work for free. Things are different, though, in the AAW today. We make thousands of dollars from the national conferences. All demonstrators should be adequately compensated. I know the board of directors is working toward that goal, having for the first time at Davis paid one-time demonstrators $50. That's a good start, but keep in mind that all but the major demonstrators pay their own registration fee and travel and lodging expenses, they spend time before the conference preparing, and they miss out on at least part of the day's events before and after their own demonstration getting set up and stowed away. I would like to see at least the registration fee waived for all invited symposium contributors along with compensation more appropriate to the value they bring to a symposium. A person good enough to be asked to demonstrate should be compensated.

As an active member of my local chapter, I have been president for two years, edited their newsletter for several years, and done numerous demonstrations, free, for the good of the cause. But when I am asked to demonstrate for other local chapters, I expect to be paid a demonstration fee and reimbursed for my travel expenses. After all, it is my profession—the way I earn my living.

I will continue to volunteer my time, money, and turned items to the many organizations and groups that I believe are worthy, but I must earn that money first.

—Betty J. Scarpino, Indianapolis, IN

Mind Turning

The mystery spins before me, its irregularities veiled in a deceptive uniformity.
I stand motionless, anticipation vying with trepidation.
I know well what I want this to become.
But does the wood agree, or does it want to become another something?
Does that something already exist?
Is it in there, waiting eagerly for skilled hands and perceptive mind to set it free?
How can I, who am not conversant with wood, know enough to do this?
Shall I proceed, shearing away that which is not part of my yet mythical form, maiming, perhaps, in the process, the perfect form that lies intact within?
Shall I, then, contend with the wood's will so that neither of us is fulfilled?
No, I say. I will not be inflexible. I will listen to the wood and try to hear clearly its wishing.
And if I do, perhaps it will also bend a little,
and be forgiving if my efforts are less than it wants them to be.
Or, does it matter? Are there thousands, hundreds of thousands of shapes it could take and be happy with any of them?
Or could it be that my expectation is the only scale on which this thing will be weighed?
No, I say. I do not believe that. I do not know what I believe, but I do not believe that.
Enough of this. Enough of procrastination and unsurety.
The decision is made.
The discovery begins.

—Alan Hildebrand, Sharonville, OH

Hotcha

My thanks to Bob Rosand for giving me a sneak preview of his kiln design (*American Woodturner*, March, 1995). I too was having some difficulty with wood movement in my boxes. I used scraps of 2-inch rigid polyisocyanurate insulation board (R-Max, Tough-R) similar to Bob's design. I made mine a bit smaller than his, and tightly constructed the 23-inch (outside measure) cube-shaped box using construction adhesive. The clamps I used to glue it up still serve as its stand…for now. To control the temperature I picked up a digital thermometer at Radio Shack for about $35, a fan from an obsolete computer (free), a standard light-bulb socket, and a single-pole dimmer switch. My total cost was about $45. (If you need to buy everything: $65 to $75.)

Before I bought the dimmer, I put a 75-watt bulb, and in 15 minutes the temperature was 130 degrees and rising. I then tried a 40-watt bulb, then a 25-watt. Still the temperature

was soaring past the 92-degree optimal setting. My box was tight so I drilled several holes in the top and bottom for ventilation. Still the temperature sailed past optimal. Next was a 2-inch hole top and bottom—a small help but not enough.

Since installing the dimmer, the temperature is now easily controlled. I check it daily and tweak the knob if necessary. I recently visited Bob and saw his kiln and the reason he and I had such large differences in temperature. Bob's kiln is constructed with five sides insulated, the floor is concrete. Mine is insulated on all six sides. Mystery solved.

—Mark Krick, Doylestown, PA

Call for torque discussion

I am interested in acquiring a large lathe to turn pieces in excess of 32 inches in diameter. I understand I need a spindle speed of 50 to 100 rpm. However, I also wish to use the same lathe for smaller work requiring 2500-plus rpm. The challenge is to maintain enough torque throughout this speed range. I would prefer not to change pulleys.

I am interested in a thorough discussion of the options. To date, I have found three:

1. DC drive with variable speed control.
2. A three-phase motor and an inverter or converter (which can control speed) so my single-phase power can drive it.
3. A hydrostatic pump/motor, such as the Eaton model 7 or 11, or a separate hydraulic system.

I'd like to know the pros and cons of these choices as well as any other possibilities.

—Dennis Provenski, #9 Parkside Pl., Brandon, Manitoba R7B 3A1

Erratum

The winner of the Florida West Coast Woodturners raffle (pictured on page 42 of the June issue) was James A. Stewart of Stafford, VA.

Learning Through Painful Experience

There is little discussion among woodturners regarding accidents at the lathe, which leads one to believe that lathe-related accidents are relatively uncommon—meaning woodturning is far safer than expected. Perhaps there's more validity in the explanation that woodturners have so much pride they do not admit their mistakes. Let me assure you, that even after ten years of safe woodturning, ACCIDENTS DO HAPPEN!

I am admitting to my own recent mishap (swallowing a large dose of pride) in hopes that this recounting may prevent others from making similar mistakes with equally painful results. As with all accidents, hindsight reveals a number of things that were wrong, all contributing.

First, I was using a tool with which I had limited experience, a $^3/_4$-inch deep-fluted bowl gouge.

Second, the gouge was ground to a long, low angle, about 35 degrees relative to the length of the gouge, similar to the fingernail shape of a spindle gouge. If you have used gouges ground in this manner, you will know that they leave fine smooth surfaces but are difficult to control until skill is gained through experience.

New Safety Guideline No. 1: *Do not grind large roughing gouges with angles intended for finish cuts.*

Third, I was using a lathe with which I had limited experience.

New Safety Guideline No. 2: *Know your equipment well before attempting new maneuvers.*

I was teaching a class on beginning bowl turning using a "borrowed" facility. Though I had turned on each of the machines, I was nowhere near as familiar with them as I am with the machines in my own studio. Fortunately, all the machines were in great operating condition, thanks to the skills and efforts of retired machinist Ora Booth of the Ohio Valley Woodturners Guild. As a Guild service project he had brought all of the equipment up to safe operating standards.

Fourth, the minimum speed on the lathe was around 300 rpm, which, admittedly, was too fast for the size and condition of the walnut blank. As the wood turned, the lathe danced around the floor more than it should have. The 10-inch blank had been rounded on a band saw while green but was about an inch out of round as a result of normal shrinkage during drying.

AAW Safety Guideline No. 10: *Rough out your workpiece on a bandsaw before mounting it on the lathe.*

While truing-up the outside of the blank, I was turning left-handed, meaning that the tool handle was in my left hand and the tool steel in my right hand, palm up, against or near the tool rest. As the "void" came around on the uneven outside, the tool moved forward pulling my right hand onto the tool rest. As the tool tip next caught in the wood, the tool slammed down onto the right index finger which was now over the tool rest.

This split-second action resulted in multiple fractures of the bone, several lacerations, and, of course, a substantially bruised pride. I will recover from the fractures and the lacerations, but there is probably no ready prescription for the bruised pride.

Fortunately, it was the instructor and not a student injured in this mishap.

Upon returning from several hours at a busy hospital emergency room, my young son asked if this accident would affect my woodturning. I assured him, and you, it will. I will be a much safer woodturner in the future. I hope that by reading this report, you will be too.

—William L. Stephenson, Jr., Loveland, OH

OTTAWA VALLEY WOODTURNERS' COMPETITION

THE SECOND ANNUAL VALLEY WOODturners competition early last March became a Trans-Canada national event with entries all the way from Pugwash, Nova Scotia, to Langley, British Columbia, for a total of eighty-five pieces, making it the largest competition in Canada. The event was held at the annual woodworking show in Ottawa, where the Valley Woodturners are based.

Entries were received by mail and in person right up to the drop-off deadline on the day before the show. The show was open from Friday through Sunday, giving the public lots of time to browse the entries and review the winners.

The judges were very impressed with the quality of design and technical execution, greatly improved over last year. The competition had three categories, including miniatures (2 x 2 x 2 inches maximum dimensions), spindle turning, and faceplate turnings. In addition, there was an award for Best of Show, several Honorable Mentions, and a People's Choice award. In total, $750 in prize money was taken away by fellow woodturners.

In the miniature category, Jeanine Hebert of Ottawa captured first place with a pair of magnificent earrings of birch and laminated tulipwood. She also took third place with excellent chatterwork on apple earrings. Second place went to Gerhard Ennis of St-Catherines, Ontario, with a petite covered bowl of ebony and beautifully colored Manitoba maple.

Top honors in spindle turning went to Gerhard Ennis for a wonderfully detailed three-legged artistic piece crafted from kingwood and holly. Gerhard also took second place for a flawless cocobolo gavel. A tall spalted maple wine goblet won third place for Chris Oosenbrug of Chateauguay, Quebec.

The faceplate competition was very close; with so many turnings it took extra deliberation by the judges. Chris Oosenbrug took top prize with a huge carved and detailed bowl that had to be seen. Bill Carey of Carp, Ontario, was a very close second with a superb ash hollow vessel. Chris also placed third with a carved and split maple bowl.

Best of Show went to Gerhard Ennis for a magnificently delicate, beautifully figured miniature goblet of ebony.

The People's Choice award (voted on by the public) went to Don Handke of Pembroke, Ontario, for his tall and slender Indian rosewood candlesticks. Don took home a huge broadleaf maple burl for his efforts.

The crowds were thick at the Valley Woodturners booth during the Ottawa Wood Show. The wide range of turnings that members displayed to show off our craft attracted many people who appreciate fine work and could seldom resist picking up a piece for a closer look and to feel.

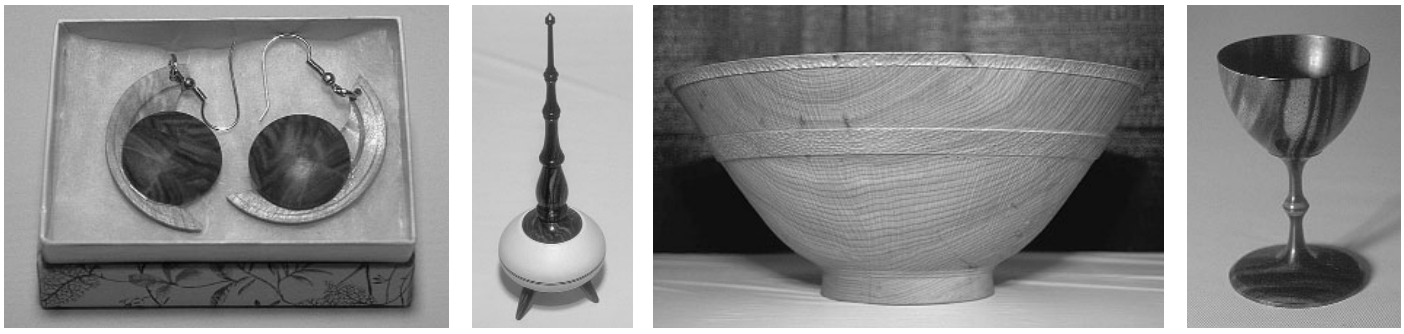
The biggest attraction to the booth was by far the live turning demonstrations given by several dedicated members of the club. This gave everyone the opportunity to see how easy and fun turning can be. This year Berg Woodworking Supplies Ltd. and Preston Hardware each donated the use of a lathe for the show, augmenting the two miniature lathes provided by the club.

Complementing the informal demonstrations, three formal seminars were given in the demonstration hall. Topics included bowl turning, miniature turning, spindle turning, and general lathe usage. The Valley Woodturners added these seminars to their video library, thanks to the video equipment donated by Algonquin College.

Many of the people who visited our booth were surprised to find a local club dedicated to woodturning and showed genuine interest, with excellent questions about how to get into woodturning or how some of the more unique pieces on the display table were made. The club gained a number of new members through their participation at the show, in addition to promoting the craft in general.

—Bart Poulter and Michel Theriault, Ottawa, ON

For information on next year's contest (March 1–3) write Poulter at 22 Vendor Way, Nepean, Ontario K2J 1M3.



Prize-winning entries, from left to right: Hebert's *First Miniature* birch and tulipwood earrings, Ennis's kingwood and holly *First Spindle,* Oosenbrug's *First Faceplate* carved bowl, and Ennis's miniature ebony goblet, *Best of Show.*

START YOUR OWN CHAPTER

AMONG THE GREATEST PLEASURES ASSOciated with the hobby of woodturning are meeting and talking with other woodturners and seeing and admiring their work. It's possible to do this on your own by visiting galleries and craft shows and attending conferences, seminars, and local woodworking shows. Such experiences are educational and inspiring, but simple observation cannot satisfy the appetites of most turners to touch and handle work or to question the artist or demonstrator in detail.

This is where the local AAW chapter becomes important. It's the "hub of the wheel" for people with the same interests and desires. It allows free exchange of knowledge, ideas, and inspiration up and down the levels of expertise. But what about those who do not have a chapter within reasonable commuting distance? Here's a solution you may not have seriously considered: *form your own chapter!* Impossible? No! Difficult? Maybe, but here is how one small group started a local chapter, and some advice drawn from our first two years.

I had attended meetings with the Los Angeles Woodturners as well as the Inland Woodturners, who meet in Pomona. Both groups were forty or more miles from my home in Glendale, and they met on a week night. Traffic made travel time unpredictable, and the next day, with a 6 am start time, I was tired at work.

In March of 1993, I began talking about forming our own chapter here in Glendale. My wife, Leslie, thought it was a great idea and has been responsible for much of the success of the group. Steve D'Arc and Bob Devoe, Glendale woodturning friends, were in favor of a local group and offered valuable input. I also solicited advice from Dick Lukes of Beech Street Tool Works, as he had been involved in the L.A. Woodturners since its inception, and Jerry Glaser of Glaser Engineering. With this nucleus of six, we set out to form a chapter.

The packet from the AAW gave us a good start, and the AAW Directory was our initial source of prospective members. We sent an invitation to thirty-two people in the immediate area, proposing a chapter. The first meeting of the Glendale Woodturners Guild was on Sunday, June 13, 1993 at our home/shop. Thirteen people attended, and mainly we discussed organizational issues. A wood raffle yielded an immediately funded treasury. Sure, most of the items in the raffle came from the officers, and we paid for soft drinks, coffee, and snacks out of pocket, but we had the start of something good. At the end of June, I secured a charter from the AAW Board, while attending the annual symposium. (I could have done it by mail, of course.) The Glendale Woodturners Guild was now an official AAW Chapter!

By the next month's meeting we were up to twenty participants. The Show & Tell and wood raffle continued to grow, as well as the treasury. We eventually settled on a meeting time of 3 pm on the second Sunday of each month. We began purchasing a video and book library. We have weeded our mailing list quarterly; currently it has 100 names: six for information only (newsletter, mailings, etc.) and ninety-four active/semi-active members.

"Magic is what inspires us"

The largest meeting to date had forty-two of us in a two-car garage, spilling down the driveway. The treasury boasts more than $600, and we have never charged dues! The money comes from the wood raffle or donations. We have fourteen videos and ten books, bought with club funds or donated to our lending library. We carry the third-party insurance provided by the AAW, and pay for it with club funds. We publish a quality but straight-forward newsletter (*Slightly Skewed)*, the production of which has been ably taken over by editor Bill Haskell. All costs are covered by the club. Again, we do all of this with no dues. Our local chapter is a success with no real problems.

We did however underestimate or fail to anticipate quite a few things, which I'm happy to share with you.

Driving distance: We now have members commuting as much as a hundred miles each way to attend meetings. We limited our first invitation to about a twenty-five-mile radius; this was too conservative on our part!

Meeting time/day: Through trial and error, we have found that we can draw participants from a much larger area with the Sunday afternoon meeting. Our meeting location is five minutes from the intersection of two major interstate highways. For any distance, it's freeway all the way in the lightest traffic of the week, in the daylight. Be flexible. Our meetings are on the second Sunday of the month. In May, this is Mother's Day, so we shift the meeting to the third Sunday. Our July meeting would have conflicted with travel home from the Davis symposium. We moved this meeting to the sixteenth and had an open discussion and "Photo Show & Tell" of the conference. Those that did not attend benefitted from the fresh memories of those that did.

Meeting environment: Meeting in a "working shop" environment attracts participants. We have discussed moving the meetings to a hall or school for space and climate control. The group disliked this idea. They

will put up with heat in summer, cold, even rain in winter to be in a shop where we can make chips at a demo.

Meeting tempo: Start on time, keep the meeting moving, keep on schedule, finish on time! Some people need to get home and feel cheated if they must leave before the meeting is over. We try to complete everything in two hours, but many people stay and socialize for another hour, or show up an hour early.

Delegate responsibility: We started with four officers but have expanded to six to spread the work load: *president*—guides the group, runs the meetings; *vice-president*—schedules meeting topics, demonstrations; *treasurer*—pays bills, balances account, runs wood raffle; *secretary*—keeps meeting attendance records and mailing list; *editor*—publishes and mails our newsletter; *librarian*—operates the club's lending library of books and videos.

Newsletter: Get the monthly newsletter out on time, about ten days before the next meeting. Publish all pertinent information. Publish planned demos as far ahead as possible. Remember, everyone can't make every meeting, but if they know November's meeting will be of special interest, they can make the effort. Use the newsletter to keep members posted of gallery openings and shows, demonstrations, trade shows, and new vendors. We also run "For Sale/Wanted" ads in the newsletter at no charge.

Demonstrations: Have something of an educational nature at every meeting. Slides or videos are interesting, but "making chips" really gets the group excited. Don't limit your thinking to the lathe only; some of our best demos have been on topics like sharpening and chainsaw/bandsaw work. We have found enough diverse talent within our group to demo almost anything and have not yet brought in guest lecturers, although we are now awaiting confirmation from an Australian demonstrator. Occasionally wood vendors arrange to be at our meetings, selling out in the driveway. Although not a demonstration per se, it is a welcome addition.

Diversify: How about a field trip? We have gone to see the famous Lipton Collection, to the set of Spelling Television's *Models, Inc.* (which features a number of turnings by our members) and to the shop of Stephen Mines, a member who is a production turner. Plans include a trip to metal-spinning and pattern-maker's shops, and a definite return to the Lipton Collection.

Show & Tell: This is the "inspirational" part of the meeting. Anything can qualify here: a masterpiece or a failure, a new tool or a new idea or method. Encourage public speaking, get the shy ones involved by asking questions. Compliment progress and achievement, but laugh at disaster only if the maker does! In an effort to streamline this process and accommodate the many people who participate, we developed this outline:

- Who are you? (It's surprising how many forget this basic item!)
- What is this object?
- What material is it made of?
- What finish did you use?
- Have you named this object?
- How much time was involved?
- Was it a success or a failure?
- Is it part of a series?
- Will you make any changes?

Wood Raffle: All of us end up with material we can't use or more than we need from time to time. This is our club's main source of revenue and a source of raw material for everyone. All donations for the raffle are placed in a designated pile before the meeting starts. We ask everyone to mark the species of wood, when known, to eliminate "mystery wood." Also, the items need not be wood; excess tools and parts spark interest. We sell tickets for $1 each/6 for $5. We draw tickets until the pile is gone, with each winner taking his choice from the pile. We encourage winners to bring back work completed from the winnings for the next Show & Tell, so the cycle continues.

Mailing list: We have the current mailing list available at every meeting. (We don't publish it often in the newsletter to save printing and postage costs.) We also keep a master list organized by city and/or zip code, which helps people find carpoolers and turning partners to talk to and work with during the month.

Challenges: An occasional challenge or competition is healthy. Jerry Glaser recently challenged the group to "make a ball." We acquired fifty pieces of 4x4 redwood, 6 inches long. The challenge was to turn a ball (ok to leave base attached) without any sanding. We sold the pieces of redwood for $1 each. Although we sold a number of blanks, only twelve finished pieces returned to be judged at the next meeting. Jerry measured for maximum size and true roundness, and looked for overall smoothness. He presented the winner with a Glaser M-4 detail gouge (which the club had purchased). The club netted $6, but we had fun and learned a lot. The next challenge involves turning "a functional object that is not a bowl." This challenge is sponsored and judged by Bruce Ruehl, with a Lindsay detail gouge as the prize. A $1 per entry fee will be charged, with all monies going to the treasury.

Bulk purchases: As a group, we have more buying power. We have made bulk buys of Sealtite-60, allowing us to pass savings on to our members.

…

Our next newsletter will include a questionnaire sent to the entire membership. Info requested includes occupation ("day job") and other

specialized training and skills, other hobbies and interests, and type of lathe(s) owned. This information will help us build a talent database for club use.

Our newest teaching aids are quarterly half-day or all-day workshops on Saturdays. The May workshop was Beginning Bowl Turning, September will be Hollow Vessels, November will be Spindle Turning, and March will be Jigs & Fixtures, Lathe Modification, and Chucking. The charge is $5 per person to the treasury; demonstrators are volunteers. Bring your own lunch; coffee and soft drinks provided.

Video recording of meetings was started several months ago. In addition to a planned history of the chapter, we hope to make a tape that is an edited version of several meetings and exchange it with other groups, saying in effect, "This is how we do it; make us a tape of your meetings and send it back!"

Now that I've covered all that ground, you may be wondering why we continue to do the work required to maintain this chapter. The reward is definitely not financial, but it is substantial. Seeing the progress a new turner makes from month to month because of the interaction with the group is magic. The look in a person's eye seeing his or her work on the Show & Tell table, or overhearing someone more experienced compliment it or refer to it as "art" or "gallery quality" is magic. The special moment when one comments in all sincerity that "the student has surpassed the teacher" is magic. That magic is too scarce in our fast-paced world. That magic is what inspires us all to keep moving ahead and striving for the "perfect" piece. That magic is a truly substantial reward for a small amount of effort. After all, we're just a local chapter.

—Bill Hrnjak, President, Glendale Woodturners Guild, Glendale, CA

WOODTURNING GOES WORLD WIDE WEB

MANY OF YOU, I AM SURE, HAVE HEARD of the information superhighway and the Internet. These terms float around in the media, but what do they mean, especially to a woodturner? Well, if you are like me, you are constantly looking for more woodturning information anywhere you can find it. I know I am not alone, because all the other members of my local AAW chapter seem to be there for the same reason. If the information age is upon us, why not look to the Internet for more about our favorite topic?

I use the Internet in my regular work. So it's been natural for me to apply it to my avocation. There are a number of parts of the Internet, each with its own evolution. This is one reason that many of the features seem so confusing. The network began as a way for diffuse government laboratories to share information. It was (and still is) a chaotic conglomeration of different networks, but the system seems to work as well as systems that were created from well-defined plans. Lately, the commercial services have begun to link into the Internet services, and thus there are increasingly more users and more access points. It is said that volume use on the Internet is increasing at a rate of fifteen percent per month! It can be overwhelming, but the average person needs only a couple of the features of the Internet: sending and receiving messages, and viewing information that other people provide.

Email

Messages are transferred back and forth between people using electronic mail. Email is a way to keep in touch with fellow woodturners all over the country and the world. I have communicated with woodturners from Canada, Tennessee, New Mexico, Arizona, Australia, Oregon, California, Michigan, and many other exotic locations, and all it takes is a couple of clicks of the mouse and some nifty typing. Those of you who use email know how great it is to be able to zip a quick message off to a colleague or client. It is very easy to send information to someone without playing phone tag and running up a long-distance bill.

You may ask: "Why not just use the U.S. mail?" How long does it take for you to actually post a letter? Printing out the paper, stuffing the envelope, addressing, stamping, and posting are much more complicated than email. Plus, with email I can send the same message to multiple addresses just as easily as to one person. Another advantage is the "reply" feature where I can send a message back in response to an incoming message without having to look up or write the person's address—just type in your response and click/send it. Delivery is also quite fast. A message from Research Triangle to Minneapolis normally takes less than five minutes on a slow day. (This is why emailers call the U.S. Postal Service "snail mail.") The most important skill a woodturner would need to develop to use email is the ability to type.

Information by network

Viewing information is done through other software called Gophers (for text) and World Wide Web viewers (for text and graphics). The Internet's World Wide Web is a good way to distribute woodturning information since it has a graphical interface much like a magazine, where photographs and graphics are interspersed in the text. The Web is the latest technology available on the Internet. It is a way to distribute large amounts of data throughout the world without having to use paper, but with all the same usefulness of the paper copies. For example, wouldn't it be great to have an

instant copy of all the magazines and newspapers that you want to read? You could just turn on your computer and page through the magazines instantly, maybe even clip out an article if you wished. That is what the Web is all about. Provider sites at educational institutions, businesses, government institutions, etc. set up Web "servers" that contain information. Anyone can then access that information world-wide by obtaining a "client" software package and paying a "provider" for a link to the Web over the phone lines. All the person needs is the address of the server's site to view the information online.

There were several problems with this system in the beginning. One was that the amount of data that had to flow through the wires into your computer was vast, and the equipment had to be developed for someone to do this at home. Now high-speed modems make this data transfer faster. Another problem was that a viewer program had to be developed to allow an untrained computer user to view information in a straightforward manner. This has been solved with the new viewer programs like Netscape and Mosaic. Still another problem was that the amount of information was so extensive that no one knew how or where to look for anything. Some wonderful people have since created indices sorted by type of information. There are also search programs that help you access information using key words and phrases.

How does the Web work?

The World Wide Web works on the concept of "hypertext." As you read along, you encounter words or phrases that are highlighted, either underlined or in a different color. These are *hyperlinks*. They are actually other Web site addresses, or *home pages*, anywhere in the world. To access these addresses, you simply click on them. For example, say you're reading some text on a general woodworking subject and you encounter the word "TWNC" (Triangle Woodturners of North Carolina) as a hyperlink. You could click your mouse cursor on that word and immediately link to our home page; the file is now on your computer providing information on our local chapter. As you're reading our home page, you will encounter other hyperlinks, which can link you to other home pages. They could be other local chapters or product suppliers or educational resources. You can go further into one document, save it for future reference, or link out to other files anywhere on Earth. It's virtually endless because the files are changing and their number growing all the time. Once you start "surfing the Web" it is somewhat addictive. You have to be careful it doesn't keep you out of the shop!

The Web and us

Because I use the Web to get information for my work, I found it relatively easy to create our chapter's home page. The address is:

http://metro.turnpike.net/RDA/index.html.

I know this is gibberish to those who would prefer wood chips flying rather than bytes of data flying, but it will get you woodturning information. Not only does it fulfill our organization's mandate to provide education, information, and organization to those interested in woodturning, but it introduces our craft to a world-wide audience. The information on the page includes chapter programs, articles from our newsletter, and especially a gallery of photographs of member's work. A click of the mouse button on any link to us, and anyone in the world with an Internet connection can view the pictures and articles. There are several more local AAW chapters with a presence on the Web. The Cascade Woodturners in Oregon have a home page now, and the North Carolina Woodturners are getting one on the Charlotte Freenet site. There are plans for sites for the Wood Turning Center and other local chapters. Hyperlinks to these pages are on the TWNC home page for anyone that is interested.

How can you hook up?

Home access to the World Wide Web isn't much more complicated than using a CompuServe or AmericaOnline account. You will need a Macintosh or Windows PC with quality video and a high-speed modem, at least 14.4 kbaud. A 28.8-kbaud modem is preferable, though more expensive. Providers are available now in many areas, especially around college towns and bigger cities. There are also hooks into the Web on the CompuServe, America Online, and Prodigy commercial services.

One of my goals is to have an email distribution list of at least one email address for each of the AAW local chapters. I have this list posted on the TWNC home page. If you have an email contact for your chapter, send me the address. This would be a good way to get information directly out to the chapters without the expense of a mailing.

If you're interested in starting your own chapter's home page, I may be able to help. Contact me via the email address below.

As turners and artists we are always looking for more information. Electronic mail and information networking as available through the World Wide Web can keep us communicating and growing as turners, no matter where we are.

—Roger Austin, Secretary,
Triangle Woodturners of North Carolina
email: rda@rti.org

Non-toxic activator

Several woodcarvers from Edmonton, Alberta, shared this tip with me when they saw that I was using cyanoacrylate glue for turning. Instead of using the smelly activator that is sold with the glue, mix baking soda with water, then use that solution as a spray to activate the glue. Also, plain water sprayed on the wood helps the c-a glue set up.

—Betty Scarpino, Indianapolis, IN

Turn on the light

There have been a few articles on fiber optics for shedding light inside a deep or hollow turning. I have never investigated the cost of such a system but have come upon a similar solution, and its cost is $23. The product is called Steelman Bend-A-Light, and is manufactured by J.S. Products, Inc., 4083 S. Industrial Rd., Las Vegas, NV 89103 (800/255-7011). This light is aimed (excuse the pun) at the automotive industry. I learned about it watching my mechanic peek at the backside of my car's water-pump bearing.

The tip of this AA-battery-powered light is quite flexible, but it is not floppy. It feels like you are bending a piece of #12 copper wire. The bulb, which costs $7 for a replacement, seems quite durable. It is encased in a stainless steel housing and screws into the end of the flexible portion. I have used it taped to a scraper, a cranked chisel, and in the flute of a bowl gouge.

I do not frequently turn hollow forms, but occasionally do a deep vase or tumbler shape. Invariably, when I get my regular lamp in a position to shine into the work, it blocks either my line of sight or my ability to put a tool to the surface. The Bend-A-Light, taped to the tool, does the trick. There's no flood of illumination, but enough to see what you are doing.

I purchased my light and spare bulb, part nos. 10150A and 12100, respectively, directly from the manufacturer. They cannot handle a credit card, either shipping C.O.D., or will pay the shipping if you send them a check. The light is $22.99 and bulb $6.99, ppd with advance payment.

—William G. Kissel, Yankton, SD

Eliminating bowl nubs

Often when I've finished turning the inside of a bowl, there is a small nub at the bottom. To remove the nub use a $1^1/_2$-inch roundnose scraper. Position the tool rest so the scraper is just below the center of the nub. As the piece turns, make fine cuts by lowering the handle and bringing the tip up to the center. As wood is removed in the center, slide the cuts toward the sides of the bowl to blend the surface.

—David Ellsworth, Quakertown, PA

Pens revisited

Occasionally, after you've turned and assembled a retractable pen, the brass barrel will fit very tight over the twist or retractable mechanism. I've had customers that could not pull the pen apart—not a good selling point. The solution is embarrassingly simple, a small amount of vaseline on a Q-tip inside the barrel allows the parts to slide freely.

—Robert Rosand, Bloomsburg, PA

Brass-brush clean-up

After many hours of green wood turning, my lathe and tool rests are covered with grimy dust and chips. What a chore to clean up! I found a brass-bristled brush in the housewares section of my supermarket that quickly removes the mess from the headstock, tool-rest base, and all of those hidden parts under the lathe ways. *—Charles Brownold, Davis, CA*

Right to the edge

On natural-edge vessels the eye goes to the rim first. Good technique in turning, sanding, and finishing the rim is crucial to the object's overall success. Here are some of the approaches I take:

The final cuts to establish the rim both on the inside and on the outside should be done with a freshly sharpened tool. The rim should remain even in thickness unless there is a deliberate focus for unevenness or taper. In order for the rim to remain even in thickness even though the height may vary, the inside cut should be made in one motion from the highest point on the rim to just below the lowest point. This cut is difficult, but proper lighting, sharp tools, and a deep breath will help.

Sanding with the lathe switched off eliminates tapering "knife" edges on the rim and keeping the sanding disks moving eliminates heat checks in the end grain. The focus should be keeping the edge uniform in thickness. With the last two grits, true the thickness.

Any cracks that start on thin or spalted material can be treated with thin cyanoacrylate glue. You can also soak the cambium with glue and lock on any bark that you want to keep. Having spent a lot of time on my hands and knees in piles of shavings looking for that little piece of bark to glue back on, I now usually remove the bark. A balanced rim will have all the bark on or all off. In order to keep the c-a from staining the wood and creating a noticeable area, I like to get a coat of finish on before the glue. At the least, you can "resist" an area with a washcoat of shellac or lacquer. Apply the glue and then sand to the final grit.

Sometimes there will be an area on the upper surface rim that will not match the rest of the bowl. Aniline dye markers, commercial touch-up crayons, and burnt and raw umber and sienna artists' colors used very sparingly are great for bringing that rim into crisp uniformity. I use a

tiny brush on all the little nooks and crannies as the final step in applying finish. *—Rodger Jacobs, Newland, NC*

Fortified sandpaper

Sandpaper backed with duct tape makes a great sanding tool for narrow spaces and odd contours. Adhere a piece of duct tape, length as needed, to the back of the appropriate grit sandpaper. Then with a sharp knife and straight edge, cut off a strip of the required width. The duct tape strengthens the sandpaper allowing the use of narrow strips.

—Leonard Klima, Sacramento, CA

C-A cap

I have a lot of trouble with the caps on the c-a glue bottles. I don't wipe off the spout every time and eventually the cap is glued to the spout or at least it gets clogged up and doesn't seat. Sometimes the cap falls off the lathe and gets lost in knee deep shavings and can't be found. What I came up with for a solution is to take about an inch of masking tape and pinch it over the spout. It seals well and can be ripped off and discarded when you next want to use the glue.

—John W. Alexander, Sacramento, CA

Cool it

As tools cut wood, a certain amount of heat develops, probably more when the tool is dull and you are deciding that it must be time to sharpen it. The heat in the tool from turning, added to the heat generated in sharpening, often causes surprisingly quick overheating and bluing (loss of temper) at the cutting edge. To minimize overheating, cool the tool in cold water *before* grinding. The heat will be quickly dissipated and the probability of overheating greatly reduced.

Thanks to Thad Whitesell for teaching me this Turners' Tip.

—Bill Stephenson, Loveland, OH

The Pen Turning Manual, *HUT Products for Wood, 15361 Hopper Rd, Sturgeon, MO 65284 (800/547-5461). $9.95.*

OK, POP QUIZ TIME! HOW MANY OF YOU know how to turn a basic twist pen? Where are your instruction sheets? How do you go about disassembling a completed pen that doesn't fit together properly or that has a bad component that needs replacing? How many components are there in a pen? How do you cut the wood to virtually eliminate grain mismatch between the two barrels? How do you keep the ends of the blanks square? How do you market the pens? Had enough? If you can answer all the above questions you probably don't need to read any further...but please do; I spent a lot of time writing this stuff!

Over the last several years I have turned and sold thousands of pens. *Answers:* I'll be hanged if I know where the instruction sheets are—unless a new batch of pen mechanisms has just arrived, and then I'm just as likely to lose them. Disassembling a completed pen usually means salvaging the clip and nib cone and turning off the wood, sanding excess glue off the tubes and starting over. There are a bunch of parts. I number each pen blank half with a number and the letters "A" and "B" to match the grain…usually. Square end? You mean they aren't that way automatically? Marketing, hmmm, take 'em to a show and hope they sell themselves?

Well, you get the picture. However, Thomas C. Hutchinson of HUT Products for Wood has come to my rescue and to yours as well. He has just published a fairly comprehensive booklet entitled *The Pen Turning Manual* that addresses all of these questions and several more. The text is clear and well written and an obvious testament to the months of planning, research, writing, re-writing, and design that went into this endeavor. Drawings are well thought out, accurate, and clearly labeled. The typeface is easy on my tired bifocal-aided eyes.

To illustrate the unusually open-minded philosophy of the author and his concern that all turners, whether they are using his products or not, have available to them good, sound information, I quote from his "Summary:"

"This manual is written with the full recognition that there are many ways of approaching most of the steps in the pen-making process. Those that I have chosen to include have all been tried and proven over time. Many of these are ideas suggested by my customers. I'm grateful for their input and patronage.

"Other workable hints and new techniques are always welcome. [What a novel approach!] If you have any suggestions, please let me know. I will incorporate them into later editions of this manual to help make pen turning fun—and profitable—for beginners as well as experienced craftsmen."

So, this is a really great booklet to have. And, yes, Tom Hutchinson does use some of it to promote his own business. So what is lacking? Well, there are a couple of things that I would like to see in later versions. First, I would like to see a more comprehensive listing of sources of pen parts/kits, pen material sources (wood, Corian, Avonite, cellulose acetate, etc.) and instructions on turning pencils, roller balls, fountain pens, and the new Parker and Mont Blanc styles of writing instruments. But perhaps that will come in the promised later editions.

I highly recommend this manual to all pen makers and for those just getting started. And I commend Tom on this latest endeavor.

—Dick Gerard, Indianapolis, IN

Mushroom Boxes

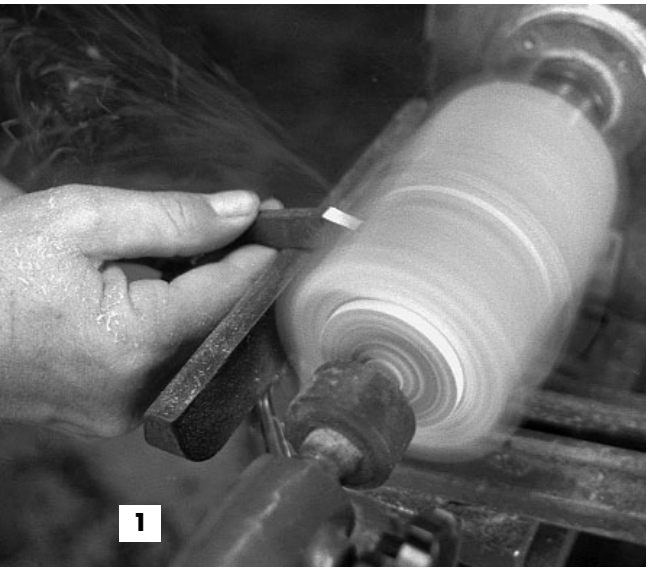
Branches sprout a form found at your feet

JAMES F. POPPELL

Since my first turning days in junior high school, I have been making boxes of one sort or another. At first they were very crude, then they seemed to be copies of someone else's design. While searching for a shape I could call my own, Ray Key came through Texas doing demos for the local chapters. He talked about how his box styles came from the world around him—an English mailbox, the pills one takes everyday. Shortly thereafter while sketching on my scratch pad, a mushroom shape evolved. With a few refinements, I felt this was a workable design.

In a lot of my work, I incorporate contrasting textures, combining polished surfaces and maybe some carving or natural surfaces. So in my mushroom boxes I wanted to utilize some natural surface around the outside edge of the top. Material selection then became a major concern.

Most of my work comes from local materials which I harvest myself; therefore, I have a good working knowledge of the properties and availability of Texas hardwoods. I decided to use branches 2 to 4 inches in diameter for my boxes, with the natural outside forming the outside edge on the top of the mushroom. I knew that there were several woods stable enough for this. Mesquite and Texas ebony, both members of the acacia family, grow with internal checking but dry with little or no shrinkage, and live oak, which contains none of the open pore structure of white or red oak, is also quite stable, though it checks badly during drying. All of these timbers evidence little or no seasonal movement once they are dry. Working whole branches into mating parts, top and base, stability is a major concern. The other is dealing with the checks.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Ever since I started working straight from the log, what to do with the checks and cracks has been the puzzle. At first I used glue mixed with the finer shavings from the piece I was working to fill the cracks. While this helped hold the piece together, it just didn't look quite right, almost but not really matching the surrounding wood. Then I used ebony dust, which looks exceptionally good on lighter woods, adding a vivid black line, but doesn't look that good on darker woods. Then in 1988, while visiting a local blacksmith friend's shop during the modification of several hundred feet of bronze handrail, a new material presented itself. Piled around his bandsaw, where he was working the bronze, was 15 to 20 pounds of bronze sawdust. After some experimentation, I found that by sifting this material to obtain the finer particles, and combining these with cyanoacrylate glue, I could get a uniform filler leaving few gaps or voids. The coarser particles I mix with ebony dust for use on lighter woods and to fill most large voids, topping them off with a layer of the finer bronze.

First I clean out the cracks using a mini die grinder with a fine-pointed diamond burr. I then pack the cracks full using a pencil eraser to minimize voids. I do this prior to adding thin Hot Stuff glue. The glue reacts with the bronze, setting up in 10 to 20 seconds. No accelerator is necessary. Once set, the filler can be worked much like wood.

The first stage in making one of these boxes is to select a branch section 5 to 6 inches long. I usually try to incorporate some unique feature (a branch stub, worm holes, crotch figure) in the top of the box. Keeping this in mind, I carefully cut the branch to usable lengths on the bandsaw. I mount these sections between centers on the lathe and turn a shoulder on each end for a Nova chuck to grip. I also make a parting cut to mark the division between top and base at about one third the length of the blank (**Photo 1**).

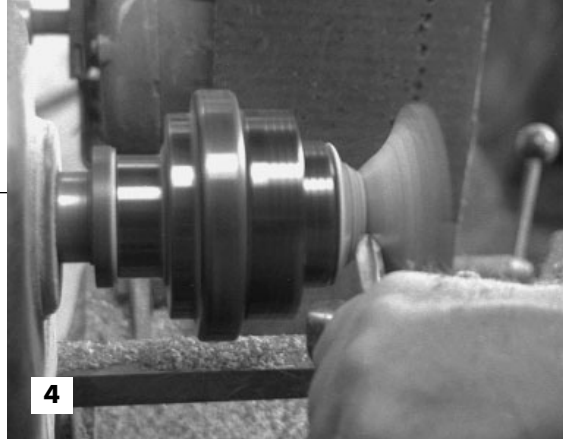
I chuck the top portion first and hollow the underside. Then I stop and clean out any checks along the outside edge and fill them with the bronze (**Photo 2**). Back on the lathe, I sand the outer half inch or so of the underside to a final finish. I do this before turning the inner area of the top so I don't round over the edge between the inner and outer portions of the top's underside.

Now I turn the inner portion of the top, first using a $^3/_8$-inch gouge to remove material quickly (**Photo 3**), then refining the surface with a $^3/_8$-inch x $^1/_2$-inch roundnose scraper. I then clean out and fill the cracks with bronze, again, remounting to turn down the filler with the scraper. I polish the inside with Scotchbrite, leaving any tool marks so there is no doubt that the box was hand-turned, finishing up with a coat of wax.

Next I turn down the topside of the top as close to the chuck as I can get (**Photo 4**). I use a piece of cardboard painted black on one side and white on the other behind the spinning wood to help highlight the shape. I can also see the thickness of the outer edge this way. Sometimes the white side of the cardboard works better, sometimes the black side does. Short of parting off, I set the top aside until later.

I now chuck up the base portion and, using a $^3/_8$-inch gouge, rough out the outside and true up the end (**Photo 5**). With a set of calipers I transfer the inside dimension of the top to the end of the base (**Photo 6**), then bring the outside closer to final size and create the lip to fit inside the top. I leave the lip slightly oversize for the time being and fill the checks in the outside, lip, and end with bronze (**Photo 7**).

To hollow the base I begin with a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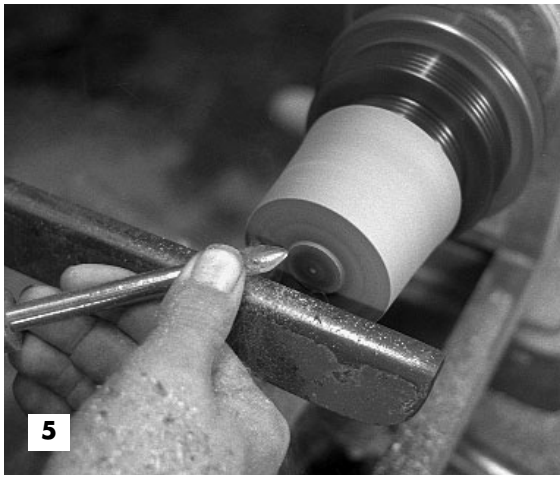
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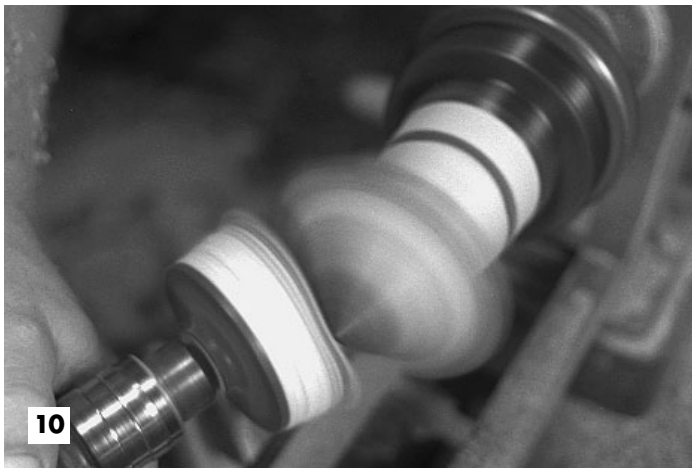


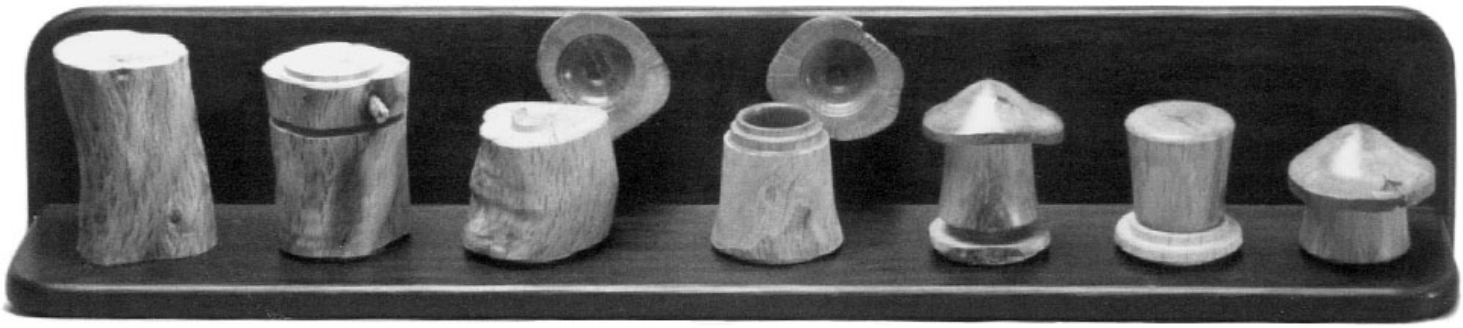
3/8-inch spindle gauge, using it like a spoon auger to remove the center and establish a depth. Then with the gouge upside-down in what may be called the "Raffan cut," I enlarge the cavity (**Photo 8**). Then I refine the inside, using a roundnose scraper, clean and fill and checks, and turn them down, again, with the scraper. I polish with Scotchbrite and apply a coat of wax.

I turn the lip down to a tight friction fit with the top. The fit must be tight enough to hold the top while the outside is finished. If the fit is a little loose, sometimes it can be tightened adequately by moistening the lip to raise the grain and create a seal. With the top in place, I use my 3/8-inch gouge, taking light cuts, to turn off the stub left from the chuck (**Photo 9**). I fill any checks and power-sand to a final finish with a stiff foam pad (**Photo 10**). I part off the base and turn down the remaining stub for a friction fit with the inside of the base, so I can reverse-chuck it and true up the underside, giving it a slight recess so the box will sit flat (**Photo 11**). I fill and sand the underside, then I use a sharp ice pick to inscribe a series of rings in the underside for decoration.

For a finish on the outside of the box, I apply two coats of Waterlox about five minutes apart to get good penetration. These cure for 24 to 48 hours. Then I buff the box with a cloth wheel running about 3500 rpm using no compound. I apply a second thin coat of Waterlox and let it cure for a about a week before buffing again.

I like to keep my boxes around for four to six weeks to make sure that no hidden stress in the wood causes them to crack. Then they are ready for a gallery.

James Poppell is a professional turner in Belton, TX.



The steps in making Poppell's mushroom boxes, from branch to finished piece.

DECORATIVE MUSHROOMS

Another branch idea

FRED W. HOLDER

IT'S EASY TO GET INTO A RUT WHEN turning wood, or anything else for that matter. I was casting about for something new and began looking through back issues of *Woodturning* (the British magazine). Issue No. 26, October 1994, had just the project: mushrooms that could be turned from limbs with the bark still on. They look neat and they're fairly easy to turn. A parting tool and a small gouge does most of the work. Something to undercut the top is helpful—I use a small roundnose scraper. I've turned a dozen or so now. It's a good way to use up small limbs from about $^3/_4$ inch up to 2 inches. I have turned one out of a $^3/_8$-inch twig and another from a 3-inch-diameter branch.

I don't try to copy nature with my mushrooms, just turn something that looks familiar and will be decorative. They can be placed in a flower bed or planter box or simply on a whatnot shelf.

To begin the project, cut a piece of a limb to about 3 to 6 inches in length and chuck it up in your lathe. If you have a four jaw chuck such as the Nova, which I use, you can chuck the limb up directly. If you don't have one of these chucks, then attach a scrap of wood to a faceplate and glue the end of the limb to the scrap, as close to center as possible. It really doesn't matter what method you use to hold the stock, but it can't be mounted between centers, it has to be faceplate-mounted.

I've used a Nova chuck on my Record RPML-300 Mini-Lathe (see page 41) to turn most of these mushrooms. The highest speed (2400 rpm) makes cutting the phantom easier.

Begin turning the cap. I use a long-and-strong $^3/_8$-inch Sorby spindle gouge. You can look up mushrooms in a book and copy their shape or use your imagination as I do. Completely shape and sand the cap before going any further.

Now cut a slot with the parting tool just below the cap; leave some bark on the edge. Don't cut in to the final diameter of the stem yet. You want to be able to undercut the cap a little, and you need stock to support that cut. Part in with two more grooves: one to mark the bottom of the base, the other to mark the top of the base. Don't cut these too deep yet either.

Now start cutting away the material between the groove below the cap and the one above the base. As you work it down, undercut the cap. I've found a small Sorby $^1/_4$-inch roundnose scraper works very well for this operation. You can use the gouge, but you can also have a catch and ruin the job.

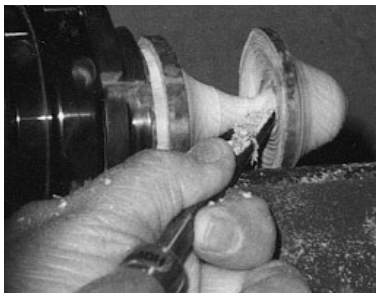
Continue turning down the stem until it is the diameter you want to balance your cap. I turn mine down to about $^1/_4$ inch, smaller on smaller mushrooms. I then use the skew to plane the top of the base and to cut a recess at the base of the stem. I generally let the base of the stem swell a little and then round this into the recess for a nice transition.

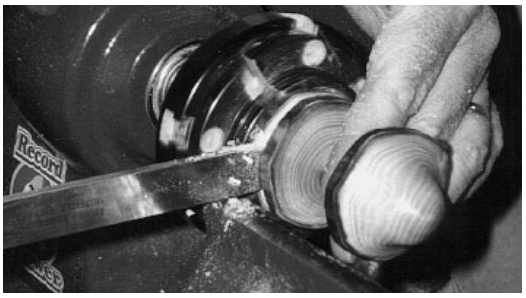
I've used regular sandpaper to sand the stem, under side of the cap and the top of the base; however, a bit of carelessness will get you a knocked knuckle, so I recommend using the foam sanding blocks available from The Sanding Catalog (800/228-0000). They come in several grits. They can be set on the tool rest and slid along the stem to sand the bottom of the cap, the stem, and the top of the base. You will learn to appreciate them.

I generally apply finish before parting off the mushroom. I've used wax, salad bowl finish, and Bonnie Klein's polish (equal parts of shellac, alcohol, and linseed oil). Bonnie's polish works real well.

When parting off, I slip two fingers of my left hand in between the cap and the base. Let the stem turn smoothly between the fingers and part off with the right hand. Take care when doing this; we don't want any damaged fingers. I then finish the base on an 8-inch disk sander. If you don't have a disk sander, lay a sheet of sandpaper on a smooth surface and hand-sand the base. It works the same way, just takes a little longer.

And now you have a wooden mushroom that looks almost real. Place it in a patch of mushrooms and it will be hard to tell which came from the lathe.





Undercut the cap, left, and turn down the stem to about $^1/_4$-inch diameter. To part off, right, carefully straddle the stem with two fingers of your left hand.

Fred Holder, a writer and former printshop owner, turns in Camano Island, WA.

The Tree Within

Returning a burl to its former life

PHIL PRATT

Of all the great moments I've enjoyed at the lathe, the best have always involved a burst of spontaneity. The gouge is peeling away another curly ribbon when suddenly a vision of something entirely unexpected drifts into my consciousness. As the wood spins and the gouge probes into places I wasn't expecting to go, my mind's eye fast-forwards to reveal a turned object unlike anything I've done before. Such was the genesis of these little trees that emerged from a big tree.

A turning friend and I had discovered a large mulberry tree covered with burls ranging in size from a grapefruit to a volleyball. The property owners considered the tree a nuisance and were delighted when we offered to fell it and drag it away.

I worked my way through more than a dozen of the burls, making the usual array of spiky-topped vessels, but when I mounted an oval-shaped burl between centers and started shaping a chuck fitting at the foot, I stopped the lathe, pondered the situation, and had one of those all-too-rare moments of revelation.

Why, I reasoned, should I waste much of this oblong, bud-encrusted dome just to make another round vessel? So I let my instincts guide me as I began plunging with my Stewart tool up toward the crest of the piece, creating a long sweeping curve. I wanted to maintain the jagged, natural edge of the burl and display the beauty of its curly grain and color, so I reversed the piece into a chuck and peeled away the top half-inch of the dome.

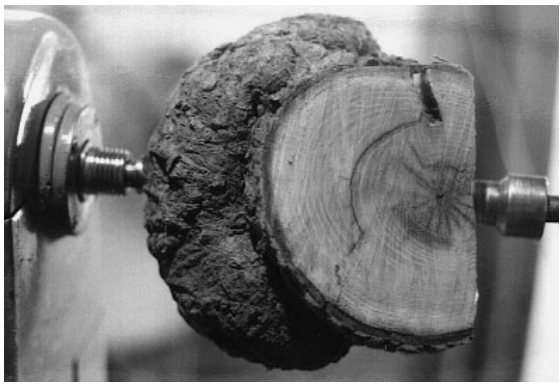
It was then I realized that this chunk of cankerous mulberry now yielded a reflection of its earlier life overhanging a parking lot on Western Boulevard. What I had here was a little tree. It was a bit impressionistic, but a tree nonetheless.

On my next attempt I adjusted the axis to put the burl off balance and thrust the "crown" of the tree off to one side. I used a shallow-fluted gouge with an elongated side grind to slice away the budtops. I found it wise to use the tail center for additional support while sweeping the gouge from the center out to the bottom edges of the crown. To reverse that process, and sweep from the outside edge up to the top, not only leads to tear-out on this irregular surface but risks a nasty snag that could send the whole thing into orbit. It requires firm manipulation of the tool to maintain a shear-scraping action through this interrupted cut. Remember, the gouge is often cutting more air than wood. By the same token, it's best to do most sanding by hand with the lathe stopped and to use a knife to pick away the bits of bark stuck between the budtops. This gives the "leaf clusters" of the crown depth and texture.

This foray into the miniature forest has helped me explore a variety of options for future turnings, all of them involving an odd-shaped natural-edge perimeter with either a swooping pedestal or a traditional vessel form in the middle.

It may be paradoxical, but I find in woodturning that the creative process involves a balance of both freedom and constraint. Each blank, with its unique shape, size, and defects, places limitations on the ultimate form, while those same limitations often provide a roadmap to a range of new possibilities. I find that when the shavings start to fly, all preconceived notions about the ultimate destination should fly with them.

Phil Pratt is a professional turner in Greensboro, NC.



The burl deciding whether to become a vessel or to return to its tree form.

The Stewart tool shapes the "tree's" trunk and its transition to the crown.

The finished burl tree.

A Family Feeling for Trees

The work of Ed and Philip Moulthrop

ELLEN AUGUSTINE

Most people in the woodturning community know that Ed and Philip Moulthrop are father and son and that both are accomplished woodturners. Named a Fellow of the American Craft Council in 1987, Ed Moulthrop's work is in the permanent collections of nine museums, including The Museum of Modern Art and The Metropolitan Museum of Art in New York. Personal collections of Ed's work include those of such diverse people as Bill Blass, David Rockefeller, Steven Spielberg, Queen Beatrix of The Netherlands, and Prince and Princess Aga Khan. Philip's work is in more than eight permanent museum collections. Both Philip and Ed have bowls in the White House collection.

I wanted to learn more about the similarities in their designs and techniques as well as the differences. In addition, I wanted to get to know both the Moulthrops as people. I took advantage of their being here in Arizona last April for the opening of their joint show at the Joanne Rapp Gallery/The Hand and the Spirit in Scottsdale to arrange an interview.

I arrived early at the gallery on that day. A client of Ed and Philip's was in the gallery looking at the pieces on display. I talked to him about how their work compares and how it might be distinguished. After several false starts he admitted, "I guess I can't really explain the differences or how I know whose piece it is, but I always know. Even before I look at the name tags next to the pieces, I know. There is just something about the shapes."

Ed, now in his seventies, began carving wood at the age of eight. He owned his first lathe at fourteen or fifteen years old and has been turning wood ever since. He earned money to buy his lathe by delivering magazines. As Ed noted, there were not very many books available then about woodturning. After graduation from college, he became a practicing architect and taught architectural design classes at Georgia Tech. As an architect, he designed Atlanta's civic center. Twenty-two years ago he made woodturning his full-time vocation.

"Consistently and from the beginning," he said to me, "I have always loved wood. The revealing of the natural wood grain and the unusual features of the wood—this has been the one continuous refrain of my work. As a result, I don't do some of the things that other people do—such as painting or carving on my turnings." He feels that additional embellishments might conflict with the grain or color of the wood he uses. Even though Ed has done woodcarving and large abstract wood sculptures in the past, he now concentrates on turning. "If someone took my lathe away from me," he said, "I would go back to another way of working with wood. I would not work with any other media such as alabaster or clay."

Philip was an award-winning photographer before entering law school. He is now a practicing attorney, in Georgia, as well as a woodturner. When questioned about his Dad's influence on his woodturning, he commented, "I remember looking

Paul Beswick

Ellipsoid bowl, 13¾" dia., in black-streaked Georgia yellow pine by Philip Moulthrop bears a family resemblance to his father's work.

out the window when I was a young boy and watching my Dad work at the lathe. Even though I didn't join him then, I have always liked working with my hands." According to Ed, "Philip has always been creative, with a natural feeling for design."

When asked to compare their work, Ed responded, "Our work uses the same southeastern woods and varnish finish techniques that we have gradually developed. But, people who know our work well are able to tell it apart easily. One important difference, currently, is the shape of the bottom portions of our bowls." Philip's response to the same question noted subtle differences in the shape of his pieces. Over time, he has developed more lift at the base of his bowls.

Both turn the woods (fifty-five varieties so far) found in the southeastern United States. Ed feels that the local area has so many beautiful woods that it is not necessary for him to look elsewhere. Philip mentioned that they are both becoming even more selective about the color or grain in the wood they use. The public has come to expect more color and more highly figured pieces, he feels, as they are exposed to better and better wood choices in everyone's work.

While some of their bowls do have similar shapes and both men turn very large bowls, they each have pieces that are unique. In the last several years, Philip has been working with small pieces of wood, typically end-grain cross sections of branches, embedding them in a "peanut-butter like" mix of resin and wood dust (photo, facing page). Ed has recently completed refinement of his chalice shape (also pictured on the facing page) which he introduced this year. He describes the foot of this chalice with it's signature set of rings as an "art-deco" base.

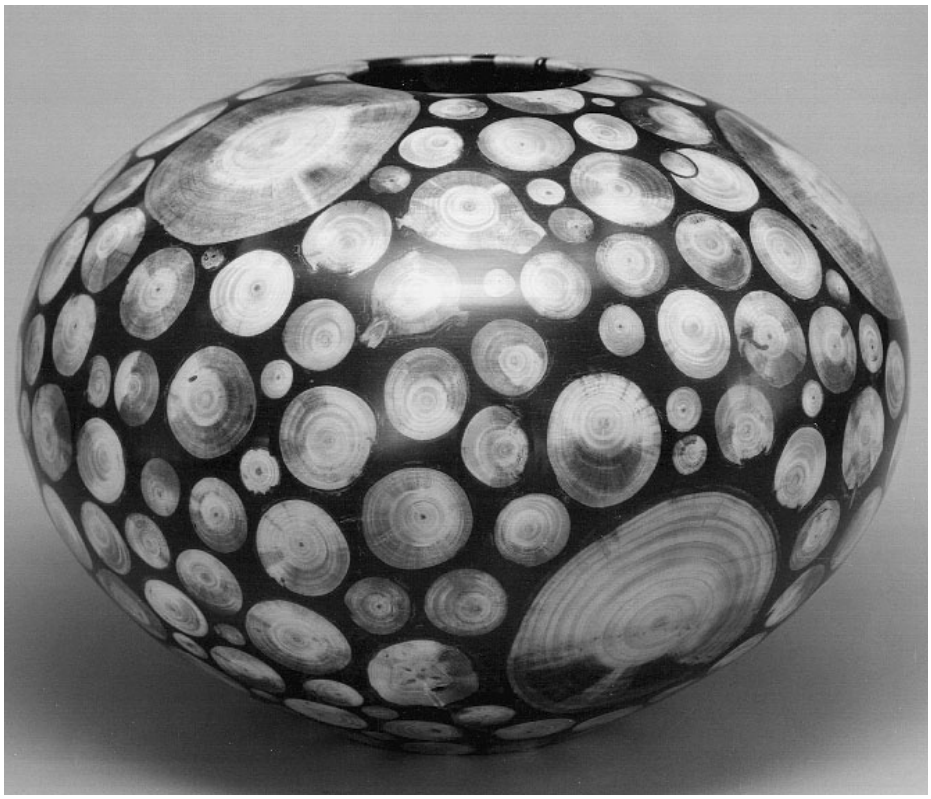
Ed Moulthrop readies a 56"-high tulipwood goblet for trimming and sanding.

They both feel that changes in all areas of their work have been evolutionary rather than revolutionary. It sometimes takes several years for new shapes (such as Ed's chalice design), modifications in their processes or new ideas (such as Philip's work with resin) to appear in the pieces offered to clients.

When asked about current experimentation, Philip described his process for developing new shapes. He lets ideas form first, then draws them on paper. If the shape looks the way he has seen it in his mind, he might create a wooden model. If the resulting item is not as pleasing as he first visualized it, he will discard that shape idea completely or hold the model aside to go back to it later. Several attempts at refinement over two or three years could be needed before a shape finally works.

While Ed feels that it is important to periodically offer his clients new designs or modifications, he doesn't achieve changes by elaboration or embellishment. As Philip put it, radical change just for the sake of change is neither necessary or desirable, adding, "If you change form too much, too soon, you could lose sight of the best form." Ed noted, "Even Picasso took nearly twenty years to change form."

Both Ed and Philip use a polyethylene glycol curing process on all their wood. PEG is a waxy substance that is highly water-soluble. When green wood is soaked in a solution of PEG, the PEG replaces the bound water in the wood cells, stabilizing the piece in its swollen state. The wood will not shrink or warp or crack as it dries. Philip noted that it is almost a necessity to use PEG with the very large pieces they turn. Ed said, "If PEG is properly used, we feel that most woods we use have



John E. May

As similar as it sometimes seems in terms of scale, shape, species and technique, the distinctions between the work of Ed and Philip Moulthrop can be pronounced. At left, Ed's ashleaf maple chalice with art-deco-beaded base, 20" high. At right, Philip's Mosaic Bowl of white pine and wood/epoxy binder, 17" dia.

proven, over time, to be 100 percent stable—with not even small changes in dimensions. Tulip poplar is one exception to this. It can be erratic and inconsistent in results." Proper use of PEG is an exacting process, involving the monitoring of immersion times, specific gravity, and temperatures.

Ed does not recommend the use of PEG for beginning woodturners, especially in the first year. It takes a great deal of research and dedication to become proficient with it in various woods. He feels that it would be too easy to become discouraged and turned off to woodturning altogether.

Using PEG also involves special finishing concerns. Water-based finishes are not compatible with PEG, nor are Danish oils or the polyester resins used for boats. While Ed and Philip do not divulge the details of the proprietary finish techniques that have taken twenty years to develop, Ed did mention that they try to achieve the most fingerprint-resistant finish possible. He added that clients like to pick up the pieces for close examination but do not want to have to wipe off fingerprint smudges.

Philip and Ed both still use the same general method, techniques, and tools described in the section about Ed Moulthrop in Dale Nish's book *Master Woodturners* (Provo, UT; Artisan Press, 1985). Techniques vary only to accommodate the type of wood being used. Even though their homes are only twelve miles apart, each has his own shop equipped with his own lathes and tools that each individually built. Both men have learned the blacksmithing necessary to achieve this. They spend about fifty percent of their personal, hands-on time for each turned piece in final shaping, sanding, and finishing. This does not include any of the delays that occur during prep work, such as the green wood piece sitting in the PEG vats.

Since Philip had been a photographer for ten years prior to entering law school, I asked if he did all of the photography for their pieces. Ed said that he did much of his own work. Philip does all of his work that uses the smaller film formats. Neither of them does the large-format photos for magazine covers and other specialized uses.

At Ed's shows, his wife, Mae, can be found giving explanations about the woodturning process and the development of the individual pieces. Philip's wife, Renée, helps explain the work process also and has recently begun helping with the paper work.

My final question to Ed was whether he had any further words of wisdom to offer beginning woodturners other than the suggestions related to PEG. He had two thoughts to offer. First, "be very interested in what you are doing—you won't do well unless you love it." Finally, "if you are thinking about woodturning as a primary vocation, it helps to be independently wealthy!"

Ellen Augustine is a woodturner in Mesa, AZ.

NORTHUMBRIAN SMALLPIPES

Tools and techniques for close-tolerance turning

JOHN LIESTMAN

Author's Northumbrian smallpipes, a delight for eye, ear, and fingers.

AS A MAKER OF Northumbrian smallpipes (a small, quiet, highly refined bagpipe native to the northeast of England), I turn mostly African blackwood, imitation ivory, and brass to very close tolerances, using standard woodturning equipment plus some odd tools and techniques. A finished "turning" will contain some 120 individual pieces, mostly attached only by friction, which are the result of turning, filing, forging, milling, boring, and sewing.

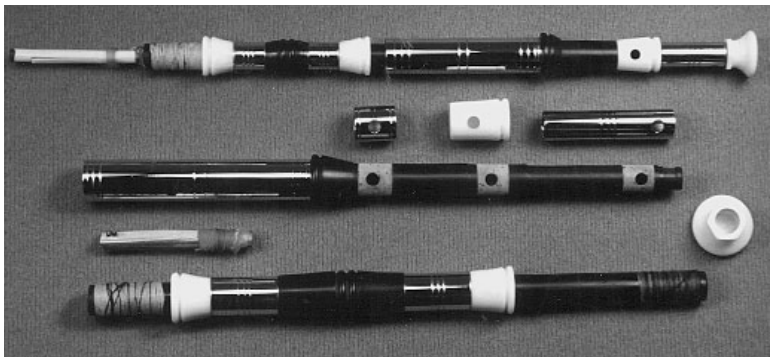
The instrument consists of a bellows under one arm which supplies air to the bag the player squeezes under the other arm to blow air through the reeds. The reeds (which actually make the sound you hear) are in the bag-end of the *chanter* (the melody pipe which the player fingers, about 12 inches long, with finger holes for some notes and metal keys for others) and in each of the four *drones* which make the constant accompanying sound associated with bagpipes. *Stocks* connect tenons on the bag ends of the chanter, drones, and air-supply tubes to the bag and are protected from splitting with ferrules. Each stock/tenon fitting is made airtight by wrapping the tenon with oiled hemp thread, allowing separation of any connection for maintenance. The chanter and drones have bores ranging from $^{7}/_{64}$ to $^{11}/_{64}$ inch diameter, similar to the bore of a flute except much smaller. Each drone is two main pieces, one of which slides into a counterbore in the other with a long hemp-wrapped tenon, allowing the drone to be lengthened or shortened for tuning, plus a series of *tuning beads* (rings of metal or imitation ivory that rotate around a band of cork imbedded in the drone) which allows the player to select different accompaniment notes to match the key of the music.

Unlike flutes and other wind instruments, when all tuning beads, key, and finger holes of a smallpipes are closed, the instrument is airtight and makes no sound. This airtight quality is critical to the working of the instrument and offers quite a challenge, given all the regular and sliding tenons, twisting tuning beads, and spring-loaded keys.

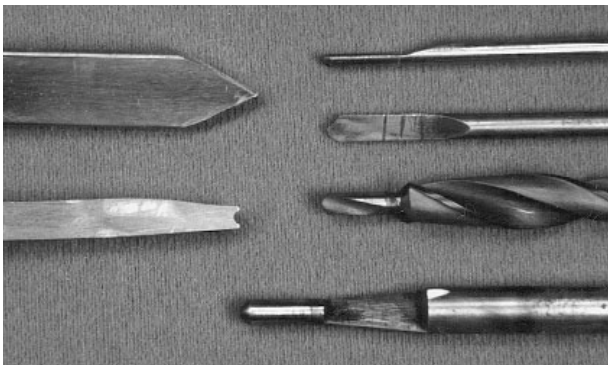
I have set up my Myford ML8 wood lathe to be quite high for an easier view of the small pieces being turned and have reduced vibration by placing the motor on a sand-filled pedestal separate from the lathe bench connected by a link-type drive belt at a low belt tension. Good dust collection is critical, to protect against the toxins found in all rosewoods (a blower mounted in a box which pulls air through furnace filters, placed right behind the piece, works very well for the fine dust produced).

Making a good-sounding chanter and drones requires boring very straight, smooth, and accurate holes roughly $^{1}/_{8}$ inch in diameter down the middle of a 12-inch long piece of very hard wood. After I rough-turn them to within $^{3}/_{32}$ inch of their final shape, I bore the pieces in the lathe, using a self-centering chuck, a three-wheel steady rest, and shopmade D-drills. To make these drills I take a piece of drill rod, round the end to make a hemisphere, file that end to half its original thickness over the last $^{3}/_{8}$ inch of the rod, relieve what will be the non-cutting edge of the tool into a sort of parrot-beak shape, and finally harden by heating and oil-quenching. The drill is guided by a tailstock chuck the first two inches and hand-fed after that. All drilling is done very gently and the bit is removed after each $^{1}/_{8}$ inch of progress to clear the swarf and clean the bit (allowing resins to build up on the bit will cause it to squeak and howl and stray off center). This procedure will drill through 12 inches of blackwood without going off center by more than $^{1}/_{32}$ inch, leaving a polished bore.

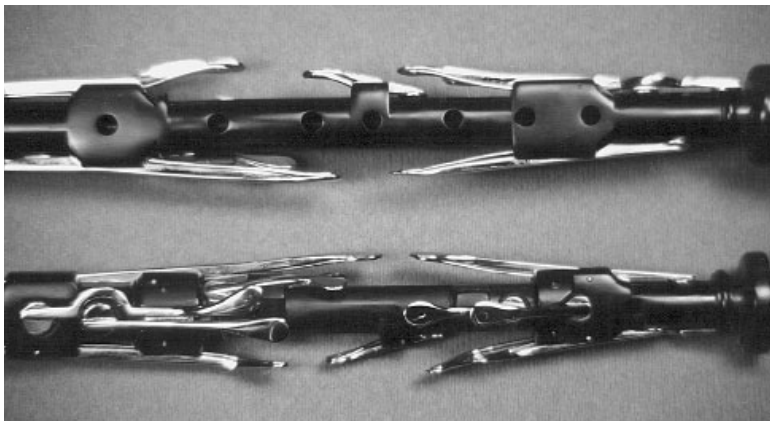
These pipes traditionally feature small beads as a decorative element. I make $^{1}/_{16}$- to $^{3}/_{32}$-inch beading tools (form tools) by drilling a hole in tool steel (annealed by heating), cutting and grinding to leave half the hole on the edge of the tool, relieving the top of the tool to produce an 80-degree face angle, and rehardening. The inside of the drilled hole should be buffed with tripoli using a miniature felt buffing wheel to remove any



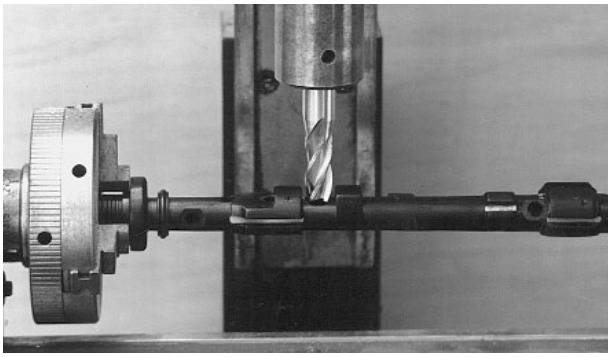
Small drone (assembled) and large drone (exploded).



Clockwise from upper right: D-drill, side view; D-drill, top view; counterbore drill; reamer for seating reed; beading tool; and parting tool.



Close-up of two chanters from front and back, respectively.



Milling key-pad seats on Sherline vertical mill.

roughness that would transfer to the work. Then the tool is sharpened on the top, not the face. I use these tools gently as scrapers, with a bit of oil to prevent tearout on the tiny beads.

I do most of my turning with a $^{3}/_{16}$ x $^{3}/_{4}$-inch parting tool, hollow-ground to a 30-degree angle. This more pointed grind gives cleaner cutting than the standard angle and allows the tool to be used as a small yet stiff skew, a straight scraper, and a parting tool. I use the side of the tool to face the shoulders on the chanter and the ends of all pieces. Grinding the tool on a 120-grit white wheel, keeping the top of the lathe tool rest very smooth, and taking light cuts in cutting or scraping mode allows me to begin sanding with 400-grit paper in most cases. I cut all of my tenons by parting in to just over finished size with parting tool and calipers, then shaping to final size with the same tool in skew or scraper mode.

The chanter is turned to a gentle overall taper, leaving "doughnuts" where each key mount will be. The chanter is then mounted in a small vertical (Sherline) mill with an indexing attachment. The key slot is milled, the other unneeded parts of the doughnut are milled away, and the shape of the remaining key support is refined to gentle curves by filing. I also use the mill to cut the beads on the stocks and ivory parts into hexagons, which are my trademark decoration.

I submerge the wood pieces in a 10-percent tung oil and mineral spirits mixture for two days to allow maximum penetration, rub them dry, and polish with a soft cloth. The player occasionally oils the instrument with a mixture of almond, olive, and wintergreen oils to give the best musical tone and to keep the wood stable with changing weather, helping to keep all of the connections airtight.

The cast polyester resin "ivory" pieces are drilled to fit their tenons and mounted on mandrels made from drill rod, gently tapered to provide a snug fit. I use a light scraping cut with the tool just below center to turn the ivory. A vacuum mounted just behind the turning is essential, to prevent the long strands of cutting from wrapping around the workpiece. After sanding to 600 grit, metal polish on a soft cloth applied to the turning work produces a nice lustrous finish. The decorative grooves and coves on the ferrules ($^{1}/_{64}$- and $^{1}/_{32}$-inch-thick brass tubing) are turned with the same techniques (masking tape helping to hold the brass on the mandrel), finished with tripoli and rouge buffs, and finally nickel plated.

Making the keys, springs, reeds, bag, bag cover, and bellows present their own challenges which are beyond the scope of this article, but suffice it to say that they each have their own peculiarities. For me, this is the most rewarding type of woodturning. After all, how many other turned projects can make people smile, cry, and dance?

John Liestman, a "serious amateur" maker of Northumbrian smallpipes, lives in Houston, TX.

Turning Goes to High School

Turning-on the next generation

KEN KEOUGHAN

At the March meeting of the Central Florida Chapter of the AAW secretary Jim McNabb polled the group on how many would volunteer to demonstrate or help demonstrate woodturning to art classes in the Central Florida school systems. Several hands were raised. He thanked the group and the next order of business was put forward. Dick Codding, president of the chapter, had the information and encouragement he needed.

Almost a year earlier, Codding and two other Central Florida woodturners had been asked to exhibit their work at the Mt. Dora Center for the Arts in a five-person exhibition. Another of the five was artist Susan Weinstock, an accomplished painter and high school art teacher. She was so impressed with the turned wood pieces that she asked Dick if he could participate in showing young people, aspiring artists in her art classes at Mt. Dora High, what woodturning was all about. Thus the seed was planted.

Germination took some time… several months. Nearly a year later she approached Dick again. Her advanced-placement studio art students, six or seven boys and girls in their junior or senior year, needed two three-dimensional pieces of work for the completion of their portfolios, a matriculation requirement. One piece needed to be extra special. They agreed that Dick would come to a class session at 3 p.m. on the next Tuesday afternoon.

Codding is absolutely irrepressible about woodturning. He flat out loves it, wonders why the rest of the world doesn't turn wood—the perfect mentor or coach for young people. He appeared before the group of youngsters, only one of whom had ever heard the expression "woodturning." The first evening he did a fast, easy demonstration on his Carbatec miniature lathe. "It was going so so," he says. Then he showed them a couple of his prize pieces, Best-in-Show, Purchase Award at the Winter Haven, Florida, Art Show, for instance. These generated a nodding, "Uh huh," kind of response. "What did it," he says, with a grin, "was the cowboy hat." Johannes Michelsen had done a program for the Central Florida Chapter and Dick, inspired, had gone home and turned his own cowboy hat.

"Man, once they saw the cowboy hat, I had 'em." It was agreed that he would provide tools, materials, safety equipment and hands-on instruction for each of the students. Classes were to be from 3 to 8 pm for three more sessions. They extended well beyond 8 pm most evenings.

In terms of safety, students wore face shields, tied their hair back, no long loose sleeves, etc. Primary tools were small scrapers. Wood was seasoned. Complete cleanup was mandatory. "The custodial crew weren't too thrilled about our being there that late in the first place," said Codding. "We certainly couldn't leave a mess."

Planning was a must. The students realized on seeing the demonstration that wood doesn't just pop on the lathe and say "do me." All agreed that a small goblet would be a satisfactory and satisfying first project. Each student had to submit a workable profile of his or her workpiece and a good sketch of its finished appearance. If the plan presented complex turning problems, Dick explained it to them and suggested a modification to the design. Basic to the project was that each student was to do his or her own piece. Dick was to guide them, not do it for them. Once all the plans had been approved by Susan Weinstock, the turning began.

"Some were more tentative then others," Dick says. "Kera McGhee's Dad had a lathe and she'd seen him use it, so she was very enthused and took right to it. Another girl, Carrie Cullinan, was genuinely frightened of the lathe. But we kept the drive belt loose, showed her the ins and outs, explained the value of the safety gear and procedures, and she finally got going and did fine."

Codding supplied pre-turned cylinders of about 6 inches in length and 3 to 4 inches in diameter. The students selected their own pieces from a box full. Most of the wood was camphor or Brazilian pepper. Both can be very colorful and manageable to work.

After turning came sanding and finishing. Some students wanted color, others preferred natural wood. Nathan Bush actually dyed his with black ink. Carrie topped hers with a glazed clay cup.

As Dick got to know the students and they got to know him, a wonderful teaching/learning environment evolved. According to Susan Weinstock, "My kids are still talking about it. It was an opportunity to which they are not exposed. We don't have industrial arts.

"The students had to think in the round. Understand grain. Think three-dimensionally. Feel the wood. See the piece take shape as they worked it. Working like this with wood belongs to our culture, our heritage, our roots. If I had the money and the skill to do it, I'd include woodturning in my classes every year."

Susan invited other visual art educators from other schools and other

Dick Codding, left, helps Carrie Cullinan through a cove. At right, Nathan Brush gets into hollowing his goblet.

counties to come in and observe. They liked what they saw: an encouraging and energy-filled mentor with kids excited and eager, not doggedly plodding through the last project of the year.

The program was solid. It was well planned. It included, in fact, it focused on the basics: safety, planning, design, development of skills...then results. It was carried through methodically from start to finish, not necessarily an easy sell to adolescents at the end of a school year. Each student met the three-dimensional portfolio requirement. Each liked what he or she had done.

Will the students take up woodturning? Maybe. Carrie Cullinan told me she would like to have a lathe of her own. Nathan Bush said, "I think woodturning is something I could really get into. We learned so much about tools and about the woods we used." For sure, they will perceive woodturning as art and appreciate the process as well as the results.

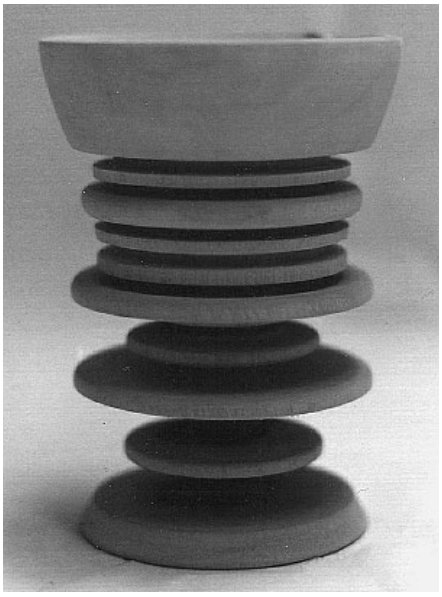
Will the program continue? "I sure hope so," Dick says, with intensity. "Woodturning has turned into something taken up as a hobby mainly by middle-aged men. We can't afford that. It's got to be passed on and it has to be passed on to people in their formative years."

As it stands, visual art educators from three other counties have expressed interest in providing a similar program within their school systems. The potential for expansion is enormous. "We may expand from Mt. Dora (population 7,600) to Orlando, Daytona, and other population centers in three counties," Dick says. Does this mean every school in every city? No. Are there guarantees of success? No.

But meantime this year, Dick has made demonstrations under a county-wide school system program called "Art Explosion." Approximately 450 promising art students in fourth and fifth grade participated. Nine fifteen-minute demos were necessary for them all to get up close enough to see.

It is clear that one individual in one chapter of the AAW has been stunningly successful at spreading both word and feeling to a perfect target audience: educators and pupils. Members of the Central Florida Chapter are prepared to help in the expansion of this effort.

We all know that liability laws, insurance rates, and other priorities are eliminating working with wood, let alone a niche like turning wood, in many of our school systems today. "If we all love turning wood, we have to make some sort of effort to pass it down. That's what it's all about," Codding says. And he's right!



Two of the completed goblets, satisfying course requirements for a 3-d project.

Ken Keoughan is a retired advertising manager who turns in Mt. Dora, FL and Friendship, ME.

HACKBERRY

A berry fine wood to turn

WILLIAM L. STEPHENSON, JR.

THERE ARE ABOUT SEVENTY SPECIES OF hackberry scattered across the temperate and tropical regions of the world, but they are only of minor commercial importance for the production of lumber. Of the five species of hackberry in the U.S, only two species, common hackberry (*Celtis occidentalis*) and sugarberry (*Celtis laevigata*), grow to sufficient size for commercial use. Common hackberry can be found growing naturally from Colorado to the Atlantic coast and from Canada to the Gulf of Mexico. The natural range of sugarberry is along the coastal plains of Virginia south through Florida and west to the Rio Grande valley. Sugarberry also grows up the Mississippi and Ohio river valleys to southern Missouri across to southern Indiana. Where the natural ranges overlap, hackberry is usually on the uplands and sugarberry in the bottomlands. It is nearly impossible to distinguish the wood of one hackberry from another. Both species are referenced commercially, and in this writing, as simply hackberry.

Hackberry should be readily available throughout the U.S., as the trees have become popular as ornamental and street trees often being planted to replace elms. The seeds are attractive to birds and other wildlife which have further scattered seeds throughout urban areas. Commercially, hackberry is readily available as lumber or veneer and is generally quite inexpensive.

Hackberry, like all of the elm family, does not make good firewood but due to widespread availability it is often found in firewood piles.

The better grades of hackberry are used primarily for furniture and to a lesser extent for sporting and athletic goods. The lower grades are used for boxes and crates, particularly food containers. Veneer is used for plywood faces. Due to the ease of bending, hackberry is used in bentwood furniture and as barrel hoops.

The wood of hackberry is one of the loveliest and most neglected of the American hardwoods. It is capable of receiving fine finishes which enhance the grain patterns and textures. An increasing amount of hackberry wood is used for furniture production.

Hackberry is in the elm family (*Ulmaceae*) and therefore has many similar characteristics (see my articles in *American Woodturner,* March 1994 on soft elms and June 1994 on hard elms). The sapwood is pale yellow to greenish yellow and is frequently discolored with blue sap stain. The heartwood, when present, is yellow gray to light brown streaked with yellow. Cut in winter, hackberry can be almost white. The wood has no characteristic odor or taste, which makes it ideally suited for turned objects that come in contact with food. The grain is often interlocking creating interesting patterns. Hackberry is not resistant to decay and therefore spalts easily creating unique black lines that traverse the wood in long thin nearly straight lines as shown in the photos on the facing page. The spalting is unlike other species where the spalt lines zigzag across the wood grain.

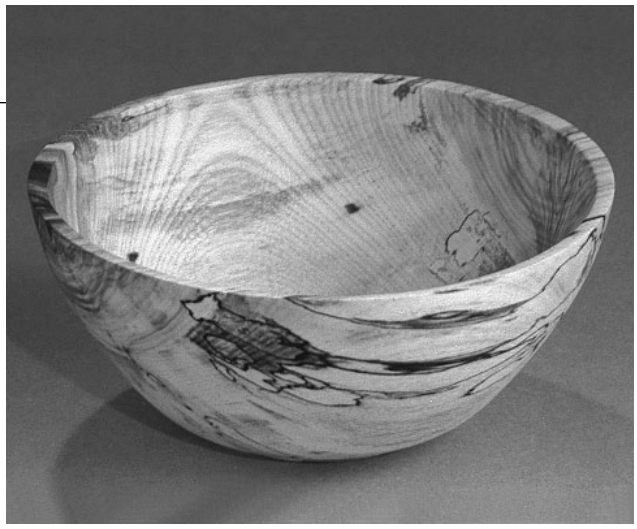
The growth rings are distinct in this ring-porous wood. Pores are visible to the naked eye in the springwood forming conspicuous bands 2 to 5 pores wide. The transition to summer-wood is abrupt and the pores are small, numerous, and arranged in more-or-less continuous, wavy, concentric bands. Rays are distinctly visible. Hackberry is often confused with elm but has wider sapwood with a yellowish tinge (elm is whitish to light brown) and wider, more prevalent rays.

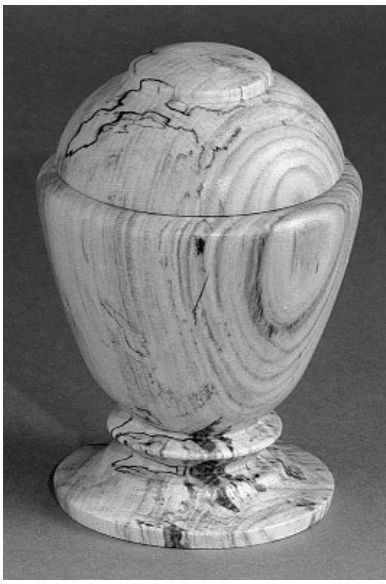
Hackberry has a specific gravity of .49 which makes it a moderately heavy hardwood. The wood is moderately hard and easy to turn but is long lasting and durable as finished objects. Hackberry glues well, making it ideally suited for segmented construction.

During drying, hackberry has low volumetric shrinkage of 13.8 percent. The ratio of radial shrinkage to tangential shrinkage is 46.1 percent, which is moderate for hardwoods. Bowls turned green will become moderately oblong during drying, about the same as elms.

When starting with green wood, it is often best to create “twice-turned" vessels, the first turning being while green and the second, or final turning, following an appropriate period of drying. This practice is especially important when force-spalting the wood. The first turning can occur either after the log has spalted or when the log is freshly cut. In the latter case, the rough-turned object can be placed in a plastic bag with an ample supply of shavings and allowed to spalt. Spalting will occur faster than is typical in whole log form, so check it at least once a week, lest it decay too far and become punky.

To slowly dry the rough-turned wood, coat the surfaces with a dilute solution (about 40 percent added water) of a wax-emulsion-based woodsealer. Record the date and weight of the object and store in a sheltered area out of direct sunlight, such as the back porch. Periodically weigh the piece; when it has quit losing weight, the moisture content is in balance with the storage environment. The piece can now be moved to a dryer environment, such as the basement, especially during winter,





Author's bowl and screw-top perfume bottle, from spalted hackberry.

for further drying. Hackberry retains its shape reasonably well during drying as it is not prone to warping and cracking.

Hackberry is well suited for spindle turning (where the grain runs generally parallel to the lathe bed). The wood cuts easily and the grain permits reasonable detailing. Due to the distinctive grain patterns associated with this and other ring-porous woods, bold patterns evolve as the final surfaces develop. Very fine detailing is best left for other species more uniform in texture and more plain in pattern. Normal rings, coves, and astragals are quite easy to cut and maintain in hackberry.

Hackberry excels in sculptural turning. The ease with which the wood can be shaped makes it well suited for complex designs. The integrity offered by interlocking grain adds strength for more intricate sculptures.

Faceplate turnings (where the grain runs generally perpendicular to the lathe bed, as in bowl turnings) are a delight to create in hackberry. Large or small, plain or complex, hackberry responds well to the skillfully applied tool. The relatively uniform color of non-spalted hackberry makes this wood well suited for textured surfaces, such as carvings, where the treatment will not be hidden by dark colors or wild grain patterns. Especially when carved green, the wood responds well to sharp tools. In carving, take care to read the texture of the grain (spring-wood to summer-wood) to avoid chipouts and runouts.

Hackberry is one of the easiest of hardwoods to sand, behaving much like walnut. Begin sanding with the finest grit your tool skills will permit. The 150-grit range is best. A smooth finish results quickly, so take caution not to over-sand. You may also note a pleasant smell, rather like toasted pecans, during sanding. Continue sanding to about 250-grit and apply the finish of your choice. Hackberry responds well to most finishes. I use a penetrating finish (such as Waterlox wiping varnish) when I want to deepen the color, and a film finish (such as Deft brushing lacquer) when I want to retain Hackberry's light color.

The bark of hackberry has corky ridges which run vertically along the trunk and on older limbs. This soft corky bark is easy to damage when turning bark-edged pieces. Sharp tools and a steady hand are required. The thin bark with thick cork, combined with the shrinkage, makes hackberry well suited for green-turned natural-edge bowls. Sugarberry usually has widely spaced corky knobs on the otherwise slightly fissured bark. It is tricky indeed to develop natural-edge pieces from sugarberry with only a few protruding corky knobs about the edge.

Hackberry trees are readily identified. The leaves are 2 to 4 inches long, alternately arranged, and oval shaped. The base of the leaves at the leaf stem are lob-sided (inequilaterally cordate). The leaf surfaces are rough in texture and slightly hairy on the underside. The leaf margins are sharply serrate (toothed). The fruit, which ripens in the fall, is nearly round, about $1/4$ inch in diameter on a stem about $3/4$ inches long. The flesh is red or purple and thin. The fruit of sugarberry is orange or yellow when mature. The fruit has a high sugar content and is edible. As the flesh dries, the surface of the fruit takes on a netted texture. The twigs are zigzag with the pith finely chambered at the nodes. The bark is grayish-brown or ashy-gray with characteristic corky warts or ridges and can always be identified by the warty bark.

Hackberry is usually a small tree 30 to 40 feet in height and about 16 inches in diameter. Sugarberry can reach 60 to 80 feet in height and diameters of 2 to 3 feet in the southern bottomlands. Trees rarely occur in pure stands and are usually found singularly within hardwood stands of elm, boxelder, silver maple, cottonwood, and sycamore.

Hackberry is a good wood for beginners. It is readily available, it cuts easily, and is not prone to splitting or cracking. The ease of sanding and finishing will return satisfactory results even while skills are being developed. If you have not created turned objects of hackberry or sugarberry, it is about time you gave these berry fine woods a turn.

Bill Stephenson is a professional forester and woodturner who turns, teaches, and writes from his studio in Loveland, OH.

UN ENCUENTRO FELIZ

Meeting an American bowl-turner in Costa Rica

CONNIE MISSISSIPPI

READING A COSTA RICAN GUIDEBOOK in preparation for our annual Christmas vacation, I came across a small article about an American woodworker, Barry Biesanz, living outside of the capital of San José in a tiny mountain town called Escazu. After arriving in Costa Rica I contacted Biesanz by phone, told him my name, and said I would like to meet him and perhaps develop an article for our journal. "You must be kidding," he said. "I'm sitting here reading the latest issue. I just finished your article about the Challenge V show in San Francisco. I was interested in it because my work is shown in the One of a Kind Gallery across the way from the Museum."

It has been my experience that when coincidence or synchronicity appears so clearly in life, something extraordinary usually follows, and it certainly was so in this case. He gave me directions to his house and we agreed to meet the next morning.

There are virtually no road signs in Costa Rica, and left can mean a hard left, a diagonal left, or the only way to turn when a road dead ends. After a few wrong turns, we arrived in front of a low-rise building set in a garden of luxurious flowering plants. This is the home and gallery of Barry Biesanz and his wife and partner, Sarah. A large room to the right of the entry serves as Biesanz's gallery. Pedestals set close together display boxes of many sizes and sorts. The sheltered corner is reserved for his turned bowls, elegantly simple designs in cocobolo and lacewood that are clearly his personal pride and joy. He says he saw one of Bob Stocksdale's natural-edge bowls many years ago and has been trying to perfect the design ever since. A self-taught turner, Biesanz has been turning daily for seventeen years. Bowls have always been his mainstay; he sold more than seven hundred last year, a third of them out of the shop, the rest wholesale.

Making furniture was part of his early business, too. "It was never hard to sell the furniture," he says, "there was a waiting list after the first five years. I just overbuilt and overdesigned everything and never got the price it was worth." So in 1984 he tried a production line of boxes, and by 1990 he had pretty much phased-out the furniture. "Making production boxes I can afford to overbuild and overdesign."

So now, as well as bowls, Biesanz Woodworks turns out boxes: large boxes, small boxes, jewelry boxes, even condom boxes. The production utilizes scraps of exotic wood native to Costa Rica that are discarded by farmers and lumberyards. The small products ship easily and relatively inexpensively. To meet demand, he began employing local woodworkers. Between the bowls and the boxes, Biesanz has a product line that ideally suits the growing tourist trade in his area. Visitors are more likely to carry bowls or boxes home in their suitcases than custom furniture.

Biesanz came to Costa Rica twenty three years ago, with his parents who were sociologists studying the people there. By the time he began Biesanz Woodworks he was, as he says, "poor as a mouse." He turns on a homemade lathe designed and built by a young man who used to clean Bob Stocksdale's shop. He rough-turns a bowl on a glue block and puts it in his drying room, sometimes for as long as a year, depending on the size of the bowl and the type of wood. He then puts the bowl back on the lathe, which looks something like an old Oliver spindle lathe. His bowls vary in thickness from translucent to $1/4$ inch thick, depending on the wood, size, and design.

After we studied the pieces in his showroom, Biesanz invited me to visit his shop nearby. On foot one

One of Biesanz's cocobolo bowls, 10" long.

Photos: Fernando Acuña, except where noted

Robert Sulnick

Barry Biesanz roughs out a cocobolo bowl, left. Above, workers sand and finish turned blanks, among the more than 700 sold last year.

crosses a large field and a small river; by four-wheel drive we made one right and two lefts and arrived at an overgrown, fenced area with a two-story warehouse-style building set to the rear of the lot. Formerly a leather-goods factory with one enormous open area in the center and several smaller rooms to either side, it is a perfect setting for a creative endeavor. Biesanz employs twenty workers who were busy sanding, finishing, and assembling his many boxes. They are all young men and some, he says, are quite accomplished woodworkers. He has piles of wood stacked along the driveway outside and had just received a large shipment of cocobolo about which he seemed particularly excited. He shared with me how he preserves the color of his cocobolo pieces. Soaked in alcohol, they stay orange instead of turning black. He's experimenting with the used alcohol as a stain and possible wood preservative.

Biesanz uses scrap wood as well as dead or fallen trees and trees felled for new houses. Whenever possible he buys direct from small farmers. He has a large pile of satinwood logs outside his shop which he found as charred logs in a field.

As well as using native trees that no one else is interested in, Biesanz has begun a non-profit program to replant unusual and endangered native trees and trees for wildlife. Since 1989 he has given away over 3,000 saplings a year to people who come from all over Costa Rica. Outside his house are small plastic bags filled with sprouting trees including guapinol, soapseed, cocobolo, purpleheart, walnut, and tubus saplings. He has also sprouted some tagua nuts which took eight months to sprout. "The roots are a foot long," he says, "but I haven't seen a leaf yet!"

Some of the wood he uses are unknown, as there are over 150 species in Costa Rica. Oftentimes people will bring him unidentified pieces. A member of the Woodworkers Alliance for Rainforest Protection (WARP), Biesanz feels the modern craft movement is sort of precursor to the environmental movement: "Both seek a more balanced, sane way of life, with natural values predominating. Fine crafts are certainly not a part of a disposable culture. We try to create pieces that will last for generations, statements to the beauty and value of these precious woods."

He is also interested in helping to get woodworking established in Nicaragua, Costa Rica's neighbor to the north. Biesanz has five Nicaraguans working for him at present whom he hopes to train as woodturners so they can return to Nicaragua with a skill, as employment in Nicaragua is at an all-time low.

Seeing a person integrate so completely into a foreign culture and care this way about the people and the land of that culture, was an inspiration. Also impressive is the individual style and signature work that Biesanz has created, living and working as he does in relative isolation away from the U.S. market. Only within the last three years has he begun to show in the States, at the del Mano Gallery in Los Angeles and the Sansar Gallery in Washington, D.C., as well as other galleries throughout the country.

If you're planning to be in San José and would like to visit him, you can write me for directions or call Biesanz directly at 011/506/228-1811. Bring your own enthusiasm for woodturning, and Barry will be delighted to see you.

Connie Mississippi turns sculptural forms in Topanga, CA.

SHARPENING SCRAPERS

An excerpt from a new "Complete Guide"

LEONARD LEE

OF ALL WOODWORKERS, I FEEL PARticularly sorry for turners because they not only face conflicting advice on sharpening from the various authors in the field but also are unable to rely on the suitability of any of the grind angles on tools when they buy them. I have seen scrapers come from the factory with an 80° bevel angle, even though a 70° angle is advertised, and skews with a 90° included angle, which is triple the angle that most teachers would recommend.

After reading a number of books on turning over the years and having listened to a number of turning instructors, I have come to the conclusion that most good turners achieve their results by overwhelming their tools with tremendous innate skill. Unfortunately, many of these same turners who have developed specific techniques to overcome tool-shape inadequacies then go on to recommend these techniques to novice turners, when the novice should be learning good shaping and honing technique instead. In my view, this is the basic reason for the proliferation of techniques that we have seen in the last ten or fifteen years.

In this article (an excerpt from my new book), I am going to avoid the subject of turning technique entirely. Part of the reason is that good sharpening principles can be adapted to any technique. The other part of the reason is that I do not want to put myself in the same position as some of the turning authors who make very categorical statements about sharpening technique even when they have limited understanding of metallurgy or abrasives. Having drawn a line in the sand, I will try to stay on my side of it.

Grind Angles/Bevel Angles

The same general theory for chisels and planes applies to turning tools, namely, "a cutting tool should be ground at the lowest possible bevel angle consistent with edge retention." The only difference is that turning tools are much more like power tools than hand tools and are subjected to more severe shocks than chisels or plane blades. This requires some increase in bevel angles in order to withstand the shocks, but the basic principle applies broadly in turning.

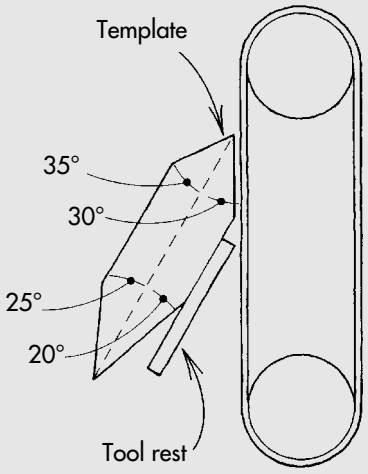
The reason turning tools are more like power tools than hand tools is that they are used to work wood that is under power. In addition to the intermittent shocks experienced, there is generally greater stress and certainly greater heat in the cutting process. But, there are numerous similarities to hand tools; I would use the example of planing cylinders to make the point. It takes a substantial amount of skill to do a good job of planing a cylinder on a lathe using a skew chisel or even a flat chisel. Yet an ordinary bench plane can be applied to the rotating cylinder on the lathe, and you will find that it works very much like using a smoothing plane on wood. With the plane somewhat askew the cylinder, you will find that the wood passing by the plane is much like having the plane passing by the wood. Not, of course, that I recommend this technique because, as stated earlier, I intend to avoid technique and deal only with sharpening. As we look at different tools we will return to the subject of bevel angles repeatedly, but I wanted to emphasize at the beginning that the same general theories apply to dimensioning wood in the turning process as they do in other aspects of woodworking.

Scrapers

One of the continuing arguments in the turning community is whether or not scraping is an honorable activity. Some turners insist that virtually everything must be done with gouges and skews; they look down

SETTING TOOL-REST ANGLES

Since you use only a small number of grinding angles for most shop tools, it is worth making a few angle templates to keep near your grinder or belt sander. Use at least $\frac{1}{2}$-in. thick material and make the templates about 8 in. long and 3 in. deep. The angle you use to set your tool rest is 180° less the grind angle, but if you use parallel-sided stock for the template you will have both angles anyway. Mark the angles and give the template a coat of shellac to keep it stable.



on turners who use scrapers to any extent. I believe that this state of affairs came about for two reasons. First, many of the scrapers used traditionally had virtually square edges and tended to pull the fibers out of the wood rather than cut them. Second, there is always a bit of snobbery involved in the competent use of a tricky tool like a skew, whereas virtually anyone can use a scraper acceptably.

Scrapers are far more predictable in use than skews or gouges. It is nearly impossible to get an inadvertent dig, or "catch," when using a scraper. So for all of those woodworkers for whom turning is a very occasional activity and who are just looking for a predictable result from their lathe, scrapers can be a godsend.

If you do a good job of sharpening a scraper, it is no longer a scraper, it is a cutter. Just as you can burnish a hook onto a well-prepared cabinet scraper to make a wonderful small plane, you can put the same sort of hook onto either a carbon-steel or high-speed-steel scraper that will give you clouds of continuous shavings. In fact, you can adjust the size and shape of the hook to make roughing scrapers as well as finishing scrapers.

Sharpening

Scrapers are very easy to grind, especially if you use a belt sander. Just set the tool rest at the bevel angle you want (usually between 70° and 80°), lay the scraper flat on the rest and grind freehand, as shown in the photo above right.

There are four reasons I recommend using a belt sander. First, it is very easy to set angles accurately between two flat surfaces, and angular control is important here. Second, it is easier to control the grinding process on a belt sander, particularly with oddly shaped scrapers. There is much more maneuvering room than with a bench grinder, where the motor is a limiting factor. Third, you can change grit sizes in seconds as desired or required, and, fourth, you do not get a hollow grind with a belt sander. Since these scrapers are bevel-rubbing tools in use, a hollow grind is undesirable.

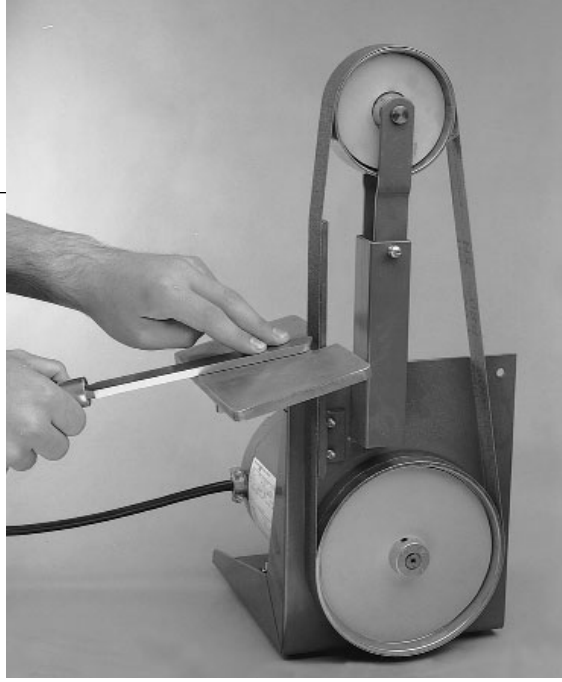
Most turners use scrapers just as they come from the grinding wheel or sander. Even with very fine grit belts or wheels, the scraper will have a burr on the top that creates a tiny cutting edge. As can be seen from the photo center right, the burr does not vary a great deal in size since it tends to be cut off fairly soon after it is formed. The wire edge that has been released in such a manner is visible on the left-hand side of the photo.

But there is a far better way to get a cutting edge on a scraper that is sharper, stronger, more durable and of more predictable result. You grind the scraper as usual, then strip the burr off the top with a fine honing stone (a 6000x or 8000x water stone, a Black Hard Arkansas, etc.) or, my favorite, the 5-micron silicon-carbide 3M micro-finishing abrasive. It takes the burr off in no time and leaves a mirror finish on the top of the scraping tool. Then you burnish the hook that you want on the scraper (photo lower right).

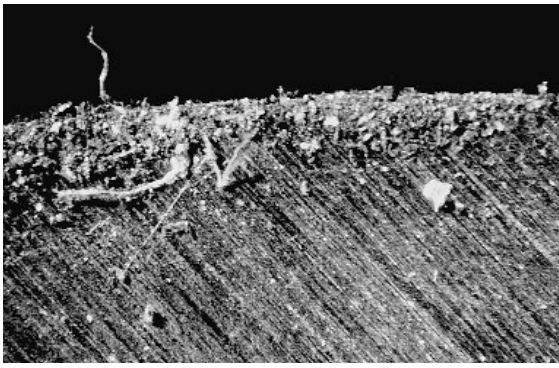
Burnishing

Burnishing a turning scraper is not as easy as burnishing a cabinet scraper. The turning scraper is much harder steel and is often an awkward shape. It can be burnished freehand, but I recommend that you wear gloves for the process since it is easy to slip and give yourself a nasty cut. As a bare minimum, clamp the scraper low in a vise (with wood-lined jaws) so that your hands are less likely to come in contact with an edge.

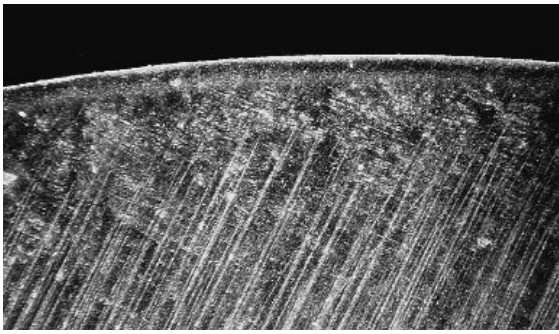
High-speed-steel scrapers are the toughest to burnish. To deal with these scrapers, I designed the bur-



To grind a scraper on a belt sander, set the tool rest at the required angle (usually between 70° and 80°) and grind freehand.



A magnified portion of the tip of a scraper as it comes from the grinder. Bits of broken abrasive particles are visible, as well as the edge burr and a portion that is breaking away on the left side of the photograph.



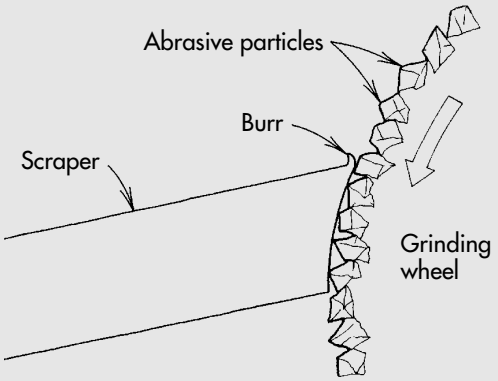
This is the same scraper after lapping and burnishing. The grind marks are substantially smaller on the scraper and disappear near the burnished edge. The keenness of the edge is apparent. (Photos courtesy Canadian Conservation Institute.)

HOW A BURR FORMS DURING GRINDING

At various times in woodworking literature you will see comments that the burr forms on the top of the scraper by a deposit process; hot chips of steel removed by the wheel are carried around a full rotation and deposited on the top of the scraper, sort of tack welded into position. This is not what happens.

The burr forms on the top of the scraper because a large number of the abrasive particles in a wheel at any one time have negative rake angles. Such particles tend to plow a groove in the steel without removing much material. When the particles first encounter the top edge of the scraper, they deform the steel at that point, raising a lip that is the burr that turners depend on for cutting.

Only a fairly small percentage of particles in a grinding wheel are actually cutting, taking out chips. Many are just scraping or plowing their way through. Scraping or plowing removes material but also generates a lot of heat by deforming the steel. For this reason, you always want a clean unglazed wheel with the maximum number of sharp particles exposed.



nisher shown in the photo below. It is a carbide rod with a 10° conical tip set in an aluminum plate drilled for a lever pin. With the burnisher clamped in a vise, you can set the lever pin in one of several available holes (the one that best suits the scraper at hand) and use both hands plus your body mass to lean into the burnishing process. Even high-speed-steel scrapers are easy to burnish with this system. Scrapers ground at 75° and burnished at 80° with this device serve most turning needs, since the size of the hook can be controlled by burnishing pressure.

If you have never burnished a hook on a turning scraper before, you might be startled by the result. The burnished scraper is a potent cutting tool. If, for example, you have ground the scraper at 70° and burnished it at 80°, you will find that you have a roughing tool, capable of removing a steady stream of thick shavings, even from end grain. You will also find that the scraper tends to be drawn into the work. With a pronounced hook, you can even get digs!

To change from a roughing scraper to a finishing scraper, you just reduce the burnishing angle. This immediately gives you greater control, because you get a wider rubbing bevel. You will find that the process can be adjusted in either direction to accommodate a range of cutting actions. The operative word here is "cutting."

A commercial burnisher for high-speed-steel scrapers.

RPM AND CUTTING ACTION

You will find that the cutting action of any turning tool can be changed by altering the spindle speed. Once a blank has been roughed down to good balance, increasing the spindle speed will make most tools cut more predictably. Whether you notice it or not, you will invariably find that you are taking a lighter cut at the higher speed but removing wood at a faster rate. A tool such as a roughing gouge, which can readily dig at low speeds, becomes more controllable at higher speeds.

Nowhere do you notice this phenomenon more than with burnished scrapers. At sub-optimal speeds, they can catch; at ideal speeds, they will consistently take a beautiful, thin shaving.

So whenever you think that your tool's edge shape may be at fault, check the cutting action at higher and lower spindle speeds before resharpening.

GRINDING WHEELS FOR TURNERS

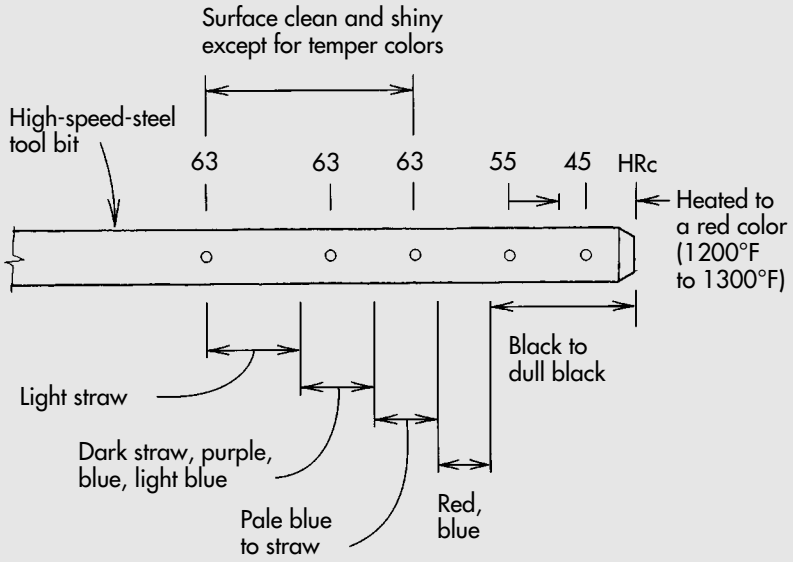
Books on turning all offer sharpening advice, but only two of the ten in print as this is being written deal with the specific type of grinding wheel that should be used. Both recommend aluminum-oxide stones of medium hardness, 38A80H-8VBE in one case and 38A60J-8VBE in the other. The latter, although coarser than the former, is also harder, so the finished grind will be similar. A J-grade will last longer but grind hotter then an H-grade; it would be fine for high-speed steel but would require a light touch with a high-carbon steel.

For grinding high-speed steel, Jerry Glaser, a California tool designer and manufacturer, uses one of the new seeded-gel stones from Norton The seeded-gel process bonds small particles together to form larger ones; these are then combined with standard aluminum-oxide particles in ratios up to 1:1. In use, the constructed particles tend to fracture rather than break away, creating a stone that gives a finer grind than the grit size would indicate. Glaser uses a 5SG60KVS, which indicates that 50% of the particles are seeded gel in a 60-grit wheel of K (medium) hardness with some sort of vitrified bond.

Norton recommends this seeded-gel stone for use only where sufficient grinding pressure will be used to ensure particle fracture; it is not for light cuts and is too hot for carbon steel. Used for grinding the basic shape on HSS tools, though, it is ideal.

Since HSS is reputed to have good red hardness, Glaser performed some basic tests to see how tool hardness might be affected by various heat levels (see the drawing below). As the results show, only the area that had been glowing red had serious softening; anything that had not been burned black retained the original hardness or close to it. This is quite different from high-carbon-steel alloys, where you can be certain that anything that turned blue during grinding has been unacceptably softened.

For anyone grinding both carbon-steel and HSS turning tools, I would still recommend a 38A80H-8VBE as the best all-round wheel.



This is no longer a scraping tool; it is a cutting tool capable of giving a very fine finish. Using a light pass at a burnishing angle of 5° or less, you can create a fine hook that is easily controlled in use. You will find that such a scraper can make a substantial difference turning slim stock between centers. The hook draws the work to it, reducing whip by acting like a steady rest. You will find equally that you can get remarkable finishes on face-plate work with such a scraper. The finish achieved and the degree of control that this system offers is truly remarkable. For example, you will find that you can tilt the scrapers to take shearing cuts. What else you do with them is a function of your technique and interest.

As with any other edge, the smoothness of the two surfaces intersecting to form the edge determines its keenness. Thus far I have mentioned honing only one of the two surfaces, the flat top of the scraper. I am reluctant to suggest honing the ground bevel, because even a slight angular difference can compromise the final hook. Another reason honing is less necessary in this instance is that a burnisher, used at an angle so close to the primary bevel angle, tends to blend the grinding serrations into a smooth plane. It is a bit like a knife-sharpening steel in effect. And the final reason I would dodge honing the bevel is that if you sharpen scrapers on a belt sander as I recommend, you can use a fine belt to refine the grind without actually honing.

A woodworker and toolmaker, Leonard Lee researches, designs, manufacturers, and sells tools, jigs, and sharpening systems. This article is an excerpt from his new book, The Complete Guide to Sharpening *(The Taunton Press, Newtown, CT 800/283-7252), which covers all kinds of sharpening topics for woodworkers, from cutting geometry and metallurgy to hands-on technique. It's 256 pages, hardcover, and costs $34.95.*

SYMPOSIUM REPORTS

Views of the summer get-togethers in Provo and Davis

From Woody Collins,
San Jose, CA

EVER SINCE I TOOK UP WOODTURNING and joined the Bay Area Woodturners, I have wanted to attend one of the several woodturning seminars that are held around the country. But time and money (usually too little of both) have always conspired to prevent that from happening. This year, with the AAW National Symposium in Davis, I knew I would have my opportunity. So when I received notice of the 1995 Utah Woodturning Symposium to be held May 4–6 in Provo, Utah, I initially dismissed any thought of attending it. Then I took a second look at the list of demonstrators for each conference and noticed that there was very little overlap. Both conferences featured a roster of world-class turners, any one of which would justify attendance. I think it was the presence of Richard Raffan at the Utah conference that led me to make a last minute decision to attend. Raffan's "Turning Wood" was my bible when I began turning and his "Designing Wood Turned Bowls" has become my favorite stylistic reference. So, in a moment of rashness, I decided to compensate for all the other missed symposia by overloading in '95 and headed for Utah without removing Davis from my plans. I'm glad I did!

The sixteenth annual Utah Woodturning Symposium was their largest ever, with over 300 attendees from just about every state of the union plus England, Australia, and New Zealand. Most were first-time attendees, although a good number had been to previous Utah events, many to five or six, and one participant (dubbed the slowest learning wood turner in Utah by Dale Nish) had been to all sixteen conferences.

The facilities at Brigham Young University are truly remarkable. Brigham Young has what must be one of the largest industrial arts departments in the country, and woodturning figures strongly in their program. Virtually every room I looked in has several lathes, with Oliver and Powermatic predominating. All of the demonstration areas had tiered seating and many also featured supplemental video that allows the audience to see just what the demonstrator is doing.

And the demonstrators were marvelous. Raffan and Vic Wood from Australia, Soren Berger from New Zealand, Stuart Batty and Marvin Firmager from England, Frank Sudol from Canada and over a dozen turners from the U.S., including Bonnie Klein, Dale Nish, J. Paul Fennell, and Kip Christensen. With nineteen demonstrators, four rotations of eight sessions per day and very few repeat sessions, there was obviously no way to see it all.

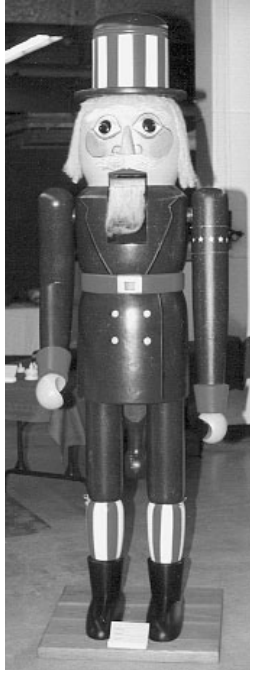
After religiously studying the schedule I decided that I needed to be in at least three places at once the full time I was there. Several other attendees said that they just planned to wander from session to session but I wanted in-depth exposure so I opted for several of Raffan's whole sessions as well as others.

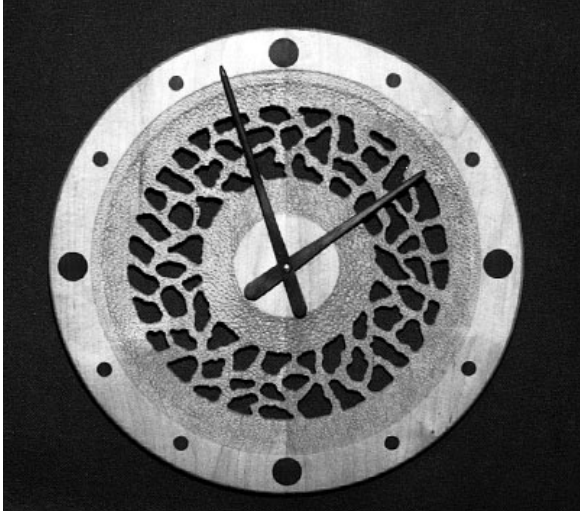
All of the demonstrators were entertaining, enlightening, and full of turning tips. Most are not only accomplished turners but also skilled teachers who can explain as well as demonstrate. The Instant Gallery was simply magnificent, with the attendees outshining the pros in many instances, and the swap meet had enough wood and tools to leave everyone drooling. But perhaps best of all was the chance to meet and become acquainted with the other attendees. With turners from all over the world, our skill levels ranging from beginner to expert, one would be hard-pressed to find a more congenial group.

I'm not very good at passive activities so when Richard Raffan needed someone to handle the video camera for one of his sessions, I volunteered. Apart from being an interesting exercise in and of itself, assisting in that manner gives you the best seat in the house for seeing exactly what the demonstrator is doing.

In addition to the normal rotations, the organizers had scheduled a turning contest for one of the evenings. Contestants were to turn an egg-cup of a proscribed shape with the emphasis on who could turn the fastest. Two entrants turned at a time which made it quite competitive. Now, I'm no speed demon on the lathe but, after watching others turn all day, here was a chance to get on a lathe myself. I didn't expect to win anything but thought I could at least do a decent job and that it would be fun to try. Instead, I did horribly, turning out a blob of wood that only vaguely resembled the desired object in 1 minute, 47 seconds. My opponent, a much younger turner, produced a fairly descent egg-cup in around a minute and a half. So imagine my surprise at the Saturday Symposium Wrap Up to find that I had taken second place among the non-professional turners and won a Sorby hollowing tool. (As an aside the best time was 51 seconds by Richard Raffan, and his actually looked like an egg-cup.)

The moral to this story is that it never hurts to try, even when you don't have any prior experience (as with handling the camera for Richard Raffan) or know that you really don't stand a chance of winning (as in the egg-cup contest). Instead of





From Stephen Garavatti, Salt Lake City: The Utah symposium's Instant Gallery filled more space than ever. A fabulous thirty-inch-diameter segmented turning (above left) by Ray Allen featured 2,210 pieces from seven woods. The eight-foot-high nutcracker (above right), created by Utah's most famous spindle turners, Tom Sorensen and Clead Christiansen, showed up fully dressed (at its debut at the 1993 Utah Symposium it appeared in naked glory). Above far right, a different approach to clock turning by Utah's Mark Shelton graced the gallery wall. And Gary Smith, president of the newly formed Southwest Idaho Woodturners Association in Boise, Idaho, presented miniature turnings from golf ball centers. Smith says, "Carvers have been carving golf balls for years. I thought I would try turning some." He advises to stay away from those liquid centers.

embarrassing myself as I had originally feared, entering the contest gained me quite a few new friends and I won a nice prize for what could be the absolute worst turning I have ever made!

This report is adapted from one published in the newsletter of the Bay Area Woodturners.

From Nick Silva, Garland, TX

THE 9TH ANNUAL AAW SYMPOSIUM, held this year on the campus of the University of California at Davis, had something for everyone. The range of topics went from hollowing thin-walled vessels to goblets to lathe duplications to drawing to tool usage and maintenance to slide shows to chairmaking and blacksmithing. There was a wonderful "Just Ask" panel discussion between novice and expert, and a seminar hosted by a group of lawyers on copyrighting your work. There was even a discussion on the dreaded carpal tunnel syndrome. And there was, of course, lots of social interaction and a few spontaneous get-togethers. Our local chapter's own Clay Foster gave an uplifting seminar on getting in touch with your creative spirit.

The instant gallery showed literally hundreds of turnings and sculptures by members. All were beautiful and no judgements were made, only a feeling of pride and sharing. A number of these pieces ended up in the yearly auction, which netted over $12,000 for the AAW Education Fund.

There was also a trade show with tools, gadgets, wood , and wood, and wood. Did I mention there was wood? Oh, there were foreign exotic woods, domestic woods, burls, roots, nuts, plastics, and countertop materials. Anything you could spin on a lathe. And in the midst of all this were 535 grown men and women buzzing around like kids in a candy store. Boy, did I buy a lot of candy!

Everyone was friendly and open. One thing you can be sure of is that if you get 500 plus people with the same interest in the same room at the same time, they are going to have something to talk about. I walked away with some new ideas, some new skills, and hopefully some new directions. I can hardly wait until next year.

This report is adapted from one published in the newsletter of the Woodturners of North Texas.

From Philip C. Hultgren, St. Croix, U.S. Virgin Islands

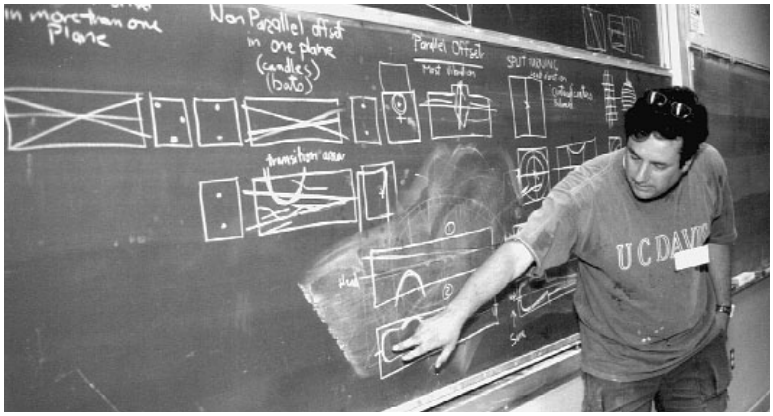
DAVIS WAS THE FIRST AAW SYMPOSIUM that I have attended. It is the first AAW event of any kind that I have attended. I am the sole member on St. Croix and so, had no one to speak with concerning what to expect.

One hope was to get help for my fledgling business. I sought to establish contacts, learn techniques for marketing, and gain some insights

Gail Redman, who makes her living turning architectural components for Victorian restorations in San Francisco, was a ball of energy as a demonstrator. Here she steps a participant through a bead.

Nick Cook

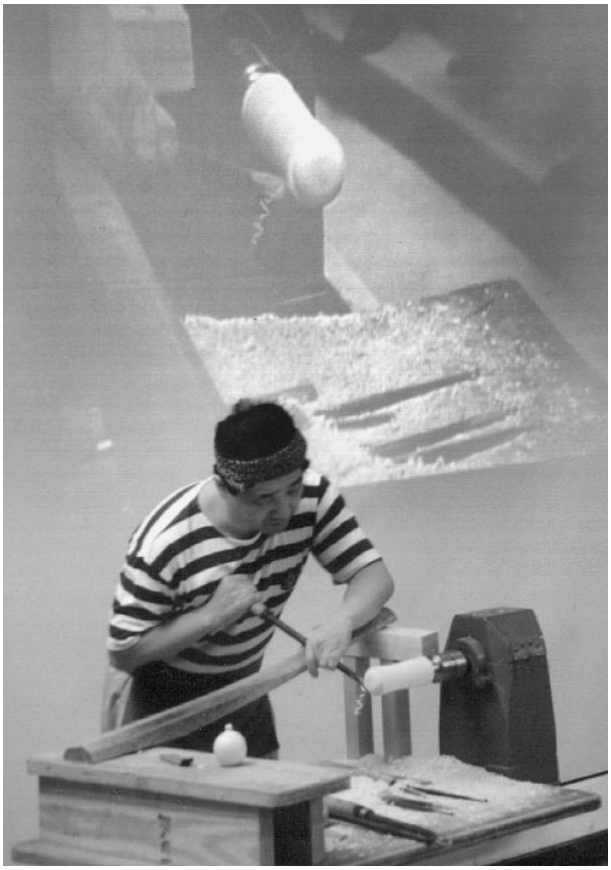
Hawaiian, Mike Lee, who made the transition to professional with the help of an AAW grant, demonstrated shaping a hollow form with multi-axis cuts.



Multi-axis mahatma Mark Sfirri, of Pennsylvania, charts the various setups that yield his offset baseball bats and candlesticks.

Nick Cook

Stuart Batty, when he wasn't playfully sparing with his father and master, Alan, demonstrated craftwork steeped in the highest traditions of the trade in his native Yorkshire, England.

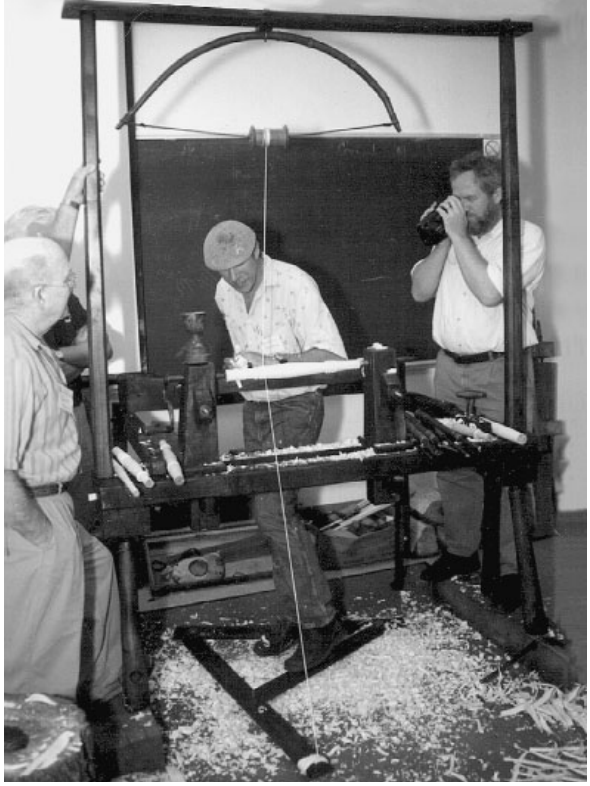


Akihiro Sakurai dazzled audiences with the unique tools and techniques of the popular (noting their performance at auction) kokeshi dolls of Naruko, Japan. A video projector provided a close-up view of his work.

that I was somehow overlooking. The one person in last June's "Symposium Portfolio" that really interested me was Ron Kent with "practical ideas,…side trips into marketing,…financial attitudes,…efficient use of time.…" And as it turned out, the panel discussion on business/marketing and the ensuing conversations with Ron Kent were the highlights of the symposium for me. I sought answers to problems I had set up for myself. Ron reflected what he saw, offered tools to surmount these problems, criticized (after politely asking if I cared to hear criticism) where improvement was sorely needed, and didn't forget who I was in encounters following our conversation. He continued, in fact, to offer ideas that occurred to him later on.

I did not expect to learn any new methods of turning that would help

Photos of the Davis symposium, pages 36–38, by Rick Mastelli, except where noted



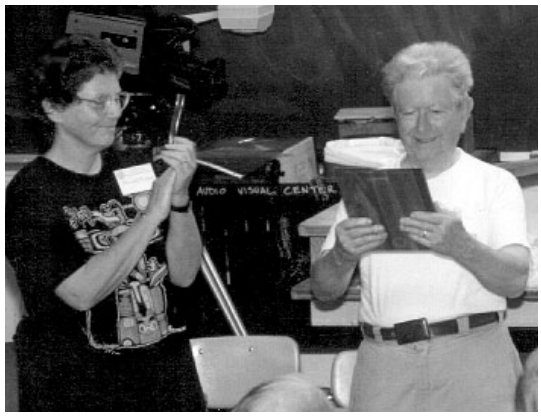
Low-tech and high-tech turning occupied adjacent demo rooms at Davis. At left, California's Don Weber shows how deftly a treadle-turned spindle can be made. Above, ornamental turning aficionados Jon Sauer and Mark Krick discuss an ornamental setup.

For sale at the trade show were thousands of pieces of wood and other materials for turning: "…anything you could spin on a lathe."

Frank Sudol, right, queries John Nichols about his humongous lathe.

me in making my 4- and 6-foot bowls. Nevertheless, the demonstrations I did watch were captivating. The presentations on copyright laws, forging, carpal tunnel syndrome, and tool design were very interesting and helpful to me as well.

The general camaraderie among the turners was both grand to see and hard to be excluded from. The back-slapping and hearty handshakes among those veterans of meetings and symposiums gave me the sense of being part of a unique group of people. That same comradeship kept me at a distance at the



Bob Stocksdale was Friday night's treat. After a peerless slide show, detailing how works of art begin with acquired lumps of wood, he shared his latest find, a gooseneck lamp on sale that he, for one, couldn't pass up. At right, Merryll Saylan presents him with AAW's lifetime membership award. "It's a good thing it's so thin," someone yelled from the audience, "or he'd turn it into a bowl!"






Scenes from the Davis symposium's Instant Gallery include John Jordan at the critique, upper left, with some light-hearted observations about a David Ellsworth vessel. Jordan, Ellsworth, and many others agreed: this symposium's work was the best yet.

barbecue Thursday evening. I made a few contacts with the people I had been sitting next to during demonstrations, but could not find them. I felt a little lost among all these intensely talking groups looking for anyone else who might have that same lost look. Eventually, two fellow turners, Dick and Vern, welcomed me into their company (they paused briefly in their conversation and I seized the moment with extended hand, introducing myself) and all was well. For a while I wondered if I shouldn't go home. I'm glad that I didn't.

The Instant Gallery was awe-inspiring. I felt intimidated by the skill in so many aspects of the woodturner's art. Anyone unimpressed had to have been blind and numb.

EDITOR'S NOTE: *As promised when we ran our first installment last March, here is our second lathe review forum, wherein you provide feedback on the lathe you use, with special attention to the sort off work it's best suited for. More contributions are still welcome.*

General 260/160

When I was in my early teens I used to spend time with a school friend name of Vernon Baker (Hi, Vern, if you're out there.) Vern lived in the kind of family that had the greatest toys. Vern's Dad had a 1955 two-tone Chevy coupe that always looked and ran like a dream. Vern had a "Whizzer," a motorized bicycle which teemed with a massive $2^1/_2$-hp motor (heavy stuff for a thirteen year old). But the toy they had that I have lusted for ever since belonged to Vern's big brother Lamonte; he owned a 1952 Panhead Harley-Davidson.

Time has passed since those memorable early 1960s; I am still wishing to own a Harley, but my choice of woodworking machinery is faithful to that hunger for honest technology that does a job, does it well, and makes no bones about it. Yesterday's technology refined for today.

While Milwaukee, Wisconsin (home of H-D) and Drummondville, Québec (where General Machinery [819/472-1161] resides) have little in common socially, politically, or geographically, they share a heritage of producing great machinery. That's because General and H-D share a common philosophy: make new models by improving on the old rather than replacing them with new designs and unproven engineering.

The Model 260 lathe today is essentially the same lathe that was introduced to the General line back in the 1940s. Many of the parts for those early machines are still available today, and if they are not, General will often be able to retrofit today's parts.

The 260 of today is different from its granddad in a lot of unseen ways. The machining is more consistent, within +/– .005 inch, well within the standard for woodworking machines. Electric furnaces have replaced the old coal-fired ones, resulting in better molten metal for the castings. The metal used today is shinier than the metal of old and harder to machine, so I'm guessing it's denser, yet still able to absorb vibration (another similarity with the venerable H-D) and not brittle. Today's castings, though not perfect, are improved in the flashings department, too. Then there's the paint, the bearings, and the knobs, which you know are improvements; time marches on and General keeps pace.

Options have improved, too, in response to user feedback. The bed extender turned the basic lathe (originally designed for metal spinning) into a furniturmaker's lathe with 8 feet between centers. The riser block kit is probably the most noticeable addition, added to the line in the early 1990s to answer the prayer of all bowlturners. (I'm guessing we can thank Rude Osolnik for this; he's been working with General lathes for years.) The 2611 post extension (courtesy of yours truly) adds versatility inboard and the ability to turn outboard on a riser-block-equipped 260. The model 2660 duplicator (a design General acquired in 1989 if memory serves me well) is one of the sweetest duplicators going. Oh yes, and then there's the DC variable-speed motor and controller; several of us contributed to this upgrade and though it had its growing pains in 1990, it's working just fine now. It's evolution—just as H-D's Knucklehead begat the Panhead which became the Shovelhead. The basic design hasn't been altered, just upgraded and tailored to the needs of the rider, er... turner over the decades.

H-D and General have another thing in common: taken care of, their products don't lose value. Used machines from either stable are resaleable for top dollar years after they come off the production floor. That speaks volumes for buyer confidence.

Sure, they both have their quirks but heck, it's the quirks in everything that give them their character and in these cases, charm. As an owner, you can easily bond with these machines. They become like your best friend, or maybe your Dad's best friend.

I'm still saving for my Harley (an FLHT, if anyone out there is feeling generous), but in the meantime I put in as much time as I can on my General 260, keeping my right wrist cranked and enjoying every minute spent with my Pal!

—Mark Salusbury, Markham, Ontario

I have three General lathes in my studio now: two model 160s and one model 260 with a riser block. The 260 I have run for eight years, and the 160s for six years.

At the time I bought my 260, I wanted to design and make a line of seating in the Shaker style—everything from rocking chairs to stools—which now numbers thirty-one different models.

All of the setups were initially on the 260 and later transferred to the 160s as I was able to acquire them.

Now the 160s have extended beds so they can be set up to turn about 84 inches long, and they have 2-hp motors. The 160 with a Vega duplicator is set up to rough out all my chair posts and rungs, using different patterns. The other 160, with a reversing switch, is set up on an extension bed of the first 160 with a foot clutch, for all my sanding and hand-turning needs.

The 260 has a D & J Ulery $1^1/_2$-hp DC drive that works very well, coupled with the General's mechanical speed adjuster. In the near future I

will be bumping up to a 5-hp motor to accommodate some large turnings that start out around 250 lbs.—on the outboard end with a concrete bed attached and a swing of 34 inches.

My setups evidence how versatile the General line is. As with all machines, they aren't perfect and there are things that you'll find that you wish to change or replace, and have to fix over time. But in eight years on the 260 I have replaced only two bearings and two belts. And in six years on the two 160s I've replaced one belt. During this same time I have made at least 20,000 chair parts and 200 to 300 other turned objects. Now I'm starting my second series of African drums (the Djembe), which starts out around 200 to 250 pounds, which gives you some idea of what the 260 can handle.

—Robert Sonday, Free Union, VA

Woodtek

The split pulley on my Delta 46-700 lathe would fly apart after a couple of hours of use. This was due, I believe, to the pulley wheel being made of two materials—copper and aluminum. When the pulley heated up, the copper would fatigue and break away from the aluminum. After going through three pulleys in less than two months, I returned the lathe to Delta for a refund. (The Delta customer service people are great, by the way. They assured me that my problem was atypical of the 46-700.)

I opted to replace the Delta with a Woodtek 12-inch variable-speed lathe from Woodworker's Supply (800/645-9292). At $999, including shipping, it cost about twice as much as the Delta. Packaged with the Taiwanese-manufactured Woodtek are both inboard and outboard tool-rest bases, 5-inch handwheel, 3-inch faceplate, drive center, cup center, and 4-inch tool rest. The lathe has a 12-inch inboard and 16-inch outboard swing, is 37 inches between centers, and has a 1-inch x 8-tpi right-hand-inboard/left-hand-outboard spindle thread. The lathe weighs in at about 300 pounds, has a cast-iron bed, variable speeds (360–2100 rpm), indexed head, No. 2 morse taper headstock and tailstock, a sheetmetal base cabinet, and a $^3/_4$-hp, 120/220-volt TEFC motor. It is shipped completely assembled.

I'm very pleased with the overall workmanship on the Woodtek. The bed is machined "mirror bright" (no machine marks), so the tool rest slides easily. The tool rest and tailstock lock down easily and securely. The headstock and tailstock align precisely (the Delta was about $^1/_{16}$ inch off center). The only noteworthy design shortcoming is that the tailstock spindle is not hollow. All-in-all this is a pleasant-to-use, well-built, heavy-duty machine that would probably be right at home in an industrial arts class or cabinet shop as well as the home workshop.

Two minor criticisms: The instruction manual is very poor, and the 3-inch faceplate included with the lathe had no screw holes. Woodworker's Supply has a toll-free technical-support line to solve the first problem; a hand drill solved the second.

This lathe should satisfy many woodturners who find the $500 lathes too light, but do not want to spend the money on a Conover, General, or Woodfast.

—Tom Bourg, Baton Rouge, LA

Record CL3

A few years ago, when I was employed by Record Tools (905/428-1077) to write owner's manuals for them, I got to know their CL1 and CL3 wood lathes quite well. Good lathes both, they share a common heritage (originally Coronet) but differ quite a bit in their composition and usefulness. The CL1 hasn't been marketed in North America for a while now, but plans are for it to reappear with some modifications. The CL3 is available from Highland Hardware (800/241-6748) and soon, perhaps, elsewhere.

Starting at the headstock, the CL3 has a $^3/_4$-hp motor and five speeds. A poly-V belt provides excellent power transfer and belt life. The CL3 employs a substantial $1^1/_8$-inch shaft running in an adjustable phosphor bronze bearing which, lubricated with SAE 50 oil, will outlast its user and provide smoother, quieter operation than ball or roller bearings. The spindle includes a No. 1 Morse taper and is threaded $^3/_4$-inch x 16 tpi.

The CL3 is available in 36- and 48-inch capacities between centers, and because the ways are made of solid bar stock not castings or tubular stock, it's easy to customize your lathe to suit your needs by adding more bars and supporting hardware or by cutting the standard bars to make a more compact package. The bars are chrome-plated, requiring minimal effort to keep clean and rust-free.

The CL3 has a pivoting headstock, allowing for more swing (optimally 30 inches with the bowl-turning option) than the standard 12-inch swing over the bed.

Structurally, Record products are sound, well finished, and can be assembled and installed easily and reliably. While some folks question the CL3's choice of headstock bearings, I don't, and while it could be changed to a ball or roller bearing I think that exceptionally smooth operation would be sacrificed for the sake of convenience of maintenance. The CL3 in this area is more than a match for any other lathe.

I particularly appreciate one recent change: handle position for locking the tool-rest height is now variable; it always used to lock in the wrong place. A cam lock mechanism would be nice at the tool rest and tailstock, but the compression mechanism works fine and you soon get

used to its action; also, it helps to be able to reposition the locking point for convenience. Indexing would also be nice to have, as would a spindle-locking pin, but hey...what's character without idiosyncrasy?

—Mark Salusbury, Markham, Ontario

Record RPML 300

I had been thinking about a small lathe since the AAW Symposium in Provo, Utah. There, I had looked at both the Carbatec and Klein lathes. They are nice little lathes. They are very good for pens, tops, small bowls, etc. I wanted a small lathe, but with enough heft to turn bowls up to eight or ten inches. When the July/August 1993 issue of *Woodturning* arrived in the mail, I found my lathe. Technical editor John Haywood had reviewed a new lathe from Record Power: the RPML 300, a compact swivel-head lathe.

This was just what I had been looking for, but I didn't feel I could afford to buy the lathe and pay shipping from England. So, I forgot about it. Forgot about it, that is, until my April 1994 copy of Woodcraft Catalog arrived in the mail. There on the cover was my lathe. A phone call to Seattle assured me that my lathe was indeed here! In fact, they were offering it with a live center and two video tapes on turning. My wife said the magic words, "If you want it, why don't you buy it!" And now I have a mini-lathe with 12 inches between centers, $8\frac{1}{2}$-inch swing over the bed, and a 14-inch swing when the head is swivelled outboard.

Originally, only Woodcraft offered these lathes. I've since seen them in several other catalogs, plus one at Eagle Hardware during the Christmas shopping season. For some reason, Record Power lathes have disappeared from the current Woodcraft catalog. I did find them in Trend-lines catalog No. 513F (800/767-9999), the most recent catalog from Harbor Freight Tools (800/423-2567), as well as Highland Hardware. At less than $400, this is a good little bowl lathe with minimum spindle-turning capability. It will turn small objects like lace bobbins, baby rattles, and goblets in the spindle-turning mode. Once you add a chuck, your length is greatly reduced unless you remove the tailstock, which takes only a minute. It isn't very satisfactory to put a Jacobs chuck in the tailstock to drill a hole in a workpiece held on the faceplate or in a four-jaw chuck. There just isn't any room.

Incidentally, all other lathes offered by Record Power use two round bars for the lathe bed; the RPML 300 was the first deviation from this design. It uses a solid box-section cast-iron bed, very rigid and very heavy. The lathe bed is accurately machined so that the tailstock and tool-rest assembly slide easily along the length of the bed. The lathe has three speeds: 540, 1140, and 2400 rpm. On small items I just use the highest speed. For bowls, the other speeds are needed, especially when roughing in from a chunk.

I've had the lathe for nine months now and have turned a great many bowls, baby rattles, bottle stoppers, tops, and goblets on it, and I'm still happy with it. Why?

1) The RPML 300 has a $\frac{3}{4}$-inch x 16 tpi spindle with a No. 1 Morse taper in the headstock and tailstock, the same specifications as my old lathe. All of the faceplates, screw chucks, and four-jaw (Nova) chucks from my old lathe fit on the RPML 300.

2) The lathe is small, compact and hefty. It measures just 26 inches in length without the motor (with the motor it's about 39 inches), but weighs 90 pounds. It's powered by a $\frac{1}{3}$-hp. The switch is prewired and ready to plug into any 110-volt three-prong grounded outlet.

3) The spindle runs in two sealed-for-life ball race bearings. The larger of the two bearings is housed on the thrust side of the headstock. Record claims that the bearing recesses are machined to plus or minus .003 inch and the spindle is ground to the same tolerance.

4) Finally, the swivel-head feature impressed me considerably. Hollowing bowls on a regular lathe is sometimes difficult, to say the least. With the RPML 300, loosen the headstock locking bolt and rotate it about 30 degrees outboard. Now, you can stand comfortably in front of the bowl while hollowing it. At this angle, you can still use the tool rest on the lathe for bowls up to about 10 inches in diameter. Of course, you can't easily rough out the outside of a 9- or 10-inch bowl on this lathe. I did some of the roughing work on my old lathe, then moved to the RPML 300 for finishing the outside and hollowing the bowl. If you don't have a larger lathe, this is a problem.

There are some negatives to the little lathe. I suppose to cut costs, there are no locking handles. You either have to use Allen wrenches or open-end wrenches to make adjustments. A $\frac{3}{4}$-inch open-end wrench will fit the tailstock, headstock swivel, and the tool-rest lock bolts. A different wrench is required for the motor tension lock. Three Allen wrenches are supplied, but I bought a set of metric T-handles after a few days of fighting with the regular Allen wrenches. In a later catalog, Woodcraft offered a Handle Upgrade Kit for $12.95. By the time it was available, I had it well in hand with the wrenches and T-handles, so I didn't bother buying the kit.

There was one major problem. Changing to the slowest speed or from it was nearly impossible. There's too little clearance between the pulley on the headstock spindle and the housing. You can loosen the set screw in the pulley and slide it to the right to get more clearance, but you then have to slide it back and

lock it up again once the belt is in the correct position. This is a bit of a pain, but then, I normally run it full out for many of the things that I turn. There is no problem in converting between the 1140 RPM and 2400 RPM steps. I think they could have left a little more room, or designed the pulley to be positioned a little further to the right. This is mostly aggravating, not debilitating.

With the few problems I've described, this is still an excellent little lathe and I believe a good buy for the money. You've got some real heft, plus turning capacity up to 14 inches. It's not really a portable lathe like some of the other small lathes available, mostly because of the weight. For someone with limited space, the RPML 300 gives big lathe performance in a small package and it does little lathe work well, too!

—Fred W. Holder, Camano Island, WA

Jet 1236 Lathe

I didn't have much woodturning experience when I bought my lathe, but I read lots of articles and I knew what to look for. In fact, I purchased my Jet 1236 after making a single bowl on the poorly maintained lathe at the local adult high school.

The Jet has several features that appealed to me. The first is the rotating headstock with the tool-rest extension included to make bowl turning unencumbered by the lathe bed. Secondly, it has seven speeds that are easily changed. Furthermore, the stand is included and the spindle, 1-inch x 8-tpi, is a standard size for accessories.

I made several modifications to the lathe, based on advice in books and videos. I raised the lathe by attaching two 4x4s to the stand which also extended the width of the base by a few inches for more stability. I enclosed the stand with $^3/_4$-inch plywood up to the switch (using sheet metal screws through the stand into the plywood), and filled the base with about 700 pounds of sand and pea gravel (scrounged from my backyard).

One famous wood turner advises, "you can buy a few faceplates and several boxes of screws for the price of one lathe chuck," but I bought a Oneway four-jaw chuck anyway. lt is a great accessory and I use it all of the time, except for some deep hollow vessels or bowls larger than 12 inches, when I use a 4-inch faceplate purchased from HWB Enterprises.

Bowls, especially big bowls (up to 16 inches—the advertised capacity of the lathe) are my favorite projects. I have a few tips that make turning the big ones easier on the Jet lathe. Even with 700 lbs. of weight, truing the blank can be a problem. I found that the speed can be lowered from the first indentation by releasing the speed control lever and turning it counterclockwise. This is significantly slower and safer than the slowest "position" (specified to be 550 rpm), and I hold the lever in place with a bungee cord.

I also cut 3 inches off each end of the tool rest with a hacksaw, leaving a 6-inch rest that is much stronger than the ends of the original. Sure, you run out of tool rest sooner, but the greater strength is worth the trouble of having to reposition more often. Go ahead and order another 12-inch tool rest, from Jet if you are squeamish. Even for spindle turning I prefer a solid 6 inches to the flexible full-length tool rest.

My last tip for large bowls is to saw the blank as accurately as possible and use a $^1/_4$-inch bowl gouge for truing the blank. A larger gouge hits the wood "corners" with more area and therefore more impact, resulting in serious downward force on the tool-rest extension, which is necessarily long and not that strong. Once the blank is trued and there is a place for the bevel to rub, I switch to a larger gouge.

The Jet 1236 is a great first lathe, but I will eventually upgrade to a heavier bowl lathe. Like I said, I like big bowls.

—Mark G. Knize, Tracy, CA

Central Machinery Model T-123

I read Krick and Hardy's "Tutorial" in the March issue with some interest. They make a convincing apology for the beginner to go out and spend a lot of money on a decent lathe and ancillary equipment. Had I taken their advice, I'd probably still be trying to save up enough money to buy my first lathe. Some of us don't own a set of golf clubs or a video camcorder for the same reasons we don't own a top-of-the-line, name-brand lathe—no spare $$. Some of us don't live in areas where decent lathes come up at yard sales, and you'd be hard pressed to find a used lathe for sale at anything even vaguely resembling an affordable price. For these folks I offer the following review.

The Central Machinery Wood Lathe Model T-123 is sold by Harbor Freight Tools (800/423-2567) as their catalog no. 06841-xxxx (suffix varies from catalog to catalog) for the budget-rending price of $159.99 including delivery. It's a five speed, belt-driven, $^3/_4$-hp, 12-inch x 37-inch wood lathe that comes with a 36-position push/pull-stop (one every 10 degrees) positioning wheel, one 6-inch tool rest, one 12-inch tool rest, one tool-rest holder, a live tailstock, a spur drive, an inboard faceplate, an outboard faceplate, and a pretty complete instruction manual. The drive spindle is bored through and will accept No. 1 Morse taper inserts. It's also right-hand-threaded $^3/_4$-inch x 16 tpi, so a host of moderately priced add-ons are available from a variety of sources. The tailstock also accepts a No. 1 Morse taper and has a handwheel with a ram advance of $2^3/_8$ inch. The unit is made of heavy cast iron throughout, save for the tubular bed which is made from heavy gauge steel. A separate stand

is available for about $70, but you're far better off building your own out of wood. Bolted to a heavy wooden bench the unit is stable, remarkably quiet, and relatively smooth running. Harbor Freight also sells additional faceplates (inboard and outboard), screw chucks (two sizes), a cup chuck, a drill chuck, and a bowl-turning rest for this machine at equally modest prices.

Realize that for $160, you're not getting a General Lathe—the machine has it's drawbacks. But dollar for dollar I rate it the best machine on the market. It comes with a host of features not normally found on inexpensive lathes (like a heavy cast-iron tool-rest holder and tool rests, a bored-through drive spindle, an outboard-threaded spindle and faceplate, two sizes of tool rests, and a multi-position lock/stop for positioning the drive spindle). While the basic lathe is robustly and simply made from heavy cast iron and steel, you can count on all the plastic adjustment knobs falling off in about a year (by that time you should be skilled enough to turn your own replacements). The cover over the belt drive/pulley system is thin sheet metal, noisy, and difficult to access for changing speeds. On the plus side it can be permanently removed with very little effort and replaced with a homemade cover.

The main tool-rest holder and tailstock guide are bedded on a single 3-inch-diameter steel pipe and key guide. While I have never had any problems positioning the tool rest, the tailstock frequently gets out of alignment and takes some skill and patience to realign with the headstock (since I do mostly faceplate turning, this is of little consequence to me). The locking mechanisms on the tool rest and tailstock are simple but a lot better than some I've seen on inexpensive lathes from other sources. The bad news is that overzealous tightening can strip the threads on the locking mechanism; the good news is that there is more than enough iron in these parts for the threads to be rebored with the most primitive of tools and replaced with larger, coarser-threaded locking bolts.

Replacement parts for every piece of the lathe are available at reasonable cost from Harbor Freight; however, Harbor Freight is a gigantic discount operation and getting service and parts can turn into an exercise in patience. At the time of purchase you should probably order a set of replacement bearings for the lathe (about $6), since that's the only part an inexperienced turner is likely to damage that needs a factory replacement.

The T-123 has a $^3/_4$-inch drive spindle and therefore can be rated as only a light-to-medium-duty lathe. While an outboard turning spindle is provided, using it for large-diameter work would probably be asking for trouble. However, a simple wooden disk mounted on the outboard faceplate that's provided makes a useful handwheel. Alternatively, a sharpening wheel can be mounted in its place, providing instant access for dressing up cutting tools.

The T-123 suffers from the same problems as all lathes in its class, but it's half the cost of its competitors and more robustly built. It is, in my opinion, an ideal lathe on which to learn—if nothing else, you'll learn what makes a top-of-the-line lathe expensive, as well as what features you'd like when it's time to move up to a better lathe. It is also a convenient and inexpensive second lathe to have.

A caution: Harbor Freight also sells two other bargain-priced lathes under the Central Machinery label, but these are *really* inferior to the T-123 in every way and are definitely *not* suited for any significant faceplate work.

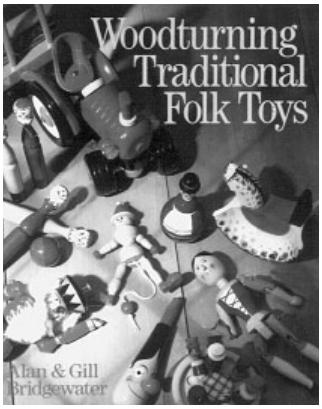
I currently own five working lathes of various makes and capacities. I purchased my first T-123 about five years ago and beat the hell out of it, pushing it way past its design limits. It was pretty easy to rebuild and it's still in service. I was so impressed with the price and performance of the first one, that I bought a second one last year.

A woman of my acquaintance was fond of remarking that "a poor workman always blames his tool." My T-123s have produced about 200 high-quality turnings, ranging in size from $^1/_2$ x $^1/_2$-inch tagua nut miniatures to $11^3/_4$-inch-diameter x 7-inch-high segmented bowls. They've won first and second prizes at juried exhibitions, have been sold out of two prestigious galleries, and were the subject of an article in last February's *Wood* magazine—a high-priced lathe is not an absolute requirement for the production of good work.

—Al Francendese, Dover, MA

Woodturning Traditional Folk Toys by Alan & Gil Bridgewater. *Sterling Publishing Co., 387 Park Ave. So., New York, NY 10016, 1995. Paperback, 128 pp, $14.95.*

IT IS REFRESHING TO READ A BOOK THAT deals with a subject in an uncommon way. Most project books approach their audience with standard ideas that have been beaten to death in journals. Woodturning books are notorious for rehashing the same project time after time. Everyone who wants to get away from the lathe for a few minutes writes an article about turning a bowl or a spindle.



Woodturning Traditional Folk Toys is a project book for woodturners who want to turn, in my opinion, uncommon and unique projects that visually are simple to behold yet can demand advanced skills to create. Bridgewater describes this text as being about "personal, finger-tingling involvement" and a desire to "make wooden toys." Folk toys are defined as "common everyday toys that were/are made by cottage craftsmen...They hark back to a time when ordinary people made all manner of beautiful wooden toys on the lathe." The toys described have their heritage in days gone by and in various cultures—European, Asian, and American.

While reading through this text I was immediately struck by how simple the designs are. I wondered whether or not they would appeal to a wide range of turners, and whether they would be marketable. Bridgewater addresses this by saying despite "horrendous political upheaval, the use of plastics, the invention of computer games, and all the rest, the humble woodturned folk toy continues to survive." This book brings the reader gently back to a simple way, a slower pace, a time when speed and complexity were not the daily norm. This way of life is of great appeal to many woodworkers, merchants, and consumers. The projects described could be produced on a high-production lathe using sophisticated chucks or on a treadle lathe or pole lathe. All projects can be made by beginners or professional turners.

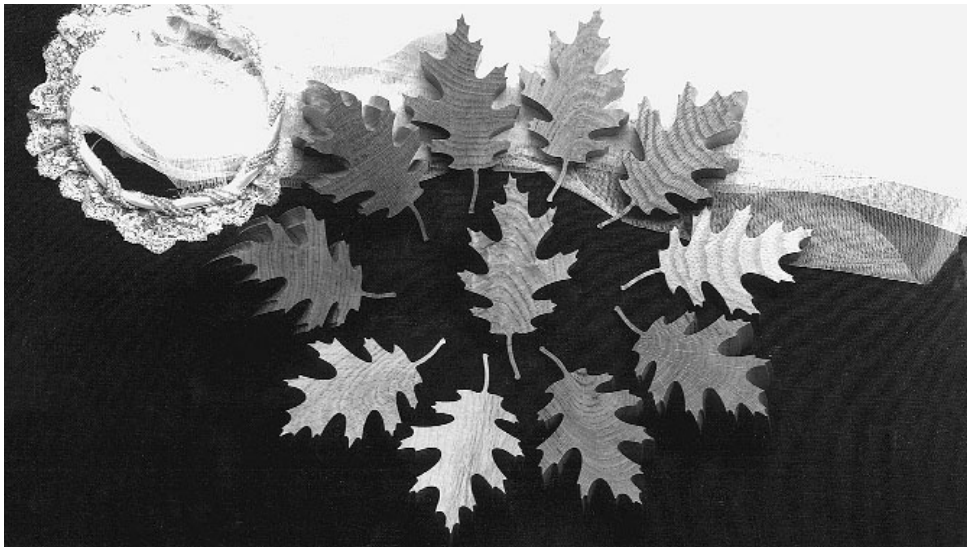
Woodturning Traditional Folk Toys is very well organized. There are fifteen projects. They include a Baby Doll, Lady Doll Shaker, Jumping Jack, Baby's Rattle with Rings, Dutch Doll with Jointed Limbs, Clown Skittles and Balls, Bilboquet Game, Tumble Doll, Pull-String Spinning Top, German Nutcracker Soldier, Round-About, Czechoslovakian Trumpet, Pull-Along Acrobats, Rocking Horse and Ride, and a Farm Tractor and Trailer. Each project has excellent diagrams, working sketches and black-and-white photos of the steps described. Each also has a tools and equipment list and a section on lathe and tool considerations. Design thoughts, wood choices, assembly (where needed), and finishing tips are also a part of each project's description. The steps involved in production are described in great detail.

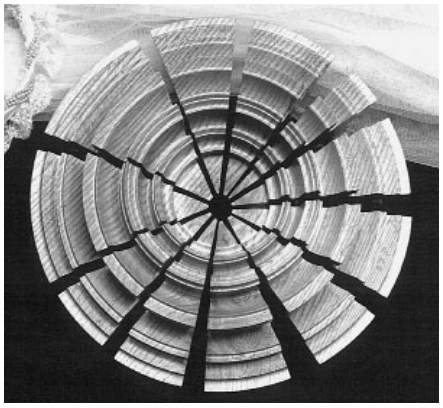
One unique addition that impressed me was the woodturning tips, inserted throughout each chapter to help the reader with any special considerations or questions that pop up during production. In the middle of the book Bridgewater includes eight pages of beautiful color photos of the finished projects. In a word, they are *delightful.*

I was skeptical when I first began thumbing through this book. By the end of Chapter 1, I was sold on these simple, fun projects. Each has its own appeal. I would encourage turners to broaden their horizons by reading this book and turning these projects. You will enjoy yourself. More importantly, the child in you and the children around you will love the toys. —*Warren Wyrostek*

Warren Wyrostek teaches woodworking at the University of South Florida.

PHOTOS FROM THE MAILBAG





This ring turning of red oak leaves, entitled "Ring of Friends," was commissioned to provide a gift for each member of a wedding party. The ring is $12\frac{1}{2}$" dia., and thus the individual leaves are about 6" long.

—Judd Mosser, East Aurora, NY

I found a great challenge in these "Jeanie Jugs" from the "I Dream of Jeanie" TV series. I scaled them from the original picture in the opening credits. They were turned in three and four stages of assembly, so as to fine-tune the inside as precisely as the outside.

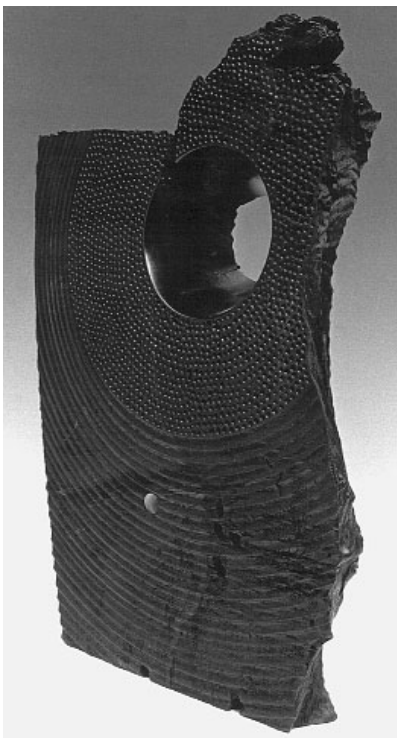
—Vaughn Raviart, Eureka, MT

Matt Horton

Here are two platters I turned from a large black walnut tree that the power company took down. They are mirror-image crotch pieces from either side of the pith, $15\frac{1}{4}$" dia.

—Dale Larson, Gresham, OR

Rich Killion



This lathe-turned sculpture, "Open Mind, Open Heart," recently received a third-place award in the "Art of the State: Pennsylvania '95" exhibition. It is of scorched maple, $12\frac{3}{4}$" high.

—Dennis Meuller, Hatboro, PA

Our new digs, with administrator Mary Redig, right, and assistant Eunice Wynn.

MOVING ON, MOVING IN

If leaving home is a rite of passage, the AAW has come of age! After almost five years working out of her living room, administrator Mary Redig has overseen the relocation of the AAW office to a real office space a few miles away. The phone and fax numbers stay the same, and our new address is:

3200 Lexington Avenue
Shoreview, MN 55126.

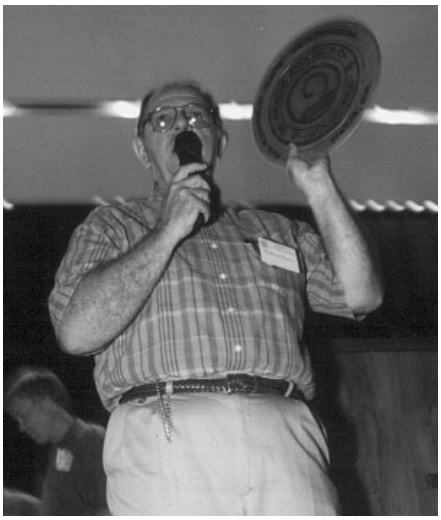
A number of members from the Minnesota Woodturners Association helped with the move. Special thanks go to Hal Malmlov, Chuck Pitschke, Jeff Redig, James Tracy, and Don Wattenhofer.

Mary reports that she and her assistant, Eunice Wynn, are pretty well settled and enjoying the opportunity to organize things better. With several times more space and additional file cabinets, the piles of boxes and papers that were taking over her home hopefully won't rise as high. She invites anyone in the area to stop by and say hello.

THANK YOU, CALIFORNIA

Everyone who contributed to the success of the ninth annual AAW symposium at UC Davis last July deserves a round of applause. The list includes the following helpers from the local Bay Area Woodturners: Ron Newcomb, Mark Schroeder, Ted Holsom, Al Hanson, Anne Glynn, Jim Lawson, Woody Collins, Berry Hermanson, Neal Devore, Ron Pike, Chris Shaker, Warren Atkins, Sally Atkins, Jim Glasse, Everett Eiselen, George Paras, Dale Anderson, and Loren Anderson.

And these helpers from the Nor-Cal Woodturners: John Alexander, Everett Beckwith, Jerry Bracketti, Jerry Doyle, Foster Giesmann, James Green, John Hardwick, Mets Lerwill, Herb Medsger, Jo and Will Michaud, John Morton, Gordon Nash, Dave Parmenter, Larry Prose, Glenn Robison, Tom Robison, Leon Saunders, Jim Stout, Russ Swenson, and Noble Waidelich.



Generous contributions of work, tools, supplies, and wood, amounting to over 300 items, brought in more than $12,000 for the Education Fund at last July's symposium. Here auctioneer Willard Baxter fetches $185 for a platter, turned and engraved by Nick Silva to commemorate the symposium.

The organizing committee, which did a formidable job, was chaired by Dale Patton, and members included Merryll Saylan, Charlie Gabriel, Jim Lawson, Bob Morelli, Norm Hinman, George L. Paes, Bruce Friederich, and Charles Brownold.

Local lathes were contributed by Charlie Gabriel, Bob Morelli, John Spitzenberger, Karl Pohl, and Norm Hinman.

Four Delta lathes were supplied by Delta International Machinery Corp., Pittsburg, PA. Grinding wheels came from the Abrasives Division of Norton Co., Worcester, MA. Grinders and drill motors came from Skil-Bosch Tool Co., Livermore, CA. Robert Sorby contributed one of their new lathes. John Nichols and Tim Clay supplied lathe parts. Wood was contributed by Quail Valley Veneer Mills and by California Hardwoods, both in Auburn, CA, by Tropical Exotic Hardwood of Carlsbad, CA, and by One Good Turn of Murray, UT. Hot Stuff and other supplies were donated by Liberon Supplies in Mendocino, CA. Other supplies came from Woodcraft Supply in Sacramento, CA, and Packard Woodworks, in Tryon, NC.

And, of course, thanks to all the demonstrators, trade-show people, auction participants, and others who made the event so full.

DOINGS AT ARROWMONT

Rodger Jacobs, of Newland, NC, has been busy at Arrowmont School of Arts & Crafts this year. In response to an invitation extended to all faculty members, he engaged in a week

Rodger Jacobs refinishing the Arrowmont totems.

"The Gong Show," a birthday present made by Rodger Jacobs in collaboration with others for Arrowmont's fiftieth.

of collaboration with Ron Koelher and Susan Moffett, both art professors at small universities, and Arrowmont assistant Caryly Brt, to create an outdoor installation celebrating Arrowmont's fifty years of teaching craft classes. He designed and they all turned the components for and erected "The Gong Show" (shown above right).

Except for the gongs themselves, which are oxygen tanks sawed open at the bottom, "The Gong Show" is made entirely of yellow locust, the trees cut from dead standing timber on the mountain behind Jacob's studio. He turned the four 8-foot posts on his Conover lathe; the rest he roughed out to be finished at Arrowmont. At the school last June, Jacobs clamped two General lathes end to end to get enough bed length to turn the strikers. And the ring decorations on the oxygen tanks required hand-turning the lathe; under power, the steel quickly blunted the point on Jacobs' Thompson tool.

While there, Arrowmont's original director, Marion Heard, expressed her concern that the elements were taking their toll on the AAW totems, erected for the 1990 symposium at the school. Jacobs concurred and proposed to the AAW board that he refinish them, the AAW picking up the cost of materials. He drove the bobcat down from the maintenance building, parked it between the totems, and used the forks as a scaffold (photo, above left). "The wood was so dry," says Jacobs, "that it sucked up two gallons of Minwax Helmsman Spar Varnish.…All the chapters' sections are intact, but the boys from Oklahoma need to get some bigger lathes, as their piece was made up of dinky little spindles and was a pain to spray. Daniel's cap still has most of the propeller, and Indiana's colors are still bright."

Bob Marshall

Bob Stocksdale and Bonnie Klein enjoying Bonnie's workshop for the Capital Area Woodturners in Alexandria, VA, last April. Bob was a surprise visitor, in town for his and Kay Sekimachi's show, "Marriage in Form," at the Renwick Gallery.

MORE CHAPTERS TO HEAR FROM

Welcome to these new chapters, all signed on since the beginning of the year, bringing the total to 74: Front Range Woodturners (Denver, CO), Redwood Empire Woodturners

BULLETIN BOARD

(Ukiah, CA), Southwest Idaho Woodturners Association (Boise, ID), Tri-State Woodturners (Chattanooga, TN), Smoky Mountain Woodturners (Gatlinsburg, TN), Turners Anonymous (Pittsburg, PA), and Ark-La-Tex (Texarcana, TX).

Many chapters already do this, but if yours hasn't, consider adding the other 73 chapters, as well as the AAW's editor, to your newsletter's mailing list. We can all learn something from each other.

KOKESHI VIDEO AVAILABLE

As many who attended the Davis symposium know, the documentary video that accompanied Akihiro Sakurai's demonstrations provides a fascinating overview of the tradition and production of kokeshi dolls, including a visit to the Kokeshi Museum. Through permission from that museum, the AAW can provide copies of the tape to interested members. At $8 to cover the cost of duplication and shipping, it's a great addition to your own or your chapter's library. Order through Administrator Mary Redig (even if you left your name at the symposium, you need to contact her again).

NATIONAL CHAPTERS SHOW

The second AAW national show, scheduled to open January 28, 1996, will be at least twice as large as the first. There's space for 250 pieces! As this issue goes to press, organizer Tom Kamila is sending invitations and directions to all AAW chapters. Look for follow-through from your chapter president, or contact Kamila at 508/827-4314.

HERE'S LOOKING TO YOU

We're still looking for holiday project articles for the December issue, and for photographs of past symposiums so we can commemorate next year's tenth anniversary symposium. If you have good stuff, please send it to editor Rick Mastelli, RR1, Box 5248, Montpelier, VT 05602.

CALENDAR

Arizona

Ed Moulthrop and Philip Moulthrop at the Joanne Rapp Gallery, September–October, Scottsdale. 602/949-1262.

California

Hans Weissflog at the Banaker Gallery, opening September 7, San Francisco. 415/397-1397.

Connecticut

Beginning Bowl Turning, Bill Gundling. Brookfield Craft Center, October 7–8, Brookfield. 203/775-4526.

Georgia

"Woodturning Southern Style III," mini-symposium of the Georgia Association of Woodturners, featuring Rude Osolnik, Charles Alvis, John Mascoll, and Nick Cook, demonstrating advanced as well as basic techniques. October 27–29, Red Top Mountain State Park. 404/919-8800.

Maryland

"Ghost Vessels," by Geoffrey Wilkes. Franklyn Street Gallery, October 27–November 18, Hagerstown. 301/791-3132.

Free Workshops with Joe Dickey and Frank Amigo at the Columbia Art Center, October 14 and 21, Columbia. 410/730-0075.

Massachusetts

Basics of Bowl and Spindle Turning, Angelo Aifreddi, Mondays, October 2–December 4; Turning and Bending Hat Forms, Johannes Michelsen, November 4. One Cottage Street School of Fine Woodworking, Easthampton. 413/527-8480.

Minnesota

"Nature Turning into Art," the Ruth and David Waterbury Collection of Turned Wood Bowls. The Carleton Art Gallery, October 13–November 16, Northfield. 507/663-4000.

Missouri

"The Joy of Turning," mini-symposium of Woodturners of St. Louis, featuring Alan Lacer, Bonnie Klein, Clay Foster, and J. Paul Fennel. September 16–17, Kirkwood. 314/227-2256.

New Jersey

"The Spinning Face of Gravity: Tops by Joe Van Putten." Bergen Museum of Art and Science, through September 10, Paramus. 201/265-1248.

New York

"Marriage in Form: Kay Sekimachi & Bob Stocksdale," American Craft Museum, through October 8, New York. 212/956-6047.

North Carolina

Mini-Symposium co-sponsored by the North Carolina and Triangle Woodturners and the AAW for novice and intermediate turners. Mitchell Community College, October 28–29, Statesville. Registration, $60. 704/246-2572.

John C. Campbell Folk School: John Weissenberger, October 21–27; Bill Stephenson, October 29–November 4; Fred Metzger, December 3–9. Brasstown. 800/365-5724.

Pennsylvania

Deadline: Wood Turning Center's 1996 and 1997 International Turning Exchange, November 30. 215/844-2188.

Segmented woodturning with George Radeschi, Saturday–Sunday monthly, Doylestown. 215/348-5208.

Tennessee

Appalachian Center for Crafts: Paul Ferrell, Exploration of Form, September 23–24; Rodger Jacobs, Legged Woodturning, October 28–29. Smithville. 615/372-3051.

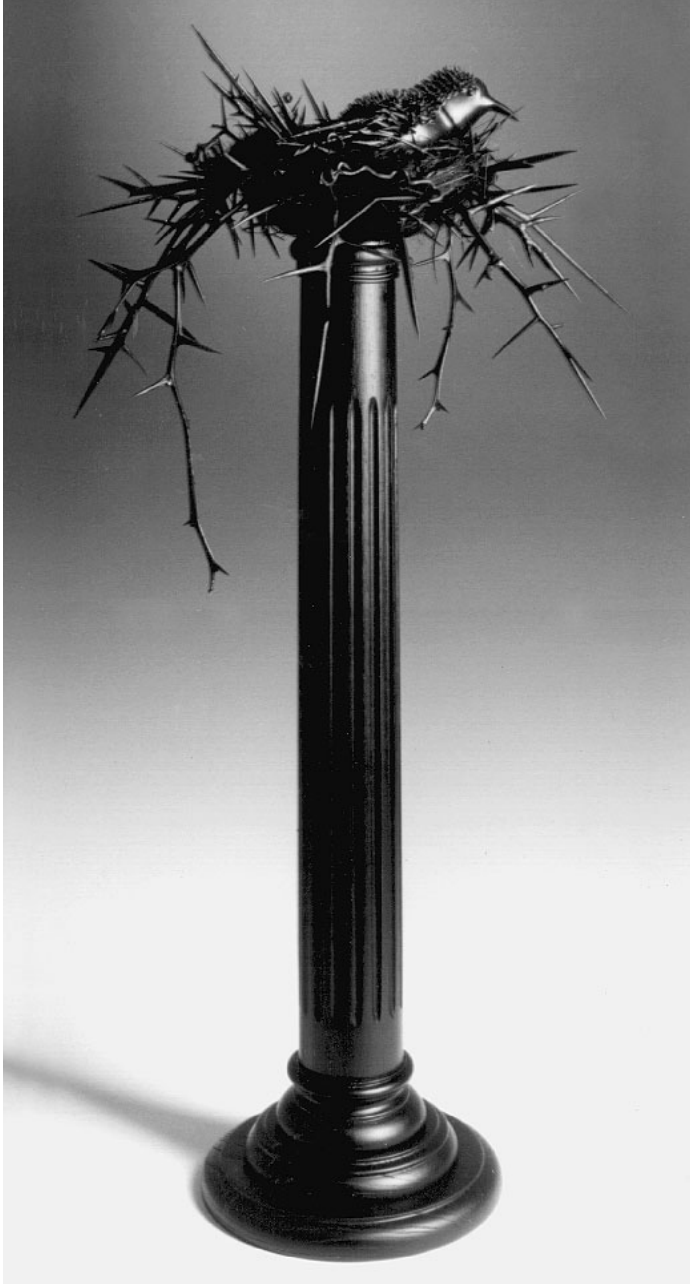
Washington DC

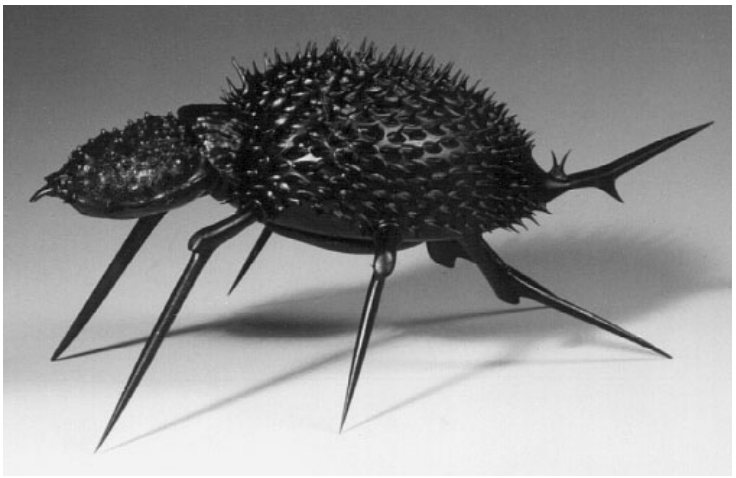
Call for entries: Smithsonian Craft Show, April 24–28. Deadline: October 12. 202/357-4000.

France

"European Turnery Conference," Centre Jurassien du Patrimoine, October 13–15, Lons le Saunier. 01 33 84-47-12-13.

Deadline for December Calendar: October 15, 1995.





Less than fulfilled by his piano repair and restoration business, David Sengal, of Boone, N.C., began creating wood sculptures, incorporating found objects. Much of the fun, he says, derived from the reaction of others, so different from his own intentions. When he acquired a lathe, around 1982, he became almost exclusively a maker of vessels. He thanks Robyn Horn for sending him the box of honey locust thorns that led to the thorn series he's been making since 1989, and Stoney Lamar and Mark Sfirri for the recent inspiration of their multi-axis work. The boxelder bird in "Thorn Bird," nesting on a two-foot-high ash and oak pedestal, is spindle-turned on at least eleven centers and hollowed (the lid's in the top of the body). "Beetle Box," above right, is of pear, 6 inches long, and turned and hollowed on two centers. The head is a found spider crab shell, the thorns are rose and locust. Inspired by the action painting of Jackson Pollock, sandblasting decorates the 9-inch diameter myrtle bowl, top. And the 13-inch high mulberry vessel, left, features rose thorns and the ebonized, lacquer finish evolved from years of piano restoration.