

Seri Robinson – DIY Spalting
January 9th
8:30-12:30



Professor Seri Robinson will be Zooming in to BAWA in January to educate the group about spalting.

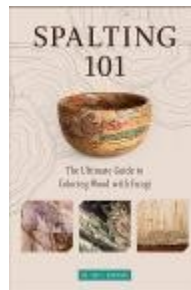
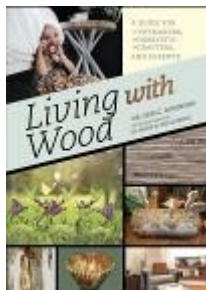
Seri is a Professor of Wood Anatomy at Oregon State University who also teaches the woodturning program there. This woodturner with over 20 years of experience researches the fungi responsible for spalted wood and potential applications for spalting fungi, from solar cells to textile dyes.

If you've ever wanted to learn about spalting, be sure to attend this meeting. You will learn about what spalting actually is, different colors of spalting, how they occur naturally, and how you can induce spalting in your wood in what should be an engaging and informative session that you won't want to miss.

The voice of the artist/scientist:

I'm an associate professor of wood anatomy at Oregon State University and work within the field of art science as a bio artist. I'm invested in maintaining a balance in my work, striving to not be 'just' an artist or 'just' a scientist, but to blur the line between the two disciplines. Neither science nor art can exist without the other, and the intersection of the two disciplines—the substantial Venn diagram overlap, is critical for excellence in either field.

Intersections, in particular, fascinate me, and spalted woodturning is the perfect medium to explore both internal and external intersections. The intersection of science and art. The intersection of old and new methodology—from historic spalted intarsia and marquetry work in the 1400s in Europe to modern spalting methods today that use extraction methods and pipettes. The intersections of form and self—the duality of being an intersex person—the understanding of biological sex in its most primitive form and the communication of those concepts in turned and reversed curves. And underlying it all, the intersection of how humans perceive fungi—both reviled/feared and celebrated as a food source. Spalted wood offers endless opportunities to explore and expose intersections both historic, modern, personal, and external.





BAY AREA WOODTURNERS ASSOCIATION

A CALIFORNIA NONPROFIT CORPORATION
LOCAL CHAPTER AAW

Club Meetings

Club Meetings-

Meetings are held on the 2nd Saturday on each month by Zoom conferencing. Invitations are posted to all members: guests are welcome by request to: membership@bayareawoodturners.org who will forward an invitation to the next meeting.

Zoom sessions open at 8:30am. The meeting start time is 9:00am.

See bayareawoodturners.org/ for club information.

BAWA Officers Meeting -

The Association's officer meetings are held each month. Contact Jim Rodgers at: president@bayareawoodturners.org for more information.

2020-2021 Event Schedule

January 2021 9th	<p>Seri Robinson-Remote DIY Spalting 8:30am - 12:30pm</p> <p>https://www.northernspalting.com/about-us/dr-spalting</p>
February 2021 13th	<p>Michael Alguire-Remote Wheel of Delicacy 8:30 - 12:30</p> <p>https://www.michaelalguire.com</p>

The Bay Area Woodturners Association is a local chapter of the American Association of Woodturners. Our purpose is to provide a meeting place for local turners to share ideas and techniques and to educate the general public regarding the art of turning. The Association usually meets the second Saturday of each month. The Association periodically sponsors exhibitions and demonstrations by local and internationally known turners.

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Jim Rodgers-Learning from Disaster

December 12th

In December BAWA President, Jim Rodgers, hosted a wide-ranging discussion of all things turning. Members of BAWA showed some of their not-ready-for-prime-time pieces and discussed how they dealt with the problems (or not.) The disaster discussion covered a host of problems and had input from almost all participants.

Some of the topic included:

A story of a madrone root burl foraged in the wild only to turn out to be scorpion and termite nest.

A very dry Liquidambar bowl finished with 100% Tung oil (Rockler) thinned with denatured alcohol rather than paint thinner – dried quickly but not much sheen. How do you make it shine?

Consensus: Either with shellac – not waterproof – or buffing.

Shellac: Everything sticks to shellac. Use dewaxed shellac if a topcoat is desired.

Wax settles to the bottom so dewaxed can be decanted from a container of waxed shellac.

Shellac is generally good for up to 3 months. If it doesn't dry in a few minutes it's too old - discard.

Can make from flakes which don't go bad – make a small amount, discard excess when it's too old.

Shou sugi ban – a Japanese burning technique which waterproofs and stops insect intrusion. Torch, wire brush, and oil. It also will emphasize the grain.

Creative carving can cover a multitude of sins – a blown HF neck can be carved into a stream down the side of the vessel. When using Native American designs, try to use designs from the same tribe on a given piece.

Coring – Freshly cored bowls can be thin at the bottom. Be very careful when cutting a tenon to avoid making a funnel. Pay attention, especially when starting a cut and removing the tool from piece at the end of a cut – that's when most catches occur. Digs from catches can be filled with Sculpey III clay crushed and mixed with epoxy or CA which gives good contrasting, easily finished fill.

Woodturning allows for many redesign opportunities as we create a project.

How to 'fix' mismatched pen parts – 1) make metal ring, 2) knock off the corners at the junction.

Dealing with cracks in large shallow platter. (Black Acacia cracked when re-turning even after aging 12 years in crawlspace and resting another 3 weeks in the shop.) There was a discussion of options: 1) carve feet to carve away cracked spot; 2) make traditional bottom; 3) convert to wall hanging; 4) hide crack by dyeing ring; 5) woodburning edges of cracks to highlight them

Bottom line – you need to adapt to changes that wood discloses as you work through a project.

For details of these and other issues, see the video of the meeting in the Members Only section of the BAWA website.

Also – Many styles of holiday ornaments were shown for the last President's Challenge of 2020. (See following page)



Charlie Saul-
Top of root ball



Charlie Saul-
Porous termite nest



Jan Blumer-
Platter



Jan Blumer-
Platter cracks



Ken Plante-
Shou sugi ban HF



Joe Martinka-
Filled gouge



Joe Martinka-
Sculpey III



Michael Hackett-
Bowl interior



Michael Hackett-
Bowl closeup

February 13th Remote Demo-Michael Alguire

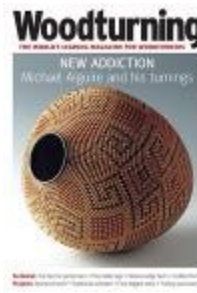
Wheel of Delicacy

8:30-12:30

Michael Alguire is a native New Mexican, born in Albuquerque. He began his wood turning hobby in 2013 making pens and small wooden ornaments. His passion has grown and his art has flourished to intricate wood turned hollow forms, including bowls, vases and abstract art pieces like basket illusions and more intricate pieces called "Wheels of Delicacy."



Michael's 13 years as a Machinist at the Very Large Array has helped him understand the mechanical aspects of his art. With no formal training in the Fine Arts field, Michael's creativity comes from within. His inspiration comes simply from seeing a piece of wood in its raw state and imaging the possibilities. Today Michael lives in Datil, New Mexico with his wife Patricia, his two sons, his two daughters and a small farm.



Membership News

By Hugh Bevan-Thomas



2021 has arrived, if you have not already renewed your membership then you will not be receiving invitations to our zoom meetings. Unfortunately, our computer does not recognize past good behavior!!

If you cannot remember whether you renewed or not, it is a very simple process to click on your profile at the BAWA website. It will clarify your status immediately.

As always, you can renew online, you will receive three emails. The first one indicating that the computer recognizes you are in the process of renewing your membership. The second email will show you have completed your membership application and the third email will be an invoice showing that you've paid your membership dues. If for some reason you do not get all three emails then you have not completed the process.

If you wish to send a check you could do that with a check made out to be BAWA and send it to:
BAWA Treasurer
1584 Webb Lane
Walnut Creek, CA 94595

Taking Measure

COVID-19 has disrupted the entire world, and it is affecting all of us, in every aspect of our lives. Self-quarantine, Social distancing. It can be overwhelming and stressful. Until this crisis passes, we must continue to create, learn, and share.

That said, now may be the perfect time to isolate yourself in your workshop-- turning, planning and prepping for projects, reviewing favorite woodturning magazines, watching videos, and more.

Remember, safety is always a top priority. Take measure: observe precautions, act wisely, and keep yourself safe. Together we are stronger, together we are the woodturning community.

President's Challenge Part 3 Ornaments



Anna Duncan



Robert Ackley



Dave Bentley



Peter Nakatani



John Langen



Jay Holland



Rick Dietrich

President's Letter

January 2021



Happy New Year to everyone! We look forward to a much better year and want to forge much of 2020!

SO! Let's get to work in our shops. Larry Batti is heading our program for *Beads of Courage* – a chance to contribute to the lives of children with difficult medical issues. A chance to use our skills in saying that we also acknowledge what they are going through to live; our sharing by providing a piece of wood.

The lidded bowl (or box) has specific requirements to meet the need of the program standards; Larry is sending all that information to you through our email.

Already John Muir Walnut Creek and Concord campuses are excited to receive our projects, Other hospitals will follow as we are able to provide the products.

If you have completed any *Beads of Courage* boxes by meeting time, let's see them. If the project is in works, let's see it. We have some great programs lined up for 2021 and look forward to them also.

Let's have a great year!

JimR

<https://smile.amazon.com/>

Attention BAWA members who shop on Amazon.com

BAWA is always looking for ways to generate funds to improve our Club. BAWA recently registered with Amazon's program to support charitable organizations, AmazonSmile. It is an easy, no cost way for our Club to benefit from your Amazon.com shopping expenditures.

AmazonSmile is a simple and automatic way for you to support your favorite charitable organization; **BAWA!** When you shop at smile.amazon.com, you'll find the exact same products, prices, and Amazon Prime benefits as Amazon.com, with the added bonus that Amazon will donate .5% of the purchase price to BAWA.

Here's how it works:

To shop at AmazonSmile simply go to smile.amazon.com from the web browser on your computer or mobile device. On your first visit to AmazonSmile, you need to designate BAWA to receive donations before you begin shopping. We are one of the almost one million charitable organizations registered with Amazon Smile. From then on when you enter Amazon through <https://smile.amazon.com/> every eligible purchase you make will result in a donation to BAWA.

You may want to bookmark the AmazonSmile URL to your desktop or mobile device to insure that you don't end up at the standard Amazon portal, thus bypassing benefit to BAWA.

If you haven't already done so, please consider registering with AmazonSmile and designating BAWA as your beneficiary. And encourage your friends and family to do likewise! We look forward to updating membership monthly on donations from this unique program.



Tree Article #43 The Implacable Redwood Tree

By Tony Wolcott

Redwood trees are relentless and unstoppable. I remember driving through a redwood as if that was the regular route of many a road. We know that giant redwoods up in Humboldt have their ecology up in the clouds. Even trees grow up there, and almost every plant and animal marvels at the absence of humanoids. Who needs the bi-peds?



FEMA and CalRecycle presently employ me. They want me to look at the fire-damaged trees from Half Moon Bay to Carmel, out of Santa Cruz, and up to Big Basin. Some places look like moon-scapes, fires so hot the soil turns to white paste, and the trees are toothpicks. In other places, the black scorch marks lightly color the bark on one side only, tree canopies untouched.

Only redwoods can survive this type of damage. Other species such as tanoak (*Notholithocarpus densiflorus*), Douglas fir (*Pseudotsuga menziesii*), Pacific madrone (*Arbutus menziesii*); all are susceptible to irreversible fire damage. The obvious factor is bark thickness. The coast live oak (*Quercus agrifolia*) is the best at surviving fires intact. This live oak has two thick layers of bark. However, the redwood tree is far superior to the other tree species mentioned. The thickness is sometimes four inches on good size trees. The fibrous gorilla hair nature also retards fire and heat.



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The Douglas fir stump (above) cut reveals how thin the bark is. You can also see that the pith is way up in the left-hand corner. The adaptive wood build-up is done on the compression side and results from a dominant wind direction. The broader rings below contrast with the tightly spaced rings above. Does the wood quality suffer because of the adaptive wood? The heartwood is a bright reddish-white color. The sapwood looks brown and ugly. The sapwood is actively transporting water up to the tree leaves. The tree's defense to this damage is to flood the area with sap injected into the water by wood rays; hence, the sticky, dirty appearance. The other tree shown is a five-stem mammoth Pacific madrone. The bark is paper-thin, and this tree has no chance when a scorching fire engulfs it.



The photo shows a burnt-out hollow middle and a natural bark on the outside. The fibrous bark can slow a fire's progress by eliminating air in the tightly woven bark.

Continued on following page



There are two types of fires. Low growing foliage feeds the ground fire, and this fire can burn the lower trunk and down into the roots, often opening up rental space for forest creatures. The picture on the left shows the redwoods' immediate response to ground fires. Other tree species sometimes produce suckering, but this reaction signals death to the tree above. The epicormic growth shown in the right photo is the redwood's response to crown or canopy fires. This adventitious growth may seem like a last-ditch effort to survive, but over a few years, the trunk sprouting becomes branches, and eventually, the redwood reestablishes its canopy.



When a canopy fire is not a high severity, the branches themselves re-sprout, and the regeneration is much quicker. Douglas fir often has live green needles at the top, but eventually, the Doug fir will die due to the vascular cambium's damage. Madrone can have healthy looking foliage still even though there is no bark left on the trunk's bottom ten feet. Madrones do have the capability of producing phloem and cork cambium, thus rebuilding their bark. However, we haven't seen the first spring to know if the madrone has any hope. I like to save the madrones if possible, but they often lean out over roadways and wires. PG&E is not so sympathetic with the madrones. That is another story.

Continued on following page

Redwoods also have another huge advantage. They are resistant to decay and insect damage. The tanoaks are just the opposite. As we walk through the forest destruction, we often see tanoaks fallen to the ground. I have yet to see a redwood that has failed at the ground or root level. There is plenty of felled Douglas fir. Valuable salvaged wood comes from the cut redwoods. The fir once felled is immediately attacked by boring insects and engraver beetles.

We are but a grain of sand, and these redwoods tower over us. Four percent of California's forests have burned this year. Thousands of household footprints are all that remain of a rustic home in the woods. The animals fled the fires, and I have only seen one rabbit and a young bobcat ten feet apart. The park wardens say that mountain lion sightings have increased ten-fold. The mountain lions are coming down off the burnt hills. The redwoods do not move except in the wind, and that is more of a dance.



The end or the beginning?



The fire aftermath appeals to few with all the heartaches of only a chimney left; all other belongings consumed. Fire suppression results in an ever-increasing fuel load, add in the drought-- fires burn. The year called 2020 has brought in the largest fires in California's history; Wildlands Urban Interface (WUI) is a line of homes butting up against the forests and wildlands. Forest fires burn up to 500 degrees Fahrenheit. One thousand degrees Fahrenheit comes from burning houses. Newer construction burns up to two thousand degrees. The reason is that cheaper building material has high percentages of glues and other chemicals that burn hotter.

BAWA Classified Ads



We want members and others with items to sell or trade, services to render or if you're just looking to find a specific item from fellow BAWA members. Please send ads to Louie Silva at:

newslettereditor@bayareawoodturners.org

You can't beat the price...FREE!!

Rockler Helps BAWA Members

BAWA members receive a 10% discount when purchasing directly at the Concord Rockler Store at:

<http://www.rockler.com/retail/stores/ca/concord-store>.

Mention your BAWA membership when checking out, to receive your discount. Rockler also donates part of the proceeds back to the club which help support our Holiday Party raffle.



Virtual Show & Tell December

Jim Campbell



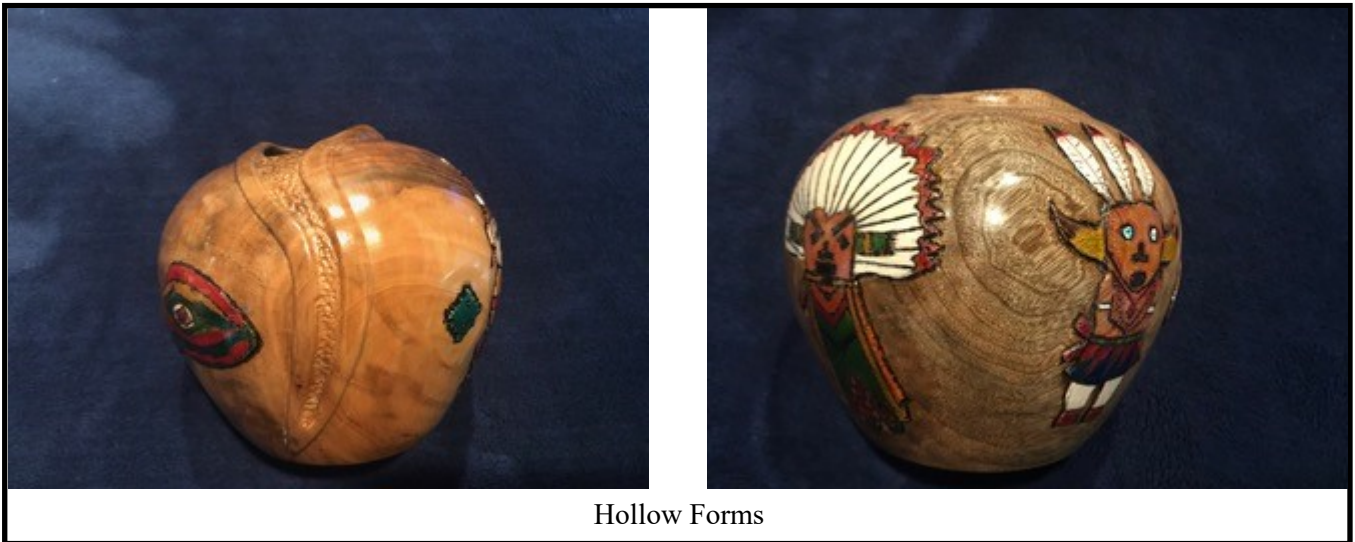
Bowl

Jan Blumer



Platter

Dave Bentley



Hollow Forms



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How to Dry Wood: A Beginner's Guide

Dr. Sara (Seri) Robinson

Wood and water have a very complex relationship, and wood drying deals with every aspect of that relationship. Below is an introduction into how drying affects wood and tips for how to dry wood so it doesn't crack.

Types of Water in Wood

Water exists in two states in wood, bound and free. Bound water is water that is in the cell walls, bound to the -OH groups that dangle from the cellulose (cellulose is a polymer of glucose and glucose is a sugar...basically water binds to some of the sugars in wood). Water always binds first to the cell wall before filling up the inside of the cells. The water in the cells is called free water, and it is this type of water that is first lost from the cell upon drying.

So, there are two types of water, bound and free. Let's start with a completely dry cell. A cell with 0% moisture content (MC) has no water, bound or free. Now we move our wood cell out of the oven in which it was drying. BOOM, it hits the air. There is moisture in the air (called relative humidity, or RH). The wood INSTANTLY starts absorbing moisture from the air.

Water binds to the -OH groups. This fills the cell wall and the cell expands to accommodate the water. Somewhere right around 30% MC, the cell walls of most wood species become completely saturated with water and can't take any more. It is at this point that the cell lumen, the inside space of the cell

(think the open, inside area of a straw), begins to fill with water. But this water, the water that fills the cell lumens, doesn't come from the air. It takes liquid water to fill up a cell lumen, so this water would have to come from something like rain, water-saturated ground, etc. And the RH of the air has to be quite heavy, around 80%, to saturate a cell wall to 30% MC. With me so far? Yes? Good.

Wood Drying, Stage I

You have cut down a tree, or taken a fallen log from the forest floor. Said log contains both types of water, and is well above 30% MC (this is a magic number, this 30%. Remember that). You take the log home and stick it in your garage. Months pass. The wood doesn't crack, but it is still drying. You are a genius! You have magically managed to get your wood to stabilize without doing a thing. You are so proud of yourself.



Wood Drying, Stage I

But wait. Another month passes. Now your log has split down the middle and warped beyond recognition. What happened?

What happened is this. Wood cells shrink and swell only within the cell wall. Once the cell wall is saturated (around 30% MC), the inside of the

cell just fills with liquid water, but the wall can't get any bigger because the wall itself is already as big as it can get. Think of a balloon inflated to capacity. You could replace the air in the balloon with water but it would never get any bigger, because the rubber can only get so big. It is the same with wood.



That prized log is now yours.

When you brought your wood home, it had an MC higher than 30%. Maybe 50%, maybe 110% (MC is a funny thing; it can go above 100% because of how the math works). A change from 50% to 45% does not change the dimensions of the wood. So water is rapidly evaporating from the surface of the wood, but the cells are staying the same size.

Wood Drying, Stage II

The time of reckoning is at hand. The second your wood hits the fiber saturation point (our magical 30%), all the free water is gone. All that is left is the bound water that is stretching the cell walls. As the bound water evaporates, the wood cell walls start to shrink. This makes the wood shrink as a whole.

Unfortunately for everyone who works with wood, water is lost first from the outside of the wood. In order for the inside to dry, water must move from the inside to the outside to evaporate. Wood likes to have an even MC throughout the piece, so it will constantly move water to try to equilibrate both with itself and the surrounding air.

But what does that mean if you have cells shrinking on the outside, but cells still swollen on the inside? Wrap your hands around a hot dog and give it a good squeeze. Squeeze too hard and the hot dog smashes. The same thing can happen with wood.



Drying rack for bowls

Wood Drying, Stage III

Enormous pressure has built up on the inside of the wood as the shell has dried and is compressing the inside. Cells are being crushed. This stage is called 'case hardening', and is a classic error phase of the beginning woodworker. Those scanning moisture readers only read moisture at the surface, so many people purchase them, scan their wood, then mistakenly think it is dry. Remember, just because wood is dry to the touch doesn't mean it is actually dry! It may just be dry on the surface.

The good news is, water from the inside is moving slowly to the surface. This

will re-swell some of the outside cells and relieve some of that pressure. If you followed a proper kiln schedule (these are available online), you dried your wood nice and slowly—slow enough to allow moisture to move out from the center before the cells on the outside completely dried. If so, you probably didn't honeycomb your wood, which is what those internal separations and cracks are called.

Wood Drying, Stage IV

An equilibrium is reached between the MC inside the wood and in the outer shell. Pressure begins to release from the inside. Some formed cracks may close at this point, and those that do close are not likely to reopen, but will be points of decreased strength in the finished piece.

Wood Drying, Stage V

The remaining extra moisture moves from the inside of the wood to the shell. The shell is swollen again but the inside is dry. In this stage, the pressure is reversed, with the inside of the wood trying to shrink but the outside being swollen and not allowing the shrinkage. This is the final (and most devastating) cracking stage. With the tension from the inside, the wood literally tears itself apart as it tries to shrink internally, and pulls against the bloated shell.

Wood Drying, Stage VI

At last, final equilibrium is reached. All of the wood is at the same MC, and is equilibrated with the RH of the surrounding air. As long as the RH of the air doesn't change, the wood will not change any more, either.

How to Avoid all the Cracking

Cracking happens while wood dries due to the forces that build up in wood as the drying stages progress. A kiln schedule is a drying schedule, specific for each wood species that gives heat and relative humidity conditions on

an hour to hour basis over several weeks. Some hours the heat may be higher or lower, dehumidifiers may run or sprinklers may run (sprinkling the top of the wood can help prevent case hardening). The kiln schedule's entire purpose is to guide you through drying without getting cracks. The schedules have been well researched and, if followed properly for each wood species, completely prevent cracking. Some, like those for sugar maple, can also affect what color the wood changes to when drying. For sugar maple, a whiter color can be achieved with one method of drying, and a richer brown color with another.

Air drying is a terrible method to dry wood as it does nothing to help regulate evaporation of water from the wood. If you are serious about working with green wood on a semi-production scale, it is worth your time to set up a kiln with a space heater and some sprinklers. Kiln plans and schedules can be downloaded for free from the internet. ■

Author

Dr. Sara (Seri) Robinson holds the Gene D. Knudson Forestry Chair, and is an assistant professor of wood anatomy in the Department of Wood Science & Engineering at Oregon State University. Her primary research areas are in spalted wood and wood sculpture, and she is heavily invested in helping woodturners better understand the science of their material. She created and runs the woodturning program at Oregon State University, and has written the quintessential resource for spalted wood: *Spalted Wood: The History, Science, and Art of a Unique Material*. You can learn more about Dr. Robinson, her research, and her programs at <http://www.northernspalting.com>

TURNING TIPS

Lathe stand mods for storage and safety

Space is at a premium where I live. I don't use my Jet mini lathe where I store it. To mobilize my lathe, I purchased a commercially available stand and added locking wheels.

Rather than attach my lathe directly to the stand, I added a shelf at each end, photo **1**. The shelf gives me a place to temporarily set things like sandpaper and finishing materials.

Additionally, it gives me a place to put hangers to keep chuck keys at hand, **2**, and to keep things like the tailstock stored close but out of the way when not in use, **3**.

As a safety feature, I added an extension power cable with a switched outlet box that I attached to the lathe stand. I plug my lathe into the switched outlet, **4**.

If there was an unwanted "event" while turning when both hands were busy, I could readily turn off the lathe using my foot.

—Randy Brunzlick, Fremont, CA



1 Shelf at each end of stand.



2 Hangers for chuck keys.



3 A place to park the tailstock.



4 Switched outlet for safety. □

Dial in the perfect angle



D.E. McIvor

Relying on the built-in guide on a table saw to dial in a precise bevel angle can be frustrating. A protractor can help you hone in on your objective, but will likely take several test cuts to land on the correct setting. An alternative is a digital angle gauge. By referencing off the table surface and then attaching the gauge to the blade using its built-in magnets, setting the blade angle becomes a simple, repeatable, and precise task.

Woodturning Tips

Lemon-Aid for Stained Hands



After a recent turning session, I returned home with black hands – no amount of scrubbing would remove the stains.

Then while preparing dinner, I squeezed a lemon. To my surprise, the stain vanished where the juice touched my hands. When I rubbed the lemon half over my hands, the stains instantly disappeared.



~ Danielle Klorig Alexandria, Virginia

(Articles courtesy of AAW)