WESTERN CAPE WOODTURNERS ASSOCIATION

NEWSLETTER : APRIL 2026

The Western Cape Woodturners Association is a group of folk with a common interest in woodturning and wood.

We aim to promote the art of turning wood and to create awareness of this craft in the community and encourage young members to join the fellowship.

Members meet every Wednesday at 6.30pm to do " hands-on " turning and get instruction and help.

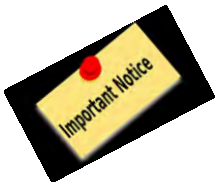
The venue is the Pinelands Hobbies Club, Nursery Way, Pinelands, Cape Town.

The Formal Meeting is on the 3rd Wednesday of the month at 7pm.

Visitors are welcome .

APRIL 2026:

In view of the Turnfest over the Easter weekend, the subject for the meeting on the 15th April still has to be decided.



REMINDER

The Turnfest at the Old Mutual Conference and Exhibition Centre at Kirstenbosch 3rd to 6th April 2026.

Western Cape Woodturners Association Committee :

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EDITOR'S NOTE :

This month we have some fun projects to keep you occupied over the Easter weekend.
That is if you are not going to the Turnfest at Kirstenbosch, where you will be enthralled with the turned items , and get a chance to turn as well.

Turn a Mushroom

Birthdays in April:

A Very Happy Birthday to :

Andre Buis, Michael Gates,
Hannes Holm, Bjorn Jochems
Ronald Munro.

We now have SEVENTY-SIX paid-up members in the Western Cape Woodturners Association.

Our grateful thanks to The American Association of Woodturners, American Woodturner & Woodturner magazines and authors :- **Asaf Peled, Charles Mak, Neil Scobie and Kurt Hertzog.**

TURN A WOODEN MUSHROOM

Asaf Peled

There is a joke about a certain kind of mushroom: eat it just once, and it's enough to feed you for the rest of your life. Applied to the woodshop: Turning a wooden mushroom can keep a woodturner busy and satisfied for an entire hour. Let me take you on a "trip" into mushroom turning.

It all started from a spore

The inspiration for my mushroom series came from a set of three simple mushrooms I turned as a gift for a friend who is a home decorator and designer. One day, she called to ask if I'd sell the mushrooms to one of her clients. She planned to use them as decorative pieces in a photo shoot, and the client was enchanted. Receiving such recognition from a stranger encouraged me to further develop the mushroom design and include it in my saleable collection.

After a year of selling at art fairs, I have observed that these mushrooms consistently inspire dramatic and positive reactions from passersby. There is something about their shape that stirs strong emotions, though I can't quite put my finger on why.

Mushroom design

Often when witnessing a discussion about a nicely turned piece, I notice that turners focus on technique: "How did you hold that?" or "Which tool did you use?" Yet, questions about design—such as "Why did you make the foot that size?"—are less common. To me, this reflects a misconception that design is an innate quality of the creator—something you either have or you don't have. In reality, design and aesthetics are skills that can be taught and refined, just like technical skills, as they are in universities and art schools. Here are the core guidelines I follow when turning mushrooms:

- A thin, ogee-shaped cap (mushroom head)
- A teardrop-shaped stipe (stem)
- A golden ratio proportion (1:1.6) between the cap diameter and mushroom height
- A golden ratio proportion between the cap height and the mushroom height
- A non-perfect, slightly irregular cap circumference for a more organic look

Following these principles does not mean creating identical pieces. Just as music has its harmonies, every piece has its unique rhythm.

Foraging lumber

Now for some bad news: plain wood blanks won't work for this project. They may technically work, but the result won't have the same "magic mushroom" quality. Instead, you should forage for branches—the same ones you might normally discard when harvesting wood for bowls.

Look for branches 1¼" to 4" (3cm to 10cm) in diameter, preferably with the bark intact; slightly irregular, or amorphous, circumferences (*Photo 1*); interesting wood textures for natural patterns and depth; and fresh, green wood for flexibility. Thin-turned green wood often warps as it dries, giving the mushroom a more organic, natural

1

Desirable branch stock

Wood selection. Branches with irregular circumferences and patterns are best for mushrooms. Perfectly round branches work but are less visually appealing.

look. Trees with textured bark, such as pecan or oak, work particularly well.

The truffle shuffle

Turning a mushroom on the lathe may seem like a straightforward spindle-turning project, but there are a few challenges to be aware of specific to this form:

- Undercutting the cap: This requires the tool to extend far over the toolrest, which might lead to a catch, and removing endgrain creates stress that could cause the work to come out of the chuck.
- Removing wood against an open space: Turning the stem is done against the finished cap, and any slip of the tool in that direction can send the piece flying like a mushroom-shaped firework.
- Navigating tight tool access and small angles.
- Avoiding sanding mishaps: the rotating cap acts like a micro-table saw that can easily cut your fingers.

But don't worry—I will share helpful tips to make the process manageable and safer.

Tools for the job

Here are some specific tools I use when turning a mushroom:

- ⅛" (3mm) parting tool
- ⅜" (9.5mm) diamond parting tool (less likely to catch when working on the inside of the cap)
- ⅝" (16mm) spindle gouge, sharpened to a 40-degree angle with swept-back wings, as shown in *Photo 2*. This versatile tool is ideal for detailed work and shear cuts, functioning similarly to a skew. Its large diameter helps minimize vibrations when working at a distance from the toolrest.

Keep your tools razor-sharp throughout the process!

Step 1: Rough-turn

Once you have selected a branch, mount it on the lathe between centers. Begin by turning the cap. This initial turning can be rough, as the final shaping will be completed after the piece is remounted in the chuck. Create a pleasing ogee shape, and leave extra material where the tailstock presses against the wood—you will need to remove the mark it leaves later.

Carefully remove the bark at the lower part of the branch, leaving a strip of bark about ⅜" wide along the edge. When doing this, start with a precise V-groove cut to ensure your gouge does not accidentally strip off the remaining bark (*Photo 3*).

When shaping the cap, aim for proportions that follow the golden ratio between the cap's height and the mushroom's overall height (*Photo 4*). This principle creates a naturally pleasing balance. Be sure to account for material lost when finalizing the base, such as tailstock marks and tenon removal.

Step 2: Secure bark

Once you have rough-turned the mushroom blank, remove it from the lathe and apply thin CA (cyanoacrylate) glue to the bark and the edge of the cap. This helps secure the bark to the wood and reduces the chances of it peeling off during the turning process (*Photo 5*).

Wood harvested during winter, when the tree is dormant, will yield the best results for retaining the bark. During colder months, the sap flow is reduced, making the bark less likely to separate from the wood.

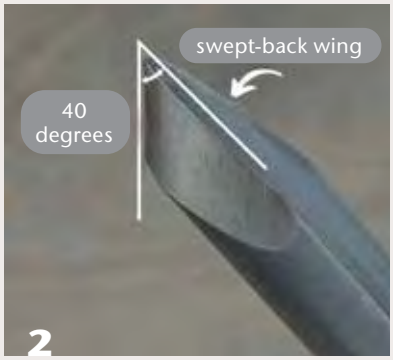
Step 3: Turn cap top

Mount the workpiece in a scroll chuck and use the tailstock mark to center it as accurately as possible.

For small mushrooms, I typically shape the top of the cap without tailstock support. For larger pieces, I keep the tailstock in place and skip ahead to the next step: the undercut.

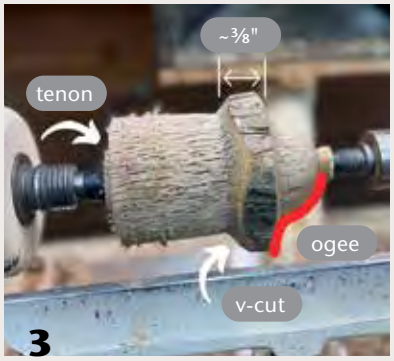
Refine the ogee shape of the cap and remove the small nub left at the top. Make sure the convex curve (outward ▸

Gouge geometry



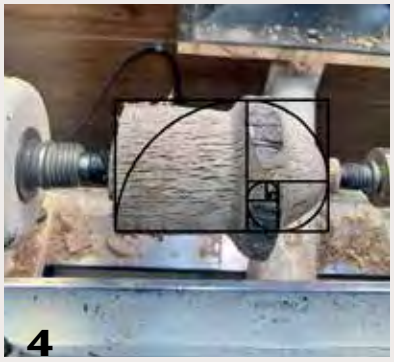
The author's preferred spindle-gouge grind, useful for hollowing under the mushroom cap.

Rough-turn mushroom



Rough-turn the mushroom to its basic dimensions and elements, leaving the bark intact if possible.

Golden ratio proportions



Applying the golden ratio (1 to 1.6) helps to establish pleasing proportions between the cap and overall mushroom height.

bulging) flows smoothly into the concave curve (inward curving) without interruptions such as flat spots or abrupt changes. This fluidity is key to achieving a natural and pleasing appearance (*Photo 6*).

While an ogee is my preferred shape for the cap, feel free to experiment with others that suit your style. Just ensure the overall proportions continue to follow the golden ratio.

Step 4: Hollow the cap

Now for the tricky part—undercutting, or hollowing, the cap. First make a straight-in cut just below the rim with a diamond parting tool. A sharp tool is essential to preventing bark separation.

The second cut should be slightly angled into the cap, establishing the desired rim thickness: about ⅛" (3mm) for small mushrooms and about 3⁄16" (5mm) for larger ones (*Photo 7*).

Continue using the diamond parting tool to remove more material from the mid-stem, creating a wider approach angle for hollowing the cap. Leave enough mass to support the hollowing process and avoid cutting too deeply.

Proceed to hollow the cap and create the stem in small, controlled bites, ensuring you don't stress the full width of the tool. With every pass, the tool should go in a wider angle and a bit deeper. This should result in a stepped neck (*Photo 8*). If you skipped Step 3, now is the time to go back and finish the cap.

Secure bark with glue

The author applies CA glue around the bark to increase the chances of it staying intact.

Anatomy of an ogee curve

The top of the mushroom cap follows an ogee shape—the blending of two curves with different radii.

When you sense that the wide parting tool has reached its limits (vibrations, squeaking noises), switch to a narrower parting tool to further refine the approach angle and depth. The final pass should align with the outer ogee curve (*Photo 9*). Take extra care to avoid tool catches. Always tilt the parting tool slightly to the left to reduce the risk of the tool skidding back.

Step 5: Turn the stipe (stem)

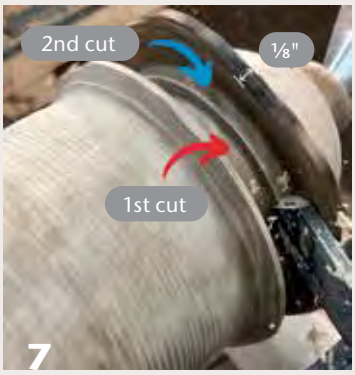
Use a detail gouge to shape the stem. I usually aim for a teardrop shape. As always, keep in mind design principles like proportion, golden ratios, and smooth transitions.

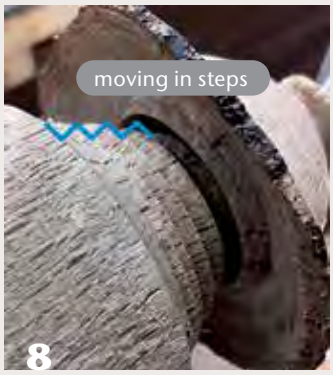
The main challenge here is turning against the hollowed-out cap. The delicate, unsupported end grain can snap suddenly, sending your gouge straight into the thin and fragile cap. Trust me, you don't want this to happen—it's a surefire way to ruin your mushroom and your day (*Photo 10*).

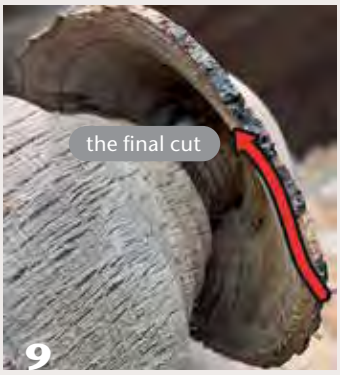
While turning the lower portion of the stem is relatively straightforward, creating a flowing curve on the upper stem demands more attention and skill. Here is the process I recommend:

1. Present the spindle gouge slightly above the top of the stem, with the flute open to the 11 o'clock position, as shown in *Photo 11*.
2. Gently engage the wood, and start sweeping the tool backward. Use the left wing of the gouge as if it were a skew, focusing on a smooth, clean cut.

Undercut mushroom cap





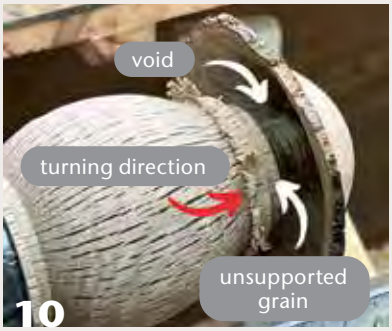


(7) The first two cuts, made with a diamond parting tool, are key to preserving the bark and setting the cap's thickness.

(8) Create a rough sampled/discrete curve by making a stepped pattern with the parting tool.

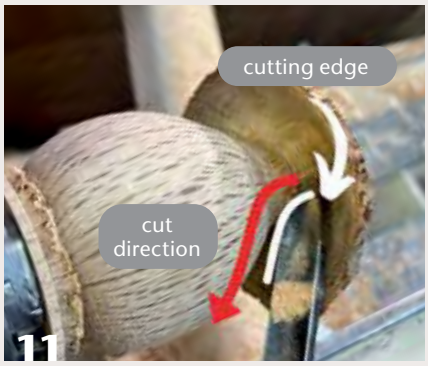
(9) The line shows the direction of the final cut into the bottom of the cap.

Turn the stem



Turning the section of the stem near the top means cutting into the void without grain support. Proceed with caution and take light cuts with a sharp tool.

A smooth transition



Gouge presentation and movement for turning the upper stem.

The desired outcome of the gouge-turning technique: a smooth transition from stem to cap.

3. Keep the gouge at a 45-degree angle to achieve a shear cut. Ensure that the wing maintains contact with the wood throughout this motion.
4. Merge the curves. As you pull the tool back toward the bottom of the stem, focus on blending the upper and lower curves into a seamless flow. This will create a natural, harmonic transition between the cap and the stem.

This maneuver might take some practice (and a few trial runs), but the result is worth the effort—a beautifully flowing stem that complements the cap's elegance (*Photo 12*).

Step 6: Sand and finish

Here is how to approach the sanding in a safe and effective manner.

The cap

For the inner cap, take a piece of sandpaper and stretch it over one finger. Gently press it against the wood while keeping your hand steady and away from the live-edge rim. Use finer grits progressively to smooth the surface (*Photo 13*). The top of the cap can be sanded more easily and even power-sanded if you prefer. However, maintain a light touch to avoid the spinning piece catching and throwing your hand off balance.

The stem

Sand the stem carefully, as it is close to both the chuck and the cap. Use small pieces of sandpaper or sanding sticks to control your movements and avoid slipping. A steady, gradual approach will help achieve a clean, smooth finish.

Part off and finish

When parting the mushroom from the lathe, use a parting tool to create a clean separation between the stem and the waste block. As you approach the final cut, form a shallow concave area at the bottom of the stem to ensure the mushroom sits evenly on a flat surface.

Since this is a decorative piece, the choice of finish is flexible. You can use oil, wax, or even a spray finish depending on your preference and the look you want to achieve.

One final note—while the mushroom might look good enough to eat (*Photo 14*), remind yourself (and others) that it's for the eyes only! ■

Asaf Peled crossed paths with woodturning seven years ago, and it has been a love affair ever since. Over the years of learning and experimenting, he has settled on a design principle that he calls simplista, a kind of minimalism with clean, flowing, seamless lines that give the wood's texture and grain the main stage. You might spot subtle influences from Japanese and Scandinavian art. For more, follow Asaf on Instagram, @asafpld, and visit his website, asafwood.com.

Sand and finish

Sand inside the cap with one finger and taut sandpaper.

The unfinished, completed mushroom.

Make a Decorative INLAY PEN

Charles Mak

For a lot of woodturners, myself included, pen turning was the first joyful encounter with the art of the lathe. But after a while, making pens, regardless of their style or materials, can become less interesting. Inlay kits do make for unique pens but are not economical for some, while other methods (making a Celtic knot, for instance) may be too complicated. I would like to offer an easy process for creating eye-catching inlay pens without the use of kits. This process also offers a wealth of design opportunities.

This simple method involves drilling holes and/or mortises into a pen blank and filling those voids with contrasting materials prior to drilling the blank and gluing in the brass tubes supplied with your pen kit. The blank is then mounted on the lathe, turned, and finished in the usual manner, and the result is a one-of-a-kind inlay pen with interesting patterns. By changing the combination of voids, their shapes, the filler materials, the layout, and the final size of the pen barrels, you can create an almost infinite number of patterns for your pens (or other spindle projects).

Chuck a ¼" plug cutter in the drill press to make plugs of a contrasting wood.

Tools and materials

In addition to the usual pen-making tools (spindle gouge, pen mandrel, drill press, for example) and supplies (pen blanks, pen kits), I use a ¼" (6mm) brad point bit to drill holes and a ¼" plug cutter to make round plugs from scrap wood (*Photo 1*). I use a mortising machine to cut the square holes (mortises), but you could also use a mortising attachment on the drill press. I cut ¼" square filler stock on the tablesaw. Alternatively, you can use pre-cut ¼" dowels and square rods.

Design the pattern

Explore possible designs by pondering questions like these:

- What kind of layout do I want for the dots and/or squares on the pen?
- Will they follow a certain pattern—straight line, spiral, evenly spaced, or will they be randomly placed?
- How many voids and which shapes/sizes do I want?
- What will be the effect of the wood or other material I choose for the pen blank and plugs?

To help me visualize and examine my design choices, I usually sketch them on paper (*Figure 1*). As you gain more experience with the technique, you can explore many other design options and choices of materials (*see sidebar*).

Applying your design

Once you have a design blueprint, use a fine-point felt pen to mark the hole locations on the pen blank. I also draw two straight lines on the blanks to indicate the rough size of the finished pen. ▸

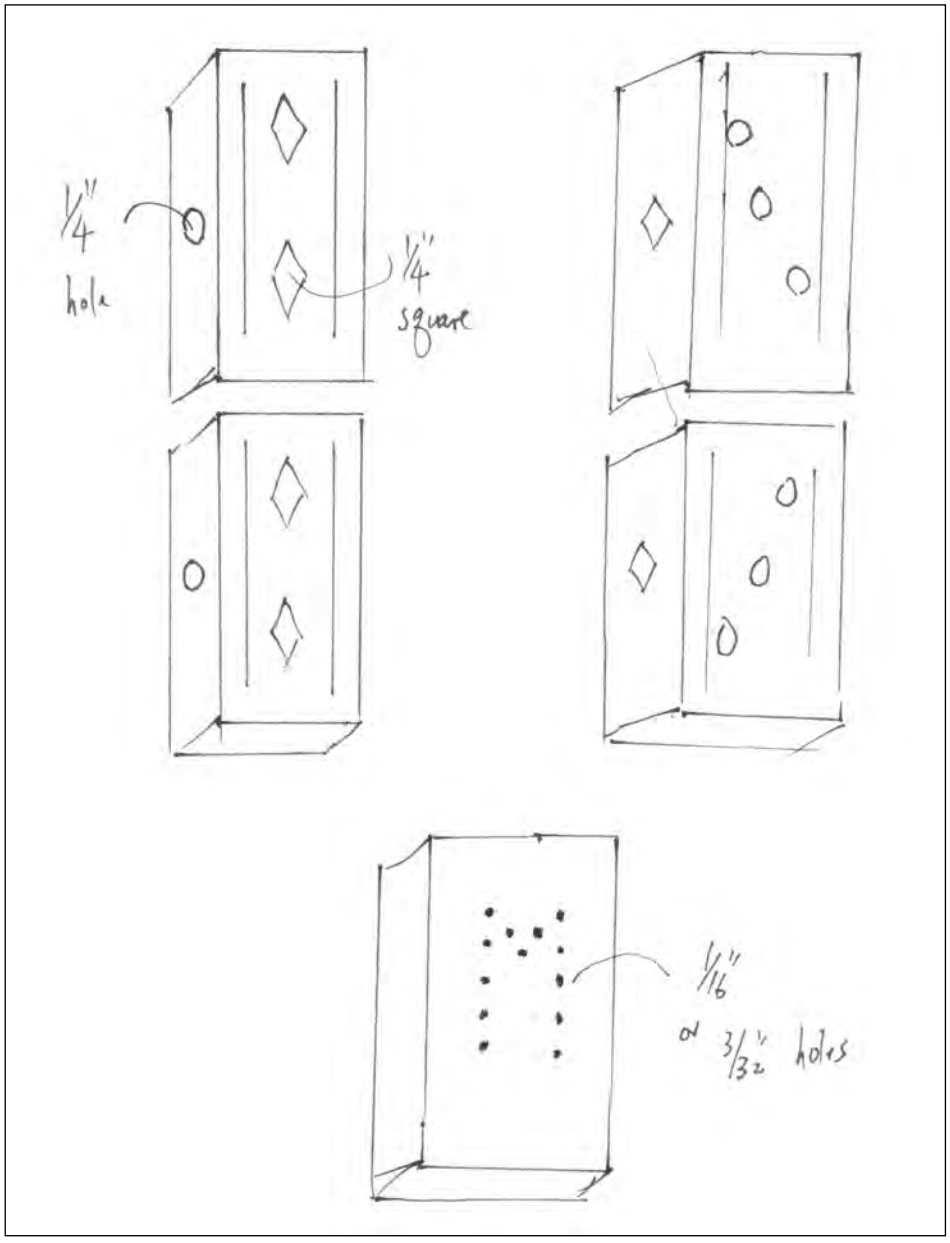


Figure 1. Sketch out your inlay designs to help visualize the patterns.

Make sure your pattern is placed well within the boundary lines (*Photo 2*).

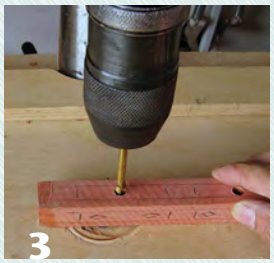
Place the blank on the drill press and chuck a ¼" brad point bit to drill through holes for the dots you have marked on the blank (*Photo 3*). Use a mortising machine or (drill press attachment) to cut the squares or diamonds (*Photo 4*). If you don't have a mortising machine or mortising attachment and plan to make only a few squares, you have a third, cheaper option: cut them by hand. To do this, drill a 7⁄32" (6mm) center hole in each square or diamond mark. Then cut to the square corners using a ¼" bench chisel or mortise chisel (sold as a chisel and bit set, but the auger bit is not used) with a mallet. At this stage, if the squares are not perfectly cut, don't worry—I'll show you a quick fix later.

After the holes and squares are drilled, fill them with plugs and square rods using cyanoacrylate (CA) glue or epoxy (*Photo 5*).

Prepare and turn the pen blanks

Before cross-cutting your pen blank to size based on the brass tubes supplied with your pen kit, mark the blank to indicate the grain orientation. This will help you mount the two pen barrels on the mandrel in the correct order and ensure the wood grain is running continuously from one barrel to the next

Use a dark pen to lay out your design and boundary lines based on the finished diameter of the pen.



Drill all the ¼" holes in the blanks using a drill press.

Use a mortising machine or drill press attachment to cut the square holes. You can also cut them by hand with a chisel and mallet after drilling a smaller hole within the square.

Glue the plugs and square pieces into the drilled voids.


Square the ends of the pen barrels to the brass tubes.


Turn the pen barrels to the desired profile and size.


Apply and buff coats of wax on the pen barrels.


Press fit the pen parts together.

after assembly. At the drill press, chuck a brad point bit sized to your pen kit and drill a hole through the length of the blank. Clean out any debris left in the hole and then glue the brass tubes into the pen barrels using thick CA glue or epoxy. Once the glue is cured, square the ends of the pen barrels to the brass tubes. I use a pen mill for this task (*Photo 6*).

Insert the barrels between the appropriate sized bushings on a pen mandrel, using the mark you previously made to ensure correct mounting order and orientation. Once secured, mount the mandrel between centers and turn the pen barrels with the tool of your choice (*Photo 7*). Use sharp tools and take lighter cuts when the blank's diameter nears the size of the bushings.

Lower the speed of the lathe for sanding. Move the sandpaper along the axis and keep it from contacting the bushings. After sanding, finish the pen with your preferred method. I like to apply two coats of polish (a shellac-based lacquer) with a paper towel to bring out the grain. I then inspect the whole pen, looking for any tearout on the inlay pattern. Here's my trick for repairing rough inlay transitions or tearout. Choose a wax stick that is close in color to the inlaid material (dot or square/diamond) and rub some wax into any voids created by tearout. With the lathe turning at a high speed, buff the waxed spots with a lint-free cloth to blend in the repairs. Apply and buff a coat or two of a lighter tone wax on the whole pen (*Photo 8*).

Assembly

Lay out the pen kit hardware and the turned barrels in their proper order. Follow the kit's assembly instructions to press fit the parts together (*Photo 9*).

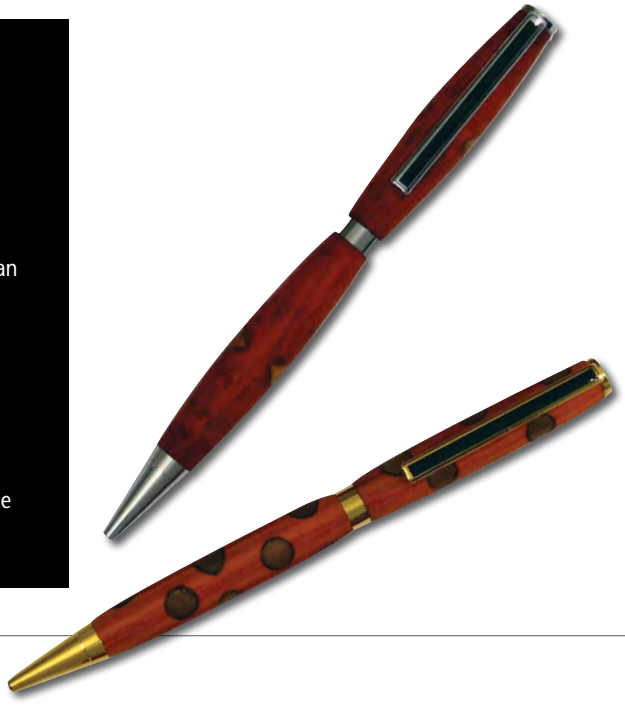
Whether or not you believe the pen is "the tongue of the mind," as Horace asserted, you can express your creative side with your own pen inlay designs. ■

Charles Mak runs a small business in Alberta, Canada. He has developed a variety of woodworking classes and teaches in his spare time. Charles is a frequent writer, sharing his work in various magazines in Australia, Britain, and North America. He can be contacted at spindleturning@gmail.com.

Inlay design ideas

Experimenting is part of the fun with this inlay technique. Consider these alternatives and others when you plan your next inlay pen:

- The holes/squares can be overlapping to create a unique look. Or, with small holes drilled and plugged, you can create initials or a distinctive image on the pen.
- By using colored markers and light-toned dowel rods like maple as the filler materials, you can color your pattern the way you want (after the pen is sanded). Simply seal and protect the color with a coat or two of suitable finish.
- Try non-wood filler materials or a combination of materials for your patterns such as plastics (clear or colored), acrylics, Corian®, sawdust, and even soft metals.
- Holes can be left unfilled or partially filled (for a dimpled look). If holes are not plugged, consider hiding the exposed brass tube by painting it with a black felt pen or one that is close to the wood blank in color.



Turning and Carving
A WAVE-RIM BOWL

Wave-Rim Bowl, 2012,
Purple gidgee, 3½" × 7"
(90mm × 180mm)

Neil Scobie

I first made a wave-rim bowl back in 1985, and it is still one of my favorite designs. At the time, there were no rotary carving tools available, so most of the carving was done with hand carving gouges and a chainsaw to cut the end slots. Today, with so many power carving tools to choose from, the task is much easier. If you are one who likes to carve by hand, you can still make this project—it will just take longer. I call it a "wave rim," taking my inspiration from surfing and trying to get up under the lip of a curling wave.

For this bowl, I chose purple gidgee wood, which is very hard and close grained. Gidgee only grows in the drier outback regions of Australia and is not readily available in larger sizes. The bowl blank was roughed out with a thick wall and allowed to dry for about six years. Leaving the walls extra thick gives you more options for carved designs when the timber is dry (*Photo 1*). Most stable timbers available in the U.S., such as walnut, rock maple, and oak, would also be suitable.

If you are roughing an unseasoned blank for this project, leave the walls extra thick for carving designs in the rim when dry.

Turning the bowl

1. Hold the bowl blank on the lathe by using a scroll chuck in expansion mode in the hollowed bowl section (*Photo 2*). If this is not possible, hold it by the foot spigot and turn a recess in the top to accept the chuck jaws. Sometimes in the drying process, bowls warp too much for

The author's deep-fluted "trimmer" gouge, used for making smooth finishing cuts on both the outside and inside of bowls.

them to be mounted safely in a chuck, so you may need another holding method for initial turning. This could include holding between centers or placing the inside of the bowl over a mandrel with the tailstock brought up for support (as illustrated in *Photo 20*).

2. Shape the outside of the bowl using a deep-fluted bowl gouge. Roll the gouge on its side with the flute facing the outside of the bowl and cut with the bottom half of the cutting edge (*Photo 3*). *Figure 1* illustrates the shape I try to achieve for this design.
3. For a smooth surface, take final shearing cuts with what I call a trimmer gouge—a deep-fluted ¼" (6mm) gouge with the front edge sharpened perpendicular to the axis of the gouge. The tool's bevel angle is about 60 degrees, with the back edge rounded to avoid making pressure marks when rubbing the bevel (*Photo 4*). For finishing cuts on the outside of a bowl, use the vertical cutting edge on the right side of the gouge. If you imagine a clock face, I have the tool rotated slightly to the left of vertical—so the flute is pointing to about 11 o'clock. When presented properly, this tool saves a lot of sanding (*Photo 5*).
4. Shape a spigot, or tenon, for remounting the bowl in the scroll chuck. I use the long point of a round-shafted skew chisel for this task (*Photo 6*). This spigot will be removed later.
5. Using the long point of the skew, mark the center of the spigot with a small "v" (*Photo 7*). This will be helpful in centering the bowl later when reverse mounting it to remove the temporary spigot.
6. Sand the bottom section of the outside of the bowl to about 320 grit. Finer sanding can be done after the carving process.
7. Mount the bowl in the chuck using the temporary spigot. Using a bowl gouge, remove the inside waste with the opening of the flute ▸

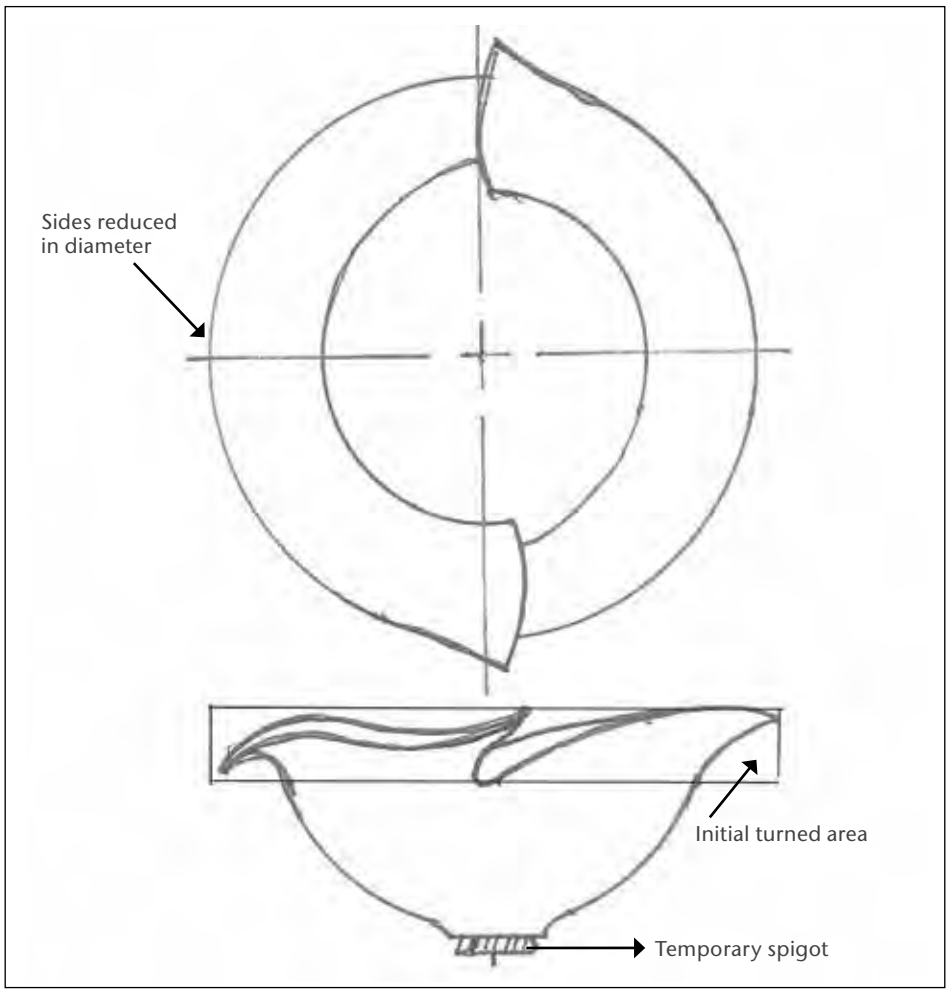


Figure 1.

pointing just above the center of the bowl—in about the 2 o'clock position (*Photo 8*). The rim at the top should be left quite wide but will be undercut on the inside (*Figure 2*). Wall thickness under the carved part of the rim should be about 3⁄16" (5mm). Make sure you leave enough thickness in the base for a small hollow, or undercut, of the foot when the spigot is removed. This will ensure the bowl sits on the outermost edges of the foot and will prevent the bowl from rocking when placed on a flat surface.

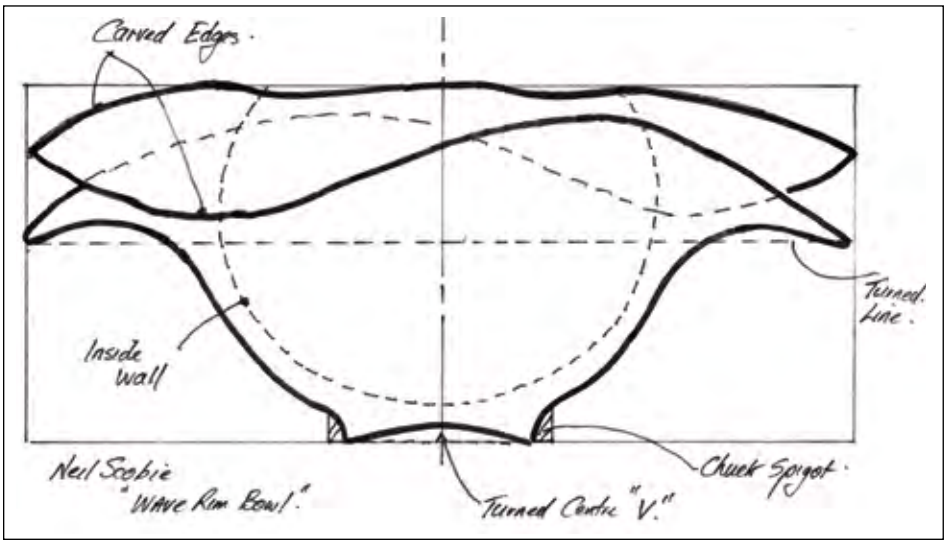


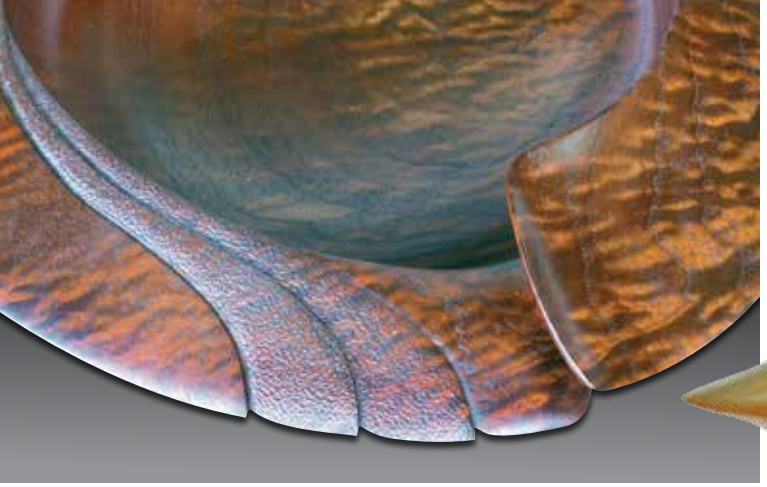
Figure 2.

8. Using the trimmer gouge with the flute pointing just to the right of the 12 o'clock position, take a light finishing pass, cutting with the left vertical edge of the tool (*Photo 9*). As on the outside of the bowl, this cut will save a lot of sanding. With practice, you will be able to rub the bevel all the way through the cut—from rim to bottom.
9. Power sand the inside surface to 600 grit, as it is difficult to reach after the rim is carved (*Photo 10*). I usually start with 180 grit to remove any tool marks and then progress to 600 grit.

Carving the rim

To hold the bowl while carving, it is handy to have a carving mount to attach to the lathe (*Photo 11*). There are a number of different mounts on the market, but you could make a simple one yourself. It is helpful to be able to rotate, swivel, and turn the bowl upside down to make the carving process easier.

1. Use a pencil or chalk to draw on your rim shape before starting to carve. I used a white crayon pencil on this bowl so the lines stand out on the darker timber. Take the time to stand back and look at the lines all the way around to ensure they are where you want them. It is always best to double check your design before getting started with carving tools.
2. As there is a fair amount of timber to remove from the rim, I started with a power mini-carver with rotary rasp attachment (*Photo 12*). Since this rim has a symmetrical design, I like to carve the same section on both sides of the center to maintain uniformity. Shape the top evenly on both sides by rotating the chuck in the carving mount. Keep an eye on your lines so you do not remove more waste than intended.



An alternate rim design. Use these ideas to explore your own design concepts.

Wave-Rim Bowl, 2004, Huon pine, ebony, 7" × 12" × 9" (175mm × 300mm × 230mm)

3. Using a smaller power tool such as a long-neck angle grinder, shape under the end cutout sections using the tool on its flat (*Photo 13*). You will be restricted on how far under you can cut.
4. Using the same tool, undercut the folded area, again reaching in as far as the tool will let you cut (*Photo 14*).
5. Reduce the width of the rim on the sides so the top view is more oval shaped (*Photo 15*). I find the design more pleasing if the sides are pulled in a little, taking away the round look. You could also use a band saw for this step.
6. Using a soft sanding arbor, sand the top surface of the rim, working through the grits to 400 (*Photo 16*). Note how the sanding pad is flared out on the outer edge, making it hug the surface much better. Use a smaller-diameter sanding pad to get into the more hollow areas.
7. Reduce the amount of waste on the underside of the rim so the shape follows the top surface (*Photo 17*). This is where a carving mount that you can rotate upside down is really handy. With dense timber, it may be necessary to use a more heavy-duty tool. For the cutout areas, use a lighter-duty tool with a finer rotary rasp.
8. Use a rotary tool, such as a die grinder, with a tapered burr attachment to refine the shape in the folded area (*Photo 18*). Use the die grinder to shape the undercut on the inside of the rim (*Photo 19*). A smaller rotary tool will also do the job, but on harder timber like gidgee, you will need a more powerful tool.
9. Once all the sanding on the top is complete, reverse mount the piece over a mandrel with a soft piece of foam to protect the sanded inside surface (*Photo 20*). Turn away the chuck spigot and sand the base as far as you can with the tailstock in place. Hand carve off the small nubbin that is left.

Final thoughts

I enjoy making this wave-rim design, but remember you can change the shape to suit your own ideas. I encourage you to experiment with new designs, as time spent on researching new ideas is not wasted, even if an idea does not work out. You still have learned from the experience—just take your cues from each effort and modify the design or start again. ■

Formerly an industrial arts teacher, Neil Scobie now runs his own woodworking business and private woodworking school. He offers workshops in woodturning/carving and furniture making. Most of his time is spent making custom furniture for private clients. For more, visit neilandlizscobie.com.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An Elegant MORTAR AND PESTLE

Kurt Hertzog

Many turnings, while beautiful and enjoyable to make, are relegated to the mantle or display case and become more decoration than a serviceable item. Others are meant for functional, ongoing use in our daily lives, such as pens, salad bowls, jewelry, lidded boxes, and canes. This mortar and pestle project is not only fun to make, but it can be of service for many years.

History

The mortar and pestle that we know today existed at least as far back as 1000 BC, and some scientists claim ancient versions date back to 35,000 BC. Since the mortar and pestle excels at crushing and blending herbs, nuts, seeds, spices, and medicinal concoctions, it is conceivable our ancient ancestors employed them as we do today. The process may have developed in prehistoric times, when perhaps food items were simply crushed between two rocks. The lack of containment would have prompted the development of a bowl function to minimize loss. Native Americans ground nuts and acorns using mortars carved into bedrock.

Motorized grinders have lessened the use of the traditional mortar and pestle but have not replaced its overall versatility. Regardless of evolution, today's mortar and pestle is a welcome addition to any creative kitchen and can be useful for other applications around the home, office, or studio.

Materials

Modern mortar and pestle sets are made from various materials, including ceramic, granite, and wood. They are not usually made of metal, although through history bronze, iron, and brass were sometimes used. When used in the kitchen, pharmacy, art studio, or any other place needing pulverizing, mashing, grinding, or crushing, design and material selection varies. Most commercially available units are ceramic or stone, lending themselves to dry and extended wet

use. They are also virtually indestructible. Glass and porcelain are sometimes used but are most often found in pharmaceutical applications.

Some but not all woods also make for wonderful mortar and pestle sets for dry and, when properly maintained, wet use. Woods that will provide the best serviceability are dense species that will reject moisture more than porous woods. Hardwoods turn well, hold detail, and are tough enough for use. But even among hardwoods, closed-grain species such as maple and cherry would work better than open-pore woods like oak or ash, since the latter varieties are more likely to retain small bits of whatever is being crushed.

Dense fruitwoods offer many of the right properties, and I opted for olivewood. It is great to turn, pleasant to smell, and sufficiently dense, hard, and smooth. In use, olivewood performs very well. I hammered peppercorns, mashed garlic, crushed dried red peppers, and generally put the wood to the test. I hand-wash my olivewood mortar and pestle with dish soap and hot water. When dry, it shows no marks, dents, or other signs of use.

I do not apply a finish to my mortar and pestle sets, so turning and sanding is all that is required.

Design

When you are designing your mortar and pestle, think through your end use, which will impact the size and shape. For example, grinding up pigments for paints may call for a smaller size than making large batches of pesto or spiced mayonnaise, and grinding spices is different still. There is no "one size fits all" for this utility item, though I do recommend erring on the side of making it bigger rather than smaller. It is easier to use a too-large vessel than one that is too small. Also, having multiple sizes on hand is much like having kitchen knives in various styles and sizes. Each excels at different tasks and is worth owning. Having a goal for the size and shape of your mortar and pestle also helps with planning processes such as material selection, workholding, and tool needs, as well as deciding on the logical sequence of operations.

For the project shown in this article, I planned for the mortar, or bowl part, to be 6" (15cm) in diameter at its widest point and a bit more than 2" (5cm) deep. I wanted the walls to curve back in so that the rim diameter is slightly smaller than the widest part of the vessel. This size and shape would work well for the portions of guacamole and pesto my wife and I make, yet it would also handle spice and seasoning blends of garlic, peppers, mint leaves, and oils. The design of the pestle will have a ball end and a muddler end, rather than the typical single-ball design. Use either end in the mortar, and use the muddler end for preparing drinks. (*See Dual-Purpose Pestle sidebar.*) The muddler consideration meant this pestle had to be a bit longer than usual, since it would have to reach the bottom of a tall drinking glass. Even if it weren't used for muddling, this design lends itself for use in the mortar since the flat contour works well with harder round items being ground or crushed.

Adapt the project design to your own needs. ▸

Raw materials

(1) The author's stash of olivewood, which arrived covered with sealing wax to prevent cracking due to humidity changes.

(2) Mortar blank rounded at the bandsaw.

Dual-Purpose Pestle

If you aren't familiar with a muddler, it is a bartender's tool specifically used to mash (called muddling) spices, herbs, and fruits at the bottom of a glass to release their flavors. Mojitos, Mint Juleps, and Old Fashioneds are just of few of the drinks where a muddler is useful. A typical muddler is made of wood and is about 7½" (19cm) long for sufficient reach. It has a flattened bottom with slightly rolled edges to work well in the bottom and side curves of drink glasses.

Rough-shaping

Rough-shaping the mortar's outside profile, cutting toward the headstock and across the facegrain. The blank is mounted between centers.

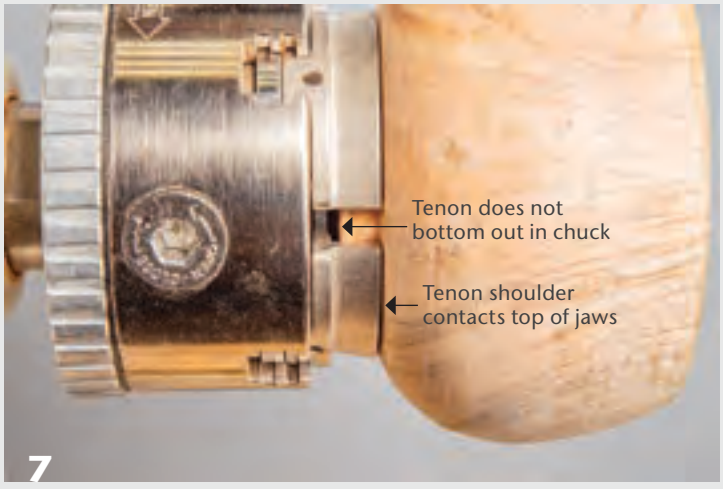
Beginning to form a tenon at the tailstock end of the blank.

Fine-tuning

The author's tenon-sizing gauge, made from scrap wood, used to quickly form a tenon you know will fit in your chuck.

Fine-tuning the outside profile with a scraper.

Proper mounting in chuck



Mortar blank now mounted in the chuck, with top of jaws registered against the tenon shoulder and clearance at the bottom of the jaws.

The turning

I ordered several pieces of olivewood in sizes that would accommodate my anticipated design (*Photo 1*). Since my mortar was to be around 6" in diameter and deeper than 2", I ordered bowl blanks 6" square and 3" (8cm) thick. For the pestle stock, I purchased blanks 2" square and 12" (30cm) long. Cutting the pestle stock to 7" (18cm) long allowed for a 6"-long pestle and some workholding scrap. Since a mortar is essentially a bowl, knocking the corners off a square blank at a minimum or ideally rounding the blank on the bandsaw is helpful (*Photo 2*).

Mortar

With the mortar blank mounted between centers, rough-shape the outside profile and begin to form a tenon at the tailstock end *(Photos 3, 4)*. I find it easier to cut the tenon at the tailstock end of the blank, as there is more room to work and the bowl-shaping cuts will mostly be made in the direction of the headstock, which is preferable.

The tenon will be used for mounting the mortar in a scroll chuck for hollowing. I use a shopmade gauge to size the tenon for my chuck *(Photo 5)*.

As shown in *Photo 6*, I use a scraper to refine the upper part of the outside profile. At this point, don't agonize over the transition from bowl side to foot, as that will be addressed after hollowing.

Mount the mortar blank in a chuck for hollowing. Be certain your tenon is as long as it can be without bottoming out inside the chuck jaws. *Photo 7* shows an appropriate gap between the bottom of the tenon and the bottom of the jaws.

Begin hollowing as you would any bowl *(Photo 8)*. Work in stages by hollowing to a shallow depth and then thinning the walls in that section to final dimension. Given

the intended function of this piece, I leave the walls at least ¼" (6mm) thick and slightly thicker at the rim and bottom. When one section is completed, hollow to the next short depth and cut the wall thickness to size. Hollowing in stages capitalizes on the strength the remaining material in the bowl provides, reducing vibration.

Don't forget to periodically check your depth, lest you make the bottom too thin *(Photo 9)*. I use an easily made bowl depth gauge—*see Shopmade Depth Gauge sidebar.*

When you have achieved your desired bottom thickness, sand the inside, as you won't be coming back to that part of the turning. Sand slowly, letting the abrasive do the work. Progressing through the grits yields great results on olivewood. With no finish planned, I sand to 400 grit.

There are many ways to reverse-mount a bowl, or mortar, to turn the tenon into a foot. Here's a way to use a scroll chuck, since for this project it is already in use. With stout sidewalls and an undercut interior, you can easily use the jaws in expansion mode to mount your hollowed mortar. I put painter's tape over the jaws to prevent marring the wood (*Photo 10*). Orient the mortar over the tape-covered jaws and lightly expand the jaws. Bring the tailstock up to help with centering the workpiece, placing the live center point in the indentation previously made when the piece was first mounted between centers. While applying gentle pressure from the tailstock, expand the jaws into the bowl rim for a good grip *(Photo 11)*.

Reverse-mounting a bowl this way allows you to refine the contour of the mortar's bottom and reshape the tenon into a stable foot *(Photos 12, 13)*. With the tailstock in place, cut ▸

Hollow the mortar

Hollow the mortar as you would a typical bowl.

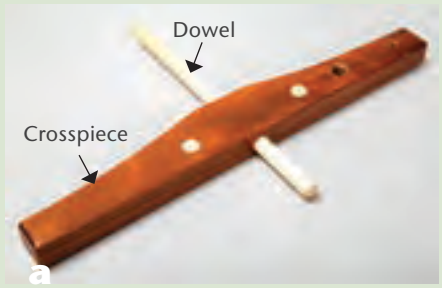
Deepen to desired bottom thickness, checking often with a depth gauge.

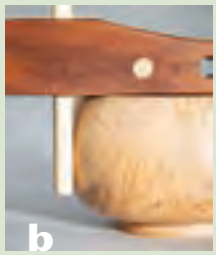
Shopmade Depth Gauge

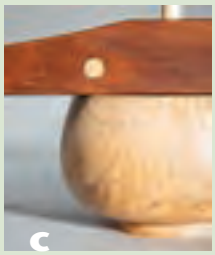
When hollowing bowls, lidded boxes, or other excavated forms, use a simple depth gauge to measure your progress and determine how much deeper you'll need to go. My depth gauge is made from just two scraps of wood (*Photo a*). The main part, the crosspiece, is a stick of wood whose length measures at least twice the diameter of the bowl rim. The other part is a dowel slightly longer than the height of your bowl.

Drill a hole through the crosspiece at the center of its length, sized for a snug fit of the inserted dowel. Having a snug fit allows for use without the dowel slipping or the need for a setscrew. Sand one end of the dowel round so it won't damage the inside of your bowl.

Using the gauge is simple. With the crosspiece spanning the bowl rim and the dowel extending down *outside* the bowl, set the rounded dowel end at a position equal to your desired inside bottom depth (*Photo b*). This can be determined either by eye or ruler. You can set the depth for a raw blank or for a turning already in the chuck and in progress. Periodically check your depth by placing the dowel *inside* the bowl, without moving its position in the crosspiece. As you measure prior to completion, the gap between the bowl rim and the crosspiece will show you the amount yet to be removed. Keep hollowing until, when tested, the dowel touches the inside bottom and the crosspiece rests on the bowl rim (*Photo c*).







Reverse-mount mortar

Painter's tape protects the wood as you gently expand the jaws inside the mortar rim for a good grip. Use the tailstock live center to aid in centering.

Turn the foot


12


13

Complete the bottom contour and clean up the tenon to create the mortar foot.

Turn the pestle


14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After roughing the pestle blank to round, shape its ends as desired. The author's design called for a rounded ball at one end and a flat muddler at the other. Shape the center of the pestle as desired.

the flat surface of the tenon slightly concave. Sand the entire outside of the mortar, except for the nub that remains under the live center. Remove the tailstock and take light cuts to remove the nub, then finish-sand that area. The mortar is now completed.

Pestle

Mount the pestle stock between centers and round it to the ball-end diameter *(Photo 14)*. Shape each end according to your design; this pestle has one ball-shaped end and one flat, muddler end. The grip between them can be shaped, contoured, and decorated as desired. Sand the entire pestle. Pare down both ends to prepare for removal, as shown in *Photos 15* and *16*. With the pestle removed from the lathe, you can cut the remaining wood from both ends using a small tenoning or razor saw. Hand-sand both ends.

Final thoughts

For this project, I opted not to apply a finish at all. Any kind of film finish would run the risk of being damaged, fractured, or worn through in general use. The wood I chose is dense enough and looks good enough that, with proper use and cleaning, its pores do not need to be sealed with a finishing product. Nut oils such as walnut oil can pose the risk of an allergic reaction in someone with a nut allergy. All of these considerations led me to leave the wood unfinished *(Photo 17)*.

This is a fun, skill-building project that reinforces fundamental woodturning practices. For craft fair turners, you might consider adding the mortar and pestle to your sales offerings. It would certainly be a wonderful gift for anyone who enjoys cooking, including yourself. ■

Kurt Hertzog is a past president of the AAW, past chairman of the Rochester Woodworkers Society, and a council member of the Pen Makers Guild. He has written about woodturning and woodworking extensively for various publications. For more, visit kurthertzog.com.

Completed mortar and pestle


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This food utility item in olivewood stands up to repeated use and hand-washing, having received no applied finish at all.