



Turn a Bowl

Make a functional and beautiful bowl
from a chunk of green wood

BY MIKE MAHONEY



Wooden bowls no doubt have a utilitarian appeal. Truly organic, they're a natural for holding fruit and mixing dough but work just as well for a cereal-and-milk breakfast or a popcorn snack. Wooden bowls also can be beautiful, the highlight of any kitchen. Perhaps it's this potential for attractive, organic utility that makes them so popular.

Bowls are also fun to turn and don't require a lot of tools. All you really need—in addition to the lathe—are a bowl gouge, a spindle gouge, and a round-nose scraper. As for the wood, kiln-dried is fine, but it's hard to find a chunk big enough for a bowl that's not cracked. Green wood is a better choice. You rough out the green-wood bowl, let it dry, and then turn it to its final shape a few months later.

The species of wood is important, especially if you want to use the bowl in the kitchen. Many North American hardwoods make great functional bowls, with the exception of very hard woods like locust, hickory, and osage orange. The density of these woods makes them brittle, and they can't take the shock when dropped on the floor or banged on a hard surface. Avoid red oak, too. Its pores are too open, so liquid in the bowl soon becomes liquid on your counter. I like claro walnut. Not only is it beautiful, but it also works exceptionally well and is easy to dry. It's



Start green, then let it dry

A chunk of dried wood big enough for a bowl can be hard (and expensive) to come by, so start with a blank cut from a trunk or branch. After roughing it out, set it aside to dry.



From log to round blank. Mahoney always begins with green wood cut from a section of trunk or branch. At the bandsaw, he roughs out the bowl, following a plywood template secured with a nail.



Mount the blank on a screw center. This is the simplest and safest way to mount a rough blank, but it's important that the blank be in solid contact with the chuck. Use the tailstock, too.

what I'll use here as I demonstrate how to turn a bowl.

Rough turning speeds drying

I cut all of my bowl blanks straight from the log with a chainsaw. It would take forever for the blank to dry if left as a big chunk of solid wood, so I rough out the bowl first and then set it aside to dry, which cuts down the wait time from many years to just a few months. After it's dry you can turn the bowl to its final shape.

Begin the roughing process by cutting the blank round on the bandsaw. Then it goes directly onto the lathe. The best way to mount a bowl blank is with a screw center. Drill a pilot hole

(as close to center as you can get it) and thread the blank onto the screw center. Bring the tailstock into place and tighten it against the blank. Set the tool rest just below center and parallel to the bed, then rotate the blank by hand to ensure that it spins without hitting the rest.

Now you're ready to turn the blank round, but before you put tool to wood, give some thought to how fast the blank should spin. The blank's diameter multiplied by the lathe's rpm should equal between 6,000 and 9,000. This blank is 12½ in. in diameter, so it can be safely turned between 500 and 800 rpm.

First, use a ½-in. bowl gouge with a fingernail grind. Start at



Rough-turn the bowl's outside.

After turning the blank round using a ½-in. bowl gouge with a fingernail grind, begin to shape the bottom half so that you can turn a tenon. Cut from the middle of the blank toward the tailstock.



Add a tenon. Cut it with a ¾-in. spindle gouge—the flute is rotated 90° counterclockwise. The tenon's diameter should be 40% of the bowl's diameter.



Chuck the tenon and true the face. The bottom of the blank should sit firmly against the chuck's rim (above). With the tool rest parallel to the blank's face (and as close as you can get it), true the face with a $\frac{1}{2}$ -in. bowl gouge. Rotate the flute 90° counterclockwise and work from the outside in (right).



Hollow the interior. Rotate the gouge clockwise until the flute is between two and three o'clock. Always work from the outside in toward the center, cutting more deeply as you go to avoid end-grain cuts.



Chamfer the rim's edges. This slows down the drying process on the bowl's rim and prevents the cracking that occurs when the corners are left sharp.



Seal it for drying. Write the date on the bowl, coat it with a green-wood sealer, then let it dry for at least 30 days. Depending on the species, it could take 120 days or more for the blank to dry completely.

Turn the dry bowl to its final shape

The blank will move and distort as it dries, but once it is dry, you can safely complete the turning. The process is much the same as before: Start on the outside and then hollow the inside.



Pinch the bowl between the tailstock and chuck. Open the jaws as wide as they go, and spin the blank by hand to check its balance.



Turn the tenon round again. As the bowl blank dried, it most likely deformed, and the tenon will not fit the chuck securely. So first turn it round again.

Clean up the rim.

After chucking the tenon, true the rim's top edge by holding the gouge with the flute rotated 90° counterclockwise. This creates a scraping cut.



the tailstock and work toward the headstock, turning off the lathe frequently to check for defects in the wood that could fly free, or cause the tool to catch.

After the blank is round, shape the bowl's exterior. The reason to do this now is to remove enough material to allow you to form a tenon on the tailstock end of the blank. Eventually this tenon will become the bowl's base, so keep in mind that a well-made, finished bowl should have a base diameter that's one third of its overall diameter. At this stage of turning the bowl, I aim for a tenon that's 40% of the blank's diameter. I use a $\frac{3}{8}$ -in. spindle gouge to cut tenons. It has a very long grind that makes it easier to cut the dovetail-shaped "cheek" required by my chuck.

Take the blank off the screw center and mount the tenon in the chuck, making sure that it sits firmly against the chuck. True the blank's face, using the bowl gouge with the flute turned to the 9 o'clock position (90° counterclockwise), and scraping back and forth.

Next, rotate the gouge's flute to the 2:30 position and hollow the bowl. Work from left to right. Aim for a wall thickness that is 10% of

Complete the outside. Before you move on to the inside, turn the exterior of the bowl to its final shape, including any decorative beads and channels.





Turn the interior to match. Turn the outer third, then the middle third, and the inner third last. Leave the bottom rough for now.



Consistent wall thickness is important. Keep the walls between $\frac{1}{4}$ in. and $\frac{3}{8}$ in. thick. To minimize distortion, the thickness should be uniform.



Two steps to determine the depth. First, measure the interior's depth, sighting across the rim to gauge it (far left). Then, measure down from the rim on the outside of the bowl (left). This gives you a good idea of how much material you can remove.

the blank's diameter. Hollow the blank in stages, starting with the top third, then the middle, and then the bottom third. Take the blank out of the chuck and coat it with a green-wood sealer like Anchorseal to prevent the bowl from drying too quickly, which can cause cracking. Let the blank dry for at least 30 days. Keep in mind, though, that it might take 120 days or more to dry depending on the species and climate.

Repeat with the dry blank

After the blank has dried, put it back on the lathe, between the tailstock and the chuck. True the tenon, then mount the tenon in the chuck. Now true up the rim, using



Scrape the bottom. After removing most of the material with a gouge, switch over to a round-nose scraper to finish the bottom.

Complete the outside and bottom

It's time to trim the tenon and turn it into a foot. Use the tailstock to press the bowl against a jam chuck (a wooden block that fits inside the rim), so that you can work on the bowl's bottom.

Sand inside and out. Mahoney starts with an 80- or 120-grit sanding pad in a drill, depending upon how rough the surface is (right). The drill spins the pad at 2,400 rpm, while the lathe is spinning at 500 rpm. He then switches over to hand-sanding, working from 120-grit paper up to 400-grit (below).



the same technique used on the blank's face. Next, turn the bowl's exterior to its final shape. Because of the chuck, you won't be able to do the base at this point. You'll turn it a bit later in the process.

If you want to give the rim a decorative profile, do it now. I put a small ogee on the inside of the rim—a place for your thumb to land when you pick up the bowl.

Next up is the interior. As before, turn the top third, then the middle third, and finally the bottom third. I keep the wall of the bowl between $\frac{1}{4}$ in. and $\frac{3}{8}$ in. thick. Check the thickness with a pair of calipers. Measure the bowl's depth with a tape measure to determine how much material to remove there.

Fair the interior curve using a round-nose scraper. You also can use the scraper to finish the bottom.



VIDEO WORKSHOP

Watch Mahoney turn a bowl from start to finish in a members-only video at FineWoodworking.com/extras.



The jam chuck needs a rabbet. Mahoney keeps a large jam chuck on hand, which he can quickly tune for the job at hand. Using a spindle gouge, he turns a rabbet on its face (above). The rabbet should fit snugly into the bowl without distorting it (right).



Blend the sides into the bottom. You're looking for a fair transition from the sides to the bottom.



Turn a foot for stability. After turning the tenon shorter, pull the tailstock out of the way and hollow out the center of the tenon. The rim created becomes a foot that sits nicely on a table or counter.

Sand the interior and exterior of the bowl up to 400 grit and then take it off the chuck. It's time to turn the lower section of the bowl's exterior and create a foot from the tenon. To do this, you'll need a jam chuck that fits snugly inside the bowl. It should be tight enough to hold the bowl in place by friction alone.

Fit the bowl over the jam chuck and slide the tailstock into place. Blend the base into the bowl sides, working until the tenon is a third of the bowl's diameter. I also turn off much of its length. With the tailstock still in place, turn the bottom of the tenon

concave. Do as much as you can with the tailstock in place, then pull it out of the way and finish off the job with light cuts.

Sand the freshly cut areas. Turn off the lathe and tap the back of the jam chuck to vibrate the bowl off the chuck. For bowls that will get used, I prefer a penetrating oil finish like mineral or walnut oil. They're easy to replenish. If the bowl is for display only, a film finish like polyurethane is fine. □

Professional turner Mike Mahoney lives and works in the beautiful foothills of the Sierra Nevada mountains near Sacramento, Calif.



An oil finish is easy to maintain. Mahoney prefers walnut oil, which doesn't dry to a film finish. You'll need to rejuvenate the oil from time to time, but you'll never have to refinish the bowl.