

Shrink pots

THIS TRADITIONAL CONTAINER
HOLDS A LOT OF PERSONALITY

BY DANIELLE ROSE BYRD



Shrink pot tool kit

Making shrink pots requires just a handful of green woodworking tools. The T-auger (center) may be hard to find, but you use it for only one task, coring the pot blank, and luckily, a drill press will also work. If you do find a T-auger, be sure the lead screw is intact. The scorp (bottom left), used to make the channel that the bottom fits into, is from Flexcut, and sloyd knives (center left) and hook knives (far left) are available from a number of makers both large and small. Drawknives (right) are fairly easy to find, both antique and new.

Making shrink pots is a great, straightforward green woodworking project that relies on the magic of wet-dry joinery. After hollowing a wet round, you let it shrink as it loses moisture, trapping a dry solid-wood bottom within. I love the intersection of utility and beauty, so the limitless options that shrink pots present are very appealing to me. They're commonly used to hold dry goods, pencils, candy, cat treats (at least for me), and other knickknacks. Also, once dry, they're great vessels for exploring design options such as colors, textures, and chip carving. Shrink pots are part of a home, and I think they should reflect some of that personality. But I'll let you explore that on your own, as this article covers only the fundamentals of making one.

Choose the right wood

Birch is my favorite wood to use for shrink pots, though maple, alder, and aspen can be

Rough out when wet



Cut the blank and mark the diameter. Byrd uses a V-sled at the bandsaw to cut the wet rounds to length. Then she scribes the inner and outer diameters using a compass. Aim for the shrink pot's walls to be an even $\frac{3}{8}$ -in. thickness. Uniformly thick walls allow the pot to release moisture evenly as it dries, reducing the chances of cracking.



Bore a hole as large as you can. Byrd uses a T-handle auger to clear as much waste as possible. She sights straight down the bit to make sure she's parallel to the blank. If there's a kink in the round, she bores from both ends.



Chisel away the remaining bulk. If your bit's too small to drill out all the waste, use a mallet and a stout gouge with a deep sweep to approach the lines. Byrd sits to clamp the pot with her leg, allowing her to reposition the vessel quickly and easily.



Hook knife cuts to your line. Hold the tool in your dominant hand and the pot in the other, rotating the pot away from your body while carving toward yourself with the knife. These counter motions allow for a longer, more fluid cut.



Debark. As you work to the exterior lines, start with a small drawknife before moving to a spokeshave or block plane for finer cuts. But don't go all the way to the line yet. Leave material for finishing cuts after the blank has dried.

■ Add the bottom

Bottom fits in a groove. Byrd uses a Flexcut scorp to carve this channel. The knuckle on her right index finger acts as a fence.



Trace the inside rim on dry stock. Then bandsaw out the bottom, sawing wide of your line to account for the groove. Byrd uses a sloyd knife (far right) to heavily chamfer and shape the bottom until it fits snugly within its groove. If she needs finer cuts, she grabs her spokeshave.



used, too. Stay away from aromatic woods, like cedar, for any jar that will store dry goods, candies, or other food items. For the lids, though, wood selection doesn't have much effect.

Look for smooth, knot-free sections from trunks or branches. Shrink pots 5 in. dia. or smaller are easier to process, though much larger ones are doable.

Lay out the walls and core the blanks

After cutting the stock to length, making sure each end is flat, use a compass to lay out the vessel's walls about $\frac{3}{8}$ in. thick. Thicker walls can be trickier when fitting the bottom because they contain more moisture, which means more shrinkage as the pot dries. The opposite is true for thinner walls.

I use a T-auger to core the blanks, but other woodworkers have used a drill press and Forstner bit. Power drills can be used, but just make sure to



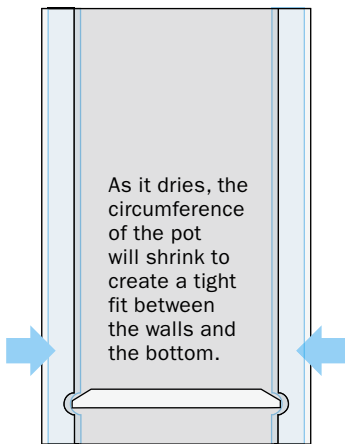
use smaller bits. I've killed a motor trying to use the biggest bit possible.

When drilling out the blank, don't cut right to your inner layout line. Instead, leave room to smooth the surface with a hook knife. If there's a significant amount of material to remove after coring the blank, turn to a mallet and a hearty gouge with a deep sweep before using your hook knife. For this work, I like a hook knife with a long handle. Make sure the texture you leave at this stage is what you want, because once the bottom is fitted, you won't be able to easily reach all parts of the inner walls again.

Now clean up the exterior. Remove the bark and work close to, but not up to, the exterior layout line.

Drying pot captures dry bottom

To plow the groove for the bottom, I use a small Flexcut scorp. A straight knife or veiner gouge also



See the light. The bottom should audibly pop into place, but you still want a gappy fit. This allows the pot to shrink around and capture the bottom without splitting.

Final shaping when dry

Dry cuts are crisper. While green wood is easier to work than dry stock, it doesn't take finishing cuts well. For final surfacing, wait until the pot is dry and your finish cuts will be much smoother and cleaner.



Clean and level the top and bottom. Make sure the plane blade is super sharp and set for a fine shaving so the end-grain cuts are smooth and consistent. Byrd wraps the pot in a towel to protect it in the vise (right). Mark any high spots (far right) on both ends, and plane them to ensure the pot won't wobble and the lid will lie flush.



works. Make sure you don't make this channel so deep that you compromise the walls of the pot.

Before fitting the bottom, lightly chamfer the inside edge of the bottom of the pot with a straight knife. It can be done after, but it's harder to do.

Cut the bottom from a dried piece of wood. I trace the inner rim of the pot's bottom onto the bottom blank and draw marriage marks on the blank and pot. These help when fitting the piece.

Bandsaw out the bottom slightly larger than the outline to account for the depth of the pot's groove. Chamfer and shape the bottom's inside face so it fits snugly within the channel. The bottom must fit tight enough to rest within the groove, but not so tight that the pot splits as it shrinks around it. You should hear a nice popping sound but still see gaps when the bottom is in place. To fit it in, tilt one end into the groove before pressing the other end in place.



Chamfer the inside of the top. Byrd uses her sloyd knife to break the sharp edge within the shrink pot, pressing the blade with her thumb for a fine, controlled cut.

Finish cuts when dry

Wait to take the finish cuts until after the pot has dried, as they'll be much crisper and cleaner than the cuts on green wood. If you're unsure whether the pot is dry, weigh it periodically. When its weight plateaus, it's ready. I usually leave them for a few weeks to avoid any worry.

Two-part lid

Once you've done the finish cuts on the dry pot, start fitting the lid, which consists of two separate pieces of dry wood that you'll glue together. The lower lid rests inside the pot; the upper lid goes on top.

I make a pencil rubbing on paper of the top rim, then cut it out to use as a template for the lower lid. For the upper lid, I simply trace around the pot onto the blank. Then I cut out both at the bandsaw.

Two-part lid

Trace for the lower and upper lid. After making a pencil rubbing of the pot's rim on paper and cutting it out, use it as a template for the lower lid. Alignment marks help fit the part after bandsawing for the upper lid. Byrd simply traces the outside of the pot onto $\frac{5}{8}$ -in. dry pine stock to lay it out.



Glue and center the lid. After fitting the lower lid, apply glue, align the marriage marks, and hold the parts together until they stay adhered but can still move. Lower the lid onto the pot with the marks aligned and then gently slide the upper lid flush with the pot's walls. Remove the lid and clamp its two parts together with a weight.



Checking the fit of the lower lid is a slow process, so take your time. If it's done well, you can achieve a twist-lock fit, where the lid locks when turned. After the lower lid fits, you can glue it to the upper lid. While the glue is still wet, though, carefully put the lid onto the pot and gently shift the upper lid to line up with the outer walls of the pot.

Then remove the lids and clamp them together using a heavy weight. After the glue has dried, I very lightly chamfer the top and bottom edges of both the lid and pot, both for aesthetics and to prevent the grain from tearing.

Finishing touches

The shrink pot is now ready to be decorated, which can take so many different forms. I've used chip carving to create a series of geometric patterns and shapes, homemade or repurposed punches to create patterns, and oil or milk paint to decorate and add to the carved patterns. You can also leave a natural surface protected by linseed or tung oil on the outside. □

Danielle Rose Byrd is a professional woodworker in Bar Harbor, Maine. To see more of her work, go to daniellerosebyrd.com.



Online Extra

To watch a video of Danielle Rose Byrd making a shrink pot, go to FineWoodworking.com/273.