

Platter with beads

# Off-Center Exercise

By Keith Gotschall

In the spring of 2006, I had the good fortune to demonstrate at the Southern States Symposium in Gainesville, Georgia. For one of my rotations, Doug Barnes, a board member and good friend, asked me to turn an off-center platter.

I think Doug did this to me on purpose; he knew I don't normally turn off-center work. (I believe Doug just likes to see what I will come up with given the challenge.) I took him up on his test in a daring way. I made an off-center platter for the first time during the demo! This isn't a practice I would normally recommend; in fact, I would guard against it.

However, I had thought the demonstration through completely, making sure I was comfortable with every step. At the beginning of the demo, I disclosed the fact that I had never made one before and, with the interaction of the crowd, pulled off a pretty nice platter that was quickly grabbed up by Doug himself! I accept that as praise.

## Get started

For turning tools, you'll need a  $\frac{3}{8}$ " spindle gouge and a  $\frac{3}{8}$ " or  $\frac{1}{2}$ " bowl gouge. You'll also need a 4-jaw scroll chuck and a screw chuck and spacers.

To make your off-center platter, you will want to start with a blank of wood that is sound; avoid cracked or flawed material. I chose maple for this project as it shows the dark detail lines well, but any wood will work. The dimensions are variable, depending on your lathe;  $1\frac{1}{2}\times 10$ " is a good size for your first attempt. You will want to consider the size of your lathe when determining the diameter. Since you will be mounting it off-center, err on the side of caution. An 11" blank mounted 1" off-center might be more than a lathe with a 12" throw can handle.

## Turn it round

First, mount your blank on a screw chuck. Use spacers to reduce the length of the protruding screw so that about  $\frac{3}{4}$ " is firmly seated in the wood. Be sure the hole is in the center of the blank (**Photo 1**).

Note: A tailstock should be used for safety whenever possible. For clarity, the tailstock isn't shown in the accompanying photos.

Once your stock is mounted, bring the blank into round and trim evenly what will be the bottom. With Vernier calipers or a similar measuring device, mark



the dimensions of your chuck jaws in the center of the platter. Don't make the recess too deep— $\frac{1}{8}$ " to  $\frac{3}{16}$ " is plenty. Don't bother with any decoration yet; you will trim off this recess later. Make sure, though, that your recess has crisp sharp corners for the jaws to seat against.

At this point, establish the platter edge. Don't define the shape of the platter yet, just give yourself a nice rim detail that is rounded (**Photo 2**). Also, don't make the rim too thin; for now, shoot for about  $\frac{3}{8}$ ".

Remove the platter from the screw and mount it on a 4-jaw scroll chuck. Then expand the chuck into the recess you cut. Clean off the face, bring it into true, and make a clean cut across the platter. You will want to make sure the face is flat, so check it with a straightedge (**Photo 3**). If you don't keep this flat, your platter will have a rim that is thick on one side and thin on the other.

### Add decorative beads

For decoration, cut in some beads on the top face. I always do this by eye, but you can measure if you prefer. I chose to have essentially even beads going from the rim to almost the center of the platter. I know some of these beads will be cut away eventually, but I would rather have too many beads than not enough.

Alternately your beads could vary in dimension or you could have only a thinner band on them.



**1** Start with a sound blank, roughly 10" in diameter and  $\frac{1}{2}$ " to 2" thick. Mount the stock on a screw chuck like normal.



**2** Flatten the bottom, make a recess for the chuck, and establish a rounded edge.



**3** Turn a flat top to the platter and check with a straightedge.

Whatever you decide, cutting the right side of all the beads and then cutting their left side on the way back will speed up this step. **Photo 4** shows cutting the left side of the beads using a  $\frac{3}{8}$ " spindle gouge.

Start at the top of the bead with bevel rubbing, and then roll the tool while lifting the handle. The flute should be closed (at the 3 or 9 o'clock position) at the end of the cut (**Photo 4**).



**4** With a  $\frac{3}{8}$ " spindle gouge, add a series of beads to the platter.



**5** Create well-defined details by pushing a thin wedge of dark wood into the spinning grooves. This works most dramatically on lighter-colored woods but can be a subtle accent with darker woods, too.

Once you're happy with the beads, sand the top of the platter. It is impossible to sand the top once it is out of round, so take it to your final grit (I sand to 320 grit). Also sand the rounded edge, as this is your last sanding opportunity here, too.

For another design detail, you can accentuate the beads with color. Push a thin wedge of dark wood into the valley between each bead (**Photo 5**). Most exotic woods will make a nicely defined dark line as they burn into the spinning wood.



## Mount off-center

Remove the platter from the chuck and drill a new hole for the screw chuck. Use moderation; a 1" off-center position will make a dramatic difference (**Photo 6**).

Once mounted on the screw chuck, bring up your tailstock for safety. Reduce the lathe speed before turning on your lathe. Then crank up the speed to just short of the point of vibration. (Electronic variable-speed control is a real help here as you can dial the speed to just under the point of vibration.) The platter will make a blurred rotation once it is spinning. Be careful to stay away from the outside edge.

Carefully start to remove material from the blurred edge. You can safely work the outside edge, cutting in steps toward the solid area in the center (**Photo 7**).

Using a  $\frac{3}{8}$ " bowl gouge on its side and making pull cuts, reduce the amount of off-center wood going around, taking weight away from the platter rim and reducing vibration further. Work in stages, cutting up to the bottom of your already-formed rim. Stop the lathe and check your progress; this will help you understand what is happening during this off-center process (**Photo 8**). You will also need to remove the original recess, and cut a new one (**Photo 9**).



**6** Position the new center hole about 1" from the original center.



**7** Cut away the bulk of the off-center rim. Work from the outside in stages, pivoting the gouge into the blurred spinning wood.



**8** With the lathe stopped, it is easy to see how the offset mounting affects the cutting of the platter's rim.



**9** Cut away the first recess and make a flat bottom. Then mark for the new recess that will be centered on the new axis.

Once you've removed the original mounting, mark and cut a new recess, then clean up the platter bottom (**Photo 10**). This will be the final bottom of the platter. Since the rim will overhang on one side, make the platter bottom on the large side. If you make the bottom too small and delicate, the weight of the rim will tip it over.

## Move to the rim

Continue to thin out the rim and shape the bowl of the platter (**Photo 11**). Make a clean, even cut to the underside of your platter's rim. The reason for establishing a thicker rim edge is so that the overhanging rim won't be flexible. (Making a thinner rim is possible, but once it starts flexing it becomes a huge turning challenge.)

Be careful that your cut is parallel to the top face; this also affects how the entire rim will look. Once you are happy with the underside, sand the bowl section and what you can access on the rim (**Photo 12**). You may find it easier to sand the underside of the rim with the lathe stopped.

## Finish the inside

Now that you've completed the bottom of the platter, it is time to turn it around once more and mount with an expanding chuck seated into the newly cut recess. Carefully begin hollowing out the bowl section (**Photo 13**). Although it looks unusual, the second hole (**Photo 14**) is now the platter center.

With your  $\frac{3}{8}$ " bowl gouge, continue to hollow the platter's bowl. To start the cut, the gouge flute should be at 3 o'clock, and the bevel should be directly perpendicular to the face of the platter rim (**Photo 15**). Remove the interior stock slowly. Pay attention



10 Now you can add some decorative detail, as this is the finished bottom of the platter.



11 Make your final cuts to the bottom of the rim and bowl section of the platter.



12 Sand what you can on the bottom now, as you won't be able to come back to it later. Sand the overhanging flange of the rim with the lathe off.

and you'll easily cut through the uneven, spinning beads.

Once into the solid wood, rotate the tool's flute to make a more efficient cut, and ride the bevel toward the bottom of the bowl. Keep an eye on the outside shape, aiming for a wall thickness of about 1/4" to 5/16".

Cut the interior of the bowl deeper, remembering that you are chucked on a recess and you don't want to cut through the bottom.



13 Start to hollow out the platter, which is mounted on the newly cut recess.



14 Although it looks odd, the hole on the right is the new center of the platter.



15 To begin hollowing, hold the flute at 3 o'clock. The bevel will head straight into the spinning beads. Once safely past this point, rotate the tool to a more open position.

After you're happy with the wall thickness and depth, sand the interior of the bowl (Photo 16).

### Apply finish

After you've completed your final sanding touches, apply a penetrating oil finish with the lathe turned off (Photo 17). I've had good experience with Waterlox and similar finishes from Liberon and Watco.

There are lots of variations that will make appealing changes in



16 With a 3"-diameter soft disc, sand the interior of the bowl.



17 After the final sanding, apply a penetrating finish of your choice.

the outcome. Varying the amount of offset, the size of platter, the depth of bowl, and the amount of decoration will dramatically change the appearance of your off-center platter.

Studio turner Keith Gotschall (k2turner@salidaco.com) lives in Salida, CO. He will demonstrate this off-center platter project during rotations at the AAW symposium in Portland.