

## **HANDOUT**

### **Grain and Grain orientation**

There are many ways a natural edge piece can be turned. The most common is to take half a log and turn the bowl into the half log. This produces the well known “oval” bowl with the bark on top.

You can use the whole log across making a bowl with much higher wings, with the pith running through the middle of the wings.

You can use a crotch to make a nice looking bowl showing the “feather”. When hollowing an entire log, be careful that you don’t turn away the feather; stop your lathe frequently to see to inspect the grain pattern.

You can turn a bowl into the end grain making for an interesting natural edge.

When turning burls, you can highlight the typical rays by turning the bowl into the burl.

You can use wet or dry wood to turn natural edge pieces. In either case you can turn the piece from start to finish in one session. If the wood is very wet, you may have to wait for 24 hours after turning to let the bowl dry sufficiently to allow for proper sanding.

### **Bark**

Often people will ask what do you do to keep the bark on?

On some woods the bark will stay on, particularly if it is cut freshly in the fall. I will re-enforce the bark line with CA glue so that it will be more stable and will not break off so easily when sanding. If the bark comes off when turning, gluing it will usually not work and it is best to clean off all the bark. The piece can still look very nice with the natural edge top, especially when using burls that have a rough or spikey surface below the bark.

### **Mounting the piece**

I prefer to mount the wood between centers to get started. This allows the most flexibility to make adjustments to take advantage of natural features that appear after you start turning.

You can band saw the wood to have a balanced piece mounted on the lathe. I generally don’t bother much with band sawing except for very large pieces. I believe the lathe is the best tool to shape the wood.

Drill a hole in the center of the bark section to allow for a more secure footing of the drive center. This is especially important when the piece is lopsided and needs to be mounted at an angle.

It is generally recommended to balance the piece by having the high points and the low points the same distance from the bottom. However, interesting effects can be achieved by having one edge much higher than the other.

Visualize what the finished piece will look like and make adjustments to reach that goal.

### **Turning (Outside)**

Make sure the tool rest clears all edges and start cutting wood away. Be careful of spinning edges. I usually wear a glove on my left hand; it cushions the blow of the spinning edge if you catch it inadvertently.

Bring up your lathe speed just before the lathe starts vibrating and start cutting the outside of the bowl. As your piece becomes more round, you can keep increasing the lathe speed.

Cut from the tailstock to the headstock. Always cut all the way until you hit just air. Watch the far side of the spinning piece to see where the tool is cutting. If you want to keep the bark on, it helps to cut the last inch or so from the top down as this way the bark is less likely to tear.

For a finish cut on the outside you can use shear scraping, either with your gauge turned over or a scraper. I use a negative rake scraper to great effect. You can also try to use your gauge like a skew by bringing the handle way down and rubbing one of the side bevels against the wood. Although this takes considerable practice, I find that it will provide the best surface.

Turn off lathe frequently and check progress and potential issues.

Turn a spigot to fit your chuck at the tailstock end. Make sure you have a proper ledge on your spigot to sit properly against your chuck shoulder, so that the piece will run true when you switch it to the chuck. If you use a face plate, turn a flat surface suitable for your face plate.

Run your outside curve short of the tenon so that you will be able to blend this curve with the bottom when you finish the bowl. (see turning the bottom)

### **Turning (Inside)**

After you mount the piece for hollowing, check that it runs true. If not, go back to refine spigot, or re-turn the outside to true it up.

Drill a hole into the bowl to the approximate depth of the inside. (This is a must when turning a narrow tall vase) I usually drill less than the whole depth which will give you some flexibility should you tear off a tenon and have to turn another one.

Start hollowing in the center and work your way out

As you get close to the outside edge, it will be difficult to see where you are starting your cut as the edge will be blurred. Move your tool rest close to the edge to assist in starting the cut. Bring your tool handle all the way opposite the edge to enter the wood and create a ledge on which the bevel can run.

Watch your bevel when you cut and run it parallel to the outside curve. This will produce an even wall thickness.

When turning a very thin bowl, you need to proceed the hollowing in 2" steps, from the outside in. Finish cut each 2" section and advance the hollowing to the bottom. Measure the thickness often.

To hollow the bottom you may use a scraper, particularly if your bowl is tall and narrow. To clean up the inside surface, the best tool in my experience is a negative rake scraper. It will clean up the inside surface on the wings without catching.

### **Sanding**

I use sanding discs on a flex shaft or in a drill. You can sand about two thirds up the bowl on the outside with the lathe running, by making sure the disc hits the trailing edge. The wings need to be sanded with the lathe stopped.

The same approach works for the inside of the bowl. Again, make sure that the disc drags above the trailing edge. The wings need to be sanded with the lathe stopped.

I usually start with 80 or 120 grit and work up to 240 or 320. For very hard wood and a fine piece you may go higher.

### **Turning the bottom**

I typically retain the tenon on the bottom until the bowl is finished. I then use a jam chuck arrangement with a soft material on the inside of the bowl to prevent it from being marred. Be careful not to get any catches as they will definitely damage the inside if the jam chuck spins because of a catch.

Turn away the tenon and blend the curves to give the bowl lift. Retain a small tenon in the center to allow the revolving center to apply pressure. Sand the blended curve to the same grit as the rest of the bowl. Reverse the rotation when you sand so that the sanding marks run the same way as the rest of the bowl. This way you will not get a mark where the curves blend.

Grooves or other bottom decorations can be added at this stage.

Chisel away the small tenon left at the center of the bottom, sand and finish the freshly sanded surfaces. Apply the same number of coats as for the rest of the bowl.

### **Tools**

I use the following tools: If you make a very large bowl, you may want to use larger tools.

5/8" bowl gauge

1/2" bowl gauge

3/8" bowl gauge

1/4" bowl or spindle gauge

3/4" scraper

Negative rake scraper

Parting tool

Hollowing tool for narrow vase turned into endgrain

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