The Natural Edge Bowl

Raymond Overman

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Natural Edge Bowls

For the purpose of this discussion we will consider the face grain oriented natural edge bowl. Tools and techniques discussed in this document will differ from those where you are cutting into end grain.

Natural edged bowls are similar to standard treen ware and decorative bowls in the respect that it takes the same tool positions, same cuts, and same skills to make them. Some people find them a little intimidating due to the uneven edge that is spinning by your fingers but this really isn't a problem since you can easily avoid them. These bowls are generally thinner than treen and highlight the natural bark edge or jagged burl on the outside of the tree.

This document will discuss the ideas of designing, preparing, and turning natural edge bowls in a face grain orientation. These same principals can be applied to end grain oriented bowls but the tools required would change to optimize the cut.

Preparation and Design

To prepare for turning a natural edged bowl we need to talk about design. The features of a natural edged bowl that make it have an impact are the uneven edges, inclusions, bark characteristics, and the curve of the piece.

I personally like to select out of round logs, crotch pieces, or burls for my natural edge pieces but I've had some success with straight logs as well. The key is, the more features, bumps, and uneven surfaces the blank has, the more you can use those to your advantage in the natural edge piece. Here are some examples of what I'm talking about.

In the burl above, there is a lot of interest in the bark. There is a definitive line between the bark and the wood and the bark is somewhat thick. What makes this bowl is the uneven rim offset by the rounded bottom.

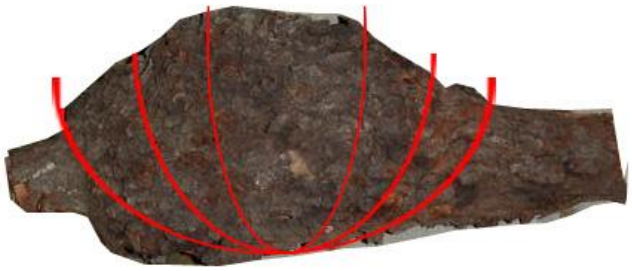
The piece above had dramatic cracks in the log prior to turning and the outside edge had oxidized or possibly burned. This created interesting inclusions in the wood. The blank was set slightly off center when turned to expose more of one side of the blank. This gave the effect that there were dips in the top edge of the bowl even though the log was round.

Here's a more dramatic orientation of the bark edge allowing more of the inside of the bowl to be seen. The natural inclusion on the side of the bowl adds even more interest.

While uniformity, clean lines, and stability are important for utilitarian bowls, there's a balance of chaos and control which make natural edge bowls popular. The more dramatic the curve in the bowl's rim, the thicker the layer of bark is, the more holes and inclusions, the more spikes and dips, the better. Designing natural edge bowls start with the chainsaw and finding the right tree and ends with orienting the blank on the lathe. While symmetry in the grain structure can be a positive it isn't as important as in treen. Even warping can add to a natural edge piece. Especially in wood species that wrinkle when they warp like madrone or dogwood.

The Angle of the Dangle

The next discussion item is the angle of attack. Orienting the bowl in the piece of wood prior to turning it is important to the outcome. For example, here is a burl that has a number of different orientations for bowls outlined.



While this may look optimal for using most of the burl, you may also want to consider the following orientation.

Note that the left edge of the bowl will be dramatically lower than the right side of the bowl. Being a burl, the grain orientation isn't going to come into play as much as with a straight grained log. This could yield an impressive piece since the rim of the bowl will follow the curve of the outside of the burl.

This orientation however will take a hefty lathe since the piece will be out of balance and possibly a faceplate would be more effective than a chuck to hold it. You'll want to plan accordingly.

No matter what the orientation, the outside shape of the bowl is still important so let's think about curves. For utilitarian bowls, it's often ok to use straight sides, ogees, and beads. For example a collection plate may have a bead around the top edge, an ogee side, and a flat bottom. For me, this doesn't translate well to the natural edge bowl. There's usually enough going on with the bark rim that extra features actually take away from the piece. That is why I prefer a nice continuous curve on the majority of my natural edge pieces. I will occasionally break that rule with a straight sided vase form but ultimately a smooth curve seems to highlight the rough edge better and gives more body to the piece.

A final note on design, a natural edge may not be a natural edge. For Instance, a roughly chainsawn edge may be attractive on some natural edge bowl. As with the example below, the weathered chainsaw edge appears rough and uneven while the bowl has an even curve and a foot. While not a natural edge, it still emulates the natural feeling.

A prime example of this type of work is David Ellsworth's Solstice series. His natural edges aren't really natural edges. They create the effect because he burned the top edge then put it out leaving a natural feeling uneven edge.

Turning On the Lathe

Now that we've discussed the blank preparation and design we're ready to mount the blank on the lathe. I start by finding the center points that I want to use on both sides of the blank. Remember that this doesn't have to equate to the actual center points on both sides. I remove any bark from around the center point on the natural side with a chisel and possibly drill a hole to provide adequate clearance and grab for a spur drive. I then mount the blank between centers using the spur drive at the headstock and a live center on the tailstock. Once the blank is mounted I spin the blank by hand to check clearance and then start the lathe at a slow speed. This is especially important when using a piece of burl because the characteristics inside the piece may mean that the blank is heavier on one side than the other which, depending on your lathe, could walk the lathe across the floor.

From here we rough the outside of the blank using a bowl gouge and standard bowl techniques. Sharp gouges are always necessary. Smooth motions all the way through the cut are important at the bark edge to help keep the bark intact. At this point I'll make sure that my tenon is defined as well. I use the gouge to rough out the tenon and an oval skew or parting tool to refine it.

Once the outside of the bowl is roughed out and the tenon is cut, I go back with the gouge and with a shear cut, I make final sweeps which clean up an tool marks. There are times where I use a sharpened scraper to smooth out any ripples or transitions that are being difficult. Riding the bevel of side of the gouge is the important part of doing the shear cut and sometimes it takes a few sweeps to get into the cut.

Once the outside of the bowl is satisfactory, I'll start with 100 grit sandpaper and sand through a couple of grits while there is some mass behind the surface.

It's now time to turn the bowl around and mount it in the chuck. I use the center point created by the spur center and bring the tailstock back up while tightening the chuck to help me keep my center points. I tend to keep the tailstock in place to provide support while I make my initial cuts into the bark face of the bowl.

I start near the center with a pull cut and remove the rough and uneven bark out to around one inch of the outside edge of the bowl. I usually continue to use this pull cut until I've removed enough material to be 1" below the top edge of the bark. This gives me clearance to make clean push cuts after bringing the tailstock away.

Looking at the shadow of the spinning uneven edge, I align the gouge so I ride the bevel into a thin cut at the bark edge. I continue this until I've reached a final thickness at the outer edge of my bowl. I continue the process by cleaning out material near the center of the bowl first, then cleaning up the edges out to the desired wall thickness until I'm below the bark line. I progress deeper into the bowl by about ½" each time before removing the center material again.

The following diagram gives an illustration of how the bowl is progressively hollowed:

When I reach final thickness at the edge of the bowl I work toward the bottom and making the walls consistent throughout the piece. Usually this is between ¼" to 3/8" thickness depending on the material and how the bark looks.

Sanding

At this point I have turned the natural edge bowl. Now I'm ready to sand it. I personally use a 3/8 angled drill to power sand the bowl while leaving it on the lathe. If you feel comfortable turning the lathe on while sanding the bowl portion of the piece you can. I generally sand the top edges of the piece inside and out with the spindle locked. This way I can use both hands to insure the power sanding doesn't wander and I'm not staying in one spot too long.

There may be tool marks in the uneven top edge of the bowl. Sand these out using 60 or 80 grit sandpaper prior to moving to the higher grits. Make sure you have no tool marks before moving to the next grit. Again, this is done with the lathe off. Be careful not to put a lot of pressure on the bark edge or you may break the bark off or possibly have a catch with the side of the sander.

I progress through all grits of sandpaper until I reach my desired smoothness. Be mindful of tool marks in the upper part of the bowl where the tool is not in constant contact with the wood. The wood tends to flex more in these sections of the bowl as it gets thinner leaving the tool marks. This may or may not be a problem depending on how good you are with riding the bevel and clean tool work. I usually start with 80 grit sandpaper in these sections to give you an idea of my skill. Sandpaper is another tool. Use it like someone else is buying it.

Cutting Away the Tenon

After I have sanded the majority of the piece I dismount the bowl from the chuck. If you have a vacuum chuck, now would be the time to get it warmed up. Since I don't have a vacuum chuck, I use the less impressive but equally effective jamb chuck method. I center the bowl using the center marked in the tenon when I roughed the bowl out. I use a small square of old mouse pad glued to the jamb to cushion the inside of the bowl against the jamb.

I then slowly remove the tenon while taking care to not get too thin in the bottom of the bowl. In some cases I like the idea of a completely round bottom. This is especially true when I make a natural edge bowl that looks like part of a sphere. In this case, I follow the curve of the bowl and continue it to the center of the bottom of the bowl.

Once I get the tenon down to about 3/8" to ¼" diameter I slow the lathe down and I sand the transition where the tenon meets the sanded section all the way through the bottom of the bowl. This creates the continuous curve through the bowl. I then remove the bowl from the jamb and pare the tenon off with a sharp wood chisel. I may power or hand sand the remains of the tenon flush with the rest of the bowl.

You have a design opportunity with the foot. You can leave a foot, leave a small dimple for stability, or make a completely rounded bottom. The choice is yours.

Finishing

I generally use two different finishes on my natural edge bowls. I use deft spray lacquer to coat the whole bowl. I use a Lazy Susan to spin the piece while I spray.

I also use a mixture of 1 gallon of boiled linseed oil, 1 gallon of mineral spirits, and 1 quart of clear varnish. I dip my bowls in the bucket after stirring it and sometimes I let them soak depending on how thick they are. I have a square piece of chicken wire that I use to drain them on top of my bucket once I've finished soaking them.

I occasionally buff the outside with wax after letting the oil mixture dry being careful not to break the bark away from the natural edge. I've found that an old pair of worn blue jeans works wonders for buffing the finish out by hand.

Contact Information and Resources

Feel free to contact me if you have any questions or burled and figured wood that you need to get rid of. I'll be glad to help you.

Raymond Overman
raymondo@overmanshop.com
http://www.overmanshop.com
http://www.nakedwoodturner.com
704.907.1830