

Burl to Bowls: How to Harvest, Section, and Core a Burl into Multiple Bowls

Demonstration Handout by Phil Holtan, Eagan, MN

What is a Burl?

An abnormal growth that protrudes from the tree. We're interested because the disturbed grain of the burl is greatly prized by woodturners and other woodworkers.



My goals are to help you:

- Identify an eyed or a layered burl
- Determine the quality and age of the burl
- Know how to best harvest the burl
- Make good decisions on how to cut up the burl.
- Get some ideas on getting burls
- Mount and orient the burl on the lathe
- Core the bowl

An eyed burl is a tumor on the tree and can usually be identified by the round or dome-like shape it makes on the outside of the tree. Once you cut open the eyed burl, you can see that they have “eyes”- a kind of bird’s eye. These are both Black ash burl, local to the swamps of northern Minnesota.



Note that the burl can be made up of multiple round shapes stacked close to and overlapping each other but the basic building block shape is still round. The seams you see between the smaller burl segments may affect our cutting.



A layered burl is usually the result of an injury to the tree- a frost split, physical damage done the tree, bird peck, an over-pruned tree or broken off branch that the tree grows over to protect itself. The shape of a layered burl tends to be random and not rounded like an eyed burl. Layered burls may have branches but eyed burls do not. They often “de-laminate” as they age and the moisture freezes and splits the grain.



The quality of the burl depends both on its condition while standing, and how long ago it was cut. Spalting can be good or bad, depending on the firmness of the wood and suitability for your purpose.



If the burl has been cut for a year or more, the sapwood will have lost its light color and the bark will loosen its grip. Sometimes I like that look, like in the photo here, and without the bark, I can definitely cut the bowl thinner.



Longer than that and the wood begins to crack and will be lots of work to glue and patch. Unlike a bowl from a regular log, I am willing to do a fair amount of gluing. Coring with McNaughton will become much more difficult.

The ideal burl for me is an eyed burl truly protruding from the tree. A big burl on a small tree is higher quality. A small burl on a big tree, not quite so much. I don't usually buy burls smaller than 12 inches across



How do I cut a burl?

While harvesting, leave a few inches of the trunk to protect the burl from splitting. Coat the ends with end grain sealer. Get out your cardboard discs to determine best divisions.

I like to keep the full burl as long as possible, but sometimes you need to cut the burl just to get it out of the woods. Avoid cracks, bark inclusions, holes, rotten areas and insect activity. Aim toward the pith of the log.



Seams, bark inclusions, cracks, and ant holes will all indicate a place to cut the burl apart. Sometimes the deciding factor is what size of blanks you want. 14-15 inches is my max with my big McNaughton cutters, but that would need to be shallow, so 12 inches is a more common and useful diameter.

Note the burl figure that shows on the cut surface. That's the prize. Note that it is a cone coming from the younger, smaller burl that grows in diameter as the tree grows. My biggest bowl in a stack almost always extends on its edge into the regular wood. Coat that exposed wood, both side-grain and end-grain, and turn it as soon as possible. It is very exposed once you section the burl.





I find the key to trimming the burl blank on the band saw is creating a cut at a right angle to the top surface. Then I can cut a flat on the bottom of the bowl blank, set the blank upright and use the cardboard disc to guide me to cut the waste wood from around the bowl blank.

Before we mount and core the bowl, let's spend a moment to think about **finding and/or buying burls.**

- Look at blogs on my website, philholtan.com, especially "Harvesting and Selling Your Burls." There are people anxious to sell their burls. You need to find them.
- Advertise in small town newspapers where you know burls can be found.
- Use Craigslist but be cautious about burls advertised there. Often old and hard, layered vs. eyed.
- Make sure your website is tagged for wood burls so people can find you.
- Buy some burls, from wood stores, online, from turners who work with burls.
- Talk about burls everywhere. Show pictures of burls at art shows or on Facebook. People with burls know they're valuable but don't know what to do with them.
- Tell your local club president you're interested, wood store staff people, too.
- "See burls" as you walk or drive. Talk to owners and offer to buy or trade.
- Expect to pay for the burls. \$1-3 a pound, depending on quality, not including waste. This will greatly vary by region and by urban/rural locations.

To turn the blank, mark the top and bottom centers, and then make a secure place to mount the driving center, not in the bark but in solid wood.



Move centers as needed to level the bowl top edge and get maximum size. A photo shows me using my finger on the rest to level the top natural edge. This will be an approximation, since the top may be very uneven.



Tips for coring-

- Use every safety precaution, like face masks and thoughtful procedure. Use larger diameter chucks for a more secure fixing. Until you become more experienced, this can feel a bit chaotic.
- I do not twice-turn my burl bowls, because burl wood is valuable, it doesn't distort too badly, and I like the "wrinkled" finish of the dried burl bowl.
- Unlike some corers, I always core from the outside, so, I first give attention to my largest, most valuable bowl.
- Align your tool rest base with the cutting tool. Sideways alignment allows cutting pressure to tip the tool rest in an alarming manner.
- Use the tailstock as much as possible, for a more secure fixing and to be able to mount on smaller chuck diameters.
- I start with a straight parting tool, for an easier entrance. The straighter cutters allow me to



use the tailstock for the first cuts. If I can get half-way down with the straights or slightly curved, then I can remove the tailstock for the curved cutter with less fear of the blank flying off.

- Bark dulls edges, so I tend to use a carbide parting tool for my cuts through the bark. The carbide saves my high-speed-steel curved cutters on the McNaughton.
- As you cut, keep the blade up against support. Also, use a shaking motion, up and down and side to side to control the cutting, overcome the friction through the gate, and avoid sudden, deep cuts that can stall the machine.
- Before you cut with any tool, check that the tip line up

exactly, or just slightly above the center of the bowl. In the last cuts, if the cutter is not exactly at the center, it will either not cut, or worse, be wrenched down to the point of bending your cutter blade.

- I often need to eject my chips, either by stopping or by lowering my handle to slide them out. A build-up of chips can lead to a stall.
- Record the length from the handle to the tips of each of my cutters so I can use a tape measure, in line with the handle, to see where my cutter has penetrated. This is not so accurate as to thickness but very good for depth toward the bottom.
- I use the smallest McNaughton set that handles my blank, for a narrower kerf and more bowls.



Design ideas for Cored Bowls

I tend to turn decorative rather than utilitarian bowls in bark-edged burl. Ranch dressing in bark is not appetizing to me and there tend to be cracks and imperfections.



The coring process itself encourages the repetitive shape of a symmetrical curve. That's not so bad, because the burls have such an abundance of figure (busy, even), that fancy shapes don't seem appropriate. I do try to vary the shape. Inward turned bowls limit the yield of the burl. However, I like to turn ogee shapes, especially on taller bowls that might otherwise have curves that are too flat. For me, the curve needs to be always moving, one way or the other.

Starting the cut with straight cutters actually keeps my options a bit more open for a variety of shapes.

If I intend to sell the stack of bowls as a unit I would turn all similar shapes. But, given my market, I usually break up my stacks and therefore often vary the shapes depending on the thickness, even after coring. That is, if my latest core slice comes off a bit thick, I may turn it into an ogee or inward curved right then.



I will sand the bowl, inside and out and then use a chip brush to put on Watco Teak Oil, and then wipe off the bit of excess about an hour later. After two coats of oil (more if the wood is spalted and super absorbent), I will finish off the base, buff the bowl with Tripoli, then oil again. After another buffing and a couple weeks of drying, I will spray 2-3 coats of gloss lacquer and buff again.

I wish you well as you explore the rich world of burls for yourself.

