

## Easy Bowls Part 1

### Introduction

OK, so you want to turn a few bowls and such like. Well, you'll need some wood ! You can of course go to Just Wood or G&S and hand over cash for some nice dry, round bits of wood. This will become expensive if you want more than a few blanks, large sizes or unusual woods. You may not have the money to spend, or you may not wish to spend lots of money on bought blanks. Most of us tend to acquire logs and chunks of wood from various sources. When people know you are a woodturner you get offered all sorts of bits and pieces which it is rewarding to be able to make use of.

So we are going to look at how you can take a green or wet log and produce a finished bowl.

We'll do this in two sessions :

Session 1 January - cut a bowl blank, rough turn it, set it aside to dry

Session 2 May - re-mount and finish turn the bowl.

These sessions are called Easy Bowls because this is the easiest way for amateurs to deal with the thick pieces of wood that you need to make bowls and such like. It is very difficult for us to dry thick sections successfully – the old rule of thumb for air drying is one year per inch of thickness plus one year. However that will only get the timber as dry as the outside air which is still too wet for centrally heated houses.

You will also have trouble with the wood splitting especially pieces with curly grain that make interesting turnings such as crotch sections. We have discussed this before but it might be useful to briefly review 'Why wood splits'. Wood shrinks as it dries. If the outside is losing water quicker than it can be replaced with water from the wetter inside then stresses will build up because the outside wants to shrink but is restrained by the inside. Cracks develop as a means of releasing these stresses. This information tells us how to reduce splitting which we will return to later.

### Raw Material

OK, so you have access to some logs. If you can influence how they are cut, leave them as large as you can safely handle, or at least as long as the diameter. If they are very large you may have to cut them into rough planks on site to be able to shift the wood at all – lucky you ! Store logs in the shade, if you want them to spalt keep them wet and in contact with the ground.

To obtain a standard side grain bowl blank from a typical log that we might acquire, divide the log down the pith even if the pith is off-centre. You could use a petrol or electric chainsaw, bandsaw or handsaw or just split it with an axe and wedges – whatever you have. If the log is on the large side it is often a good idea to first cut a waste slab off each side while the log is stable, then cut in half.

## Preparation for Turning

The next decisions are the orientation of the bowl and the method of mounting on the lathe. The conventional orientation for a standard side grain bowl is where the inside surface of the blank forms the rim of the bowl. This is for two reasons : it produces the largest bowl from a given blank, and as the annual rings straighten if the wood dries, produces a stable base. If you want to turn a natural edge bowl you will need to use the opposite orientation. Assuming that you are intending to make a standard circular bowl, and depending on the size and capacity of your lathe, you may choose to make the blank more or less round on a bandsaw, or just trim off the corners with the chain saw.

To mount the blank on the lathe you could use any of the following :-

- screw chuck, but be aware that the hold will not be as firm in green timber as in dry timber
- face plate, good choice as you can use as many screws as you consider necessary
- face plate ring, same considerations but not usually as robust as a face plate
- between centres, useful if the mounting surface is rough, or you are doing a natural edge as you can manipulate the blank to give the best looking edge.

The mounting surface needs to be smooth enough to give a stable mounting. Use screws long enough to give a firm hold but short enough that the screw holes will be removed when turning the inside.

Bring up the tailstock for additional security if you wish. Rotate the blank to ensure it clears the bed, tool rest etc., check the lathe speed, stand clear and switch on the lathe. If the wood is freshly cut and green, or just wet, be prepared for water to spray everywhere. If the wood is Oak or Sweet Chestnut the tannin in the sap will turn metal parts black if you don't protect them.

As the wood is wet, dust should not be a serious problem but you still need to consider eye and lung protection especially when turning spalted wood which may contain fungal spores.

## Turn the Outside

Start to shape the outside of the bowl using a bowl gouge, a 3/8" (10mm) gouge would be a good size to use. Exactly how you go about this shaping depends on many things – the size and capacity of the lathe, the position of the lathe bed, and the grind of the bowl gouge – whether straight across or swept back.

In most cases cut from the centre outwards, from smaller to larger diameter. This is cutting with the grain where the fibre being cut is supported by the fibres underneath giving a smoother cut. You can take heavy cuts and enjoy the shavings but work within your capacity and that of the lathe. The surface finish is not too important at this stage but aim to develop the shape close to the intended final shape of the bowl.

Decide whether you are going to use a recess or spigot to hold the bowl for hollowing. I would recommend that you use a spigot for the following reasons :-

- it is better to contract onto a spigot than expand into a recess
- the bowl will go oval as it dries and the jaws may not fit into the recess when you want to re-mount the bowl
- it is easier to re-cut the spigot true when re-turning
- the spigot can either be removed when finishing or turned into a foot

The diameter of the spigot is important – it should be a little bigger than the size at which the chuck jaws form a perfect circle. Level off the base area and mark the diameter, define the edge of the spigot with a parting tool. Remove the excess wood around the outside of the spigot by cutting from the inside out, away from the spigot ensuring that this area is flat. One way to form the dovetail is to use a skew chisel on its side as a scraper taking light cuts. Another way is to use a small spindle gouge to cut the side of the spigot.

Now complete the shaping of the outside.

### Hollow the inside

Take the piece off the lathe and remove the face plate etc. if necessary. Screw your chuck onto the lathe spindle if necessary and reverse the bowl into the chuck jaws for hollowing the inside. Contract the jaws with just finger pressure, just enough to hold the bowl. Do NOT overtighten the jaws, it is easy to crush green wood and even to break the whole spigot off. If the bowl does not run true, do NOT just tighten the jaws more, this will probably make it worse. Slacken the jaws, make sure that there is no foreign matter between the jaws and the spigot, revolve the bowl slightly and close the jaws. Repeat until the bowl runs true.

Still using the bowl gouge take a couple of cuts across the top of the bowl from outside to centre. This will make starting each hollowing cut easier. Start to hollow from just to the left of centre and work gradually outwards. Try to make each cut a clean sweep from rim to centre following the shape of the outside wall. As you start each cut press down onto the toolrest to prevent the centrifugal force from throwing the gouge outwards and spoiling the rim.

The wall and base need to be an even thickness so that they dry evenly, with the wall thickness about 10% of the diameter to allow for re-turning when dry, e.g. for a 10 inch diameter bowl, leave a 1 inch thick wall. If the pith is still visible on the rim of the bowl, turn it away as it usually distorts seriously when drying.

### Drying

You now need to set the bowl aside and let it dry. Some people seal the end grain areas, or all over with end seal, diluted PVA glue, old oil-based paint or anything which will slow down the loss of moisture from the surface.. Some people advocate wrapping the roughed out bowls in cling film, newspaper or putting them in paper or polythene bags or cardboard boxes. All these are designed to enable the bowls to dry evenly, reducing stress build up and therefore cracking. I have had good results just stacking a number of bowls together under the bench where the base of the wall tends to be damp.

Whatever you decide, weigh each bowl, grams are easier than pounds and ounces, and write the weight and the date on the bowl. The kitchen scales should do for most bowls. I have set of bakers scales which will weigh a heavier weight than most kitchen scales.

Re-weigh the bowl every few weeks, writing the new weight and date on the bowl. When the bowl is a constant weight, move it to a drier location and repeat the process. If your workshop is nice and dry the pieces may get dry enough to finish stored in the workshop. More typically, when the bowl is a constant weight in the workshop, bring it into the house, maybe under the bed in a spare bedroom, and see if it loses more weight. When the weight is consistent within a few grams it is ready to finish turn but can be kept until you are ready.

## Part 2

In Part 2 we will have a look what happened to the bowl we have just turned as it dried, re-mount it in the lathe and finish turn the bowl to completion.

Galloway Woodturners  
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