Galloway Woodturners

Project Notes – Small bowl

Example in Beech, approx. 6" diameter, 2" deep

There are often a number of ways of doing the same thing. The method suggested here is one way. As long as it is safe and produces a high quality result, feel free to incorporate your own ideas. These notes assume that you have access to a woodturning chuck fitted with 2" (50mm) jaws.

Wood required – about 6" diameter by 2" thick. Any hardwood would be suitable, not too coarse grained.

1. Select which side of the wood will become the inside of the finished bowl. The convention is that this is the side that was nearest the centre of the growing tree.

2. Consider how to mount the wood on the lathe while you shape the outside. Face plate, face plate ring, or screw chuck would all be suitable. Ensure that the depth of the screw holes is compatible with the thickness of your wood and that you will be able to remove all traces of the screw holes when shaping the inside of the bowl.

3. Mount the wood on the lathe, check that it rotates freely and does not touch the tool rest or anything else. Stand clear of the lathe and switch on. Check that the lathe speed is appropriate for the work, and comfortable for you.

4. 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.

5. For your first few bowls, keep the shape simple. Aim for a smooth flowing curve from base to rim. Avoid leaving a big flat base with almost straight sides. Don't be tempted to curve the side over at the top towards the centre. Both of these shapes will make turning the inside more difficult.

6. When you have done the initial shaping, flatten off the base, still using the gouge, then mark the diameter of the recess that will be used to hold the bowl for hollowing. One way to do this is to set a pair of dividers to the diameter required, set the tool rest to centre height, then position the dividers with each leg on the tool rest either side of the centre. Use the LEFT leg of the dividers to mark the approximate diameter, keeping the RIGHT leg clear of the wood. If the diameter is correct the RIGHT leg will also be in line with the scribed circle. If not, adjust as required.

7. Lower the tool rest to about 1" below the centre line then use a parting tool to define the edge of the recess. This only needs to be 3/16" (5mm) deep for a small bowl. Then use the bowl gouge to remove the bulk of the waste. The circumference of the recess must be undercut in a dovetail to match the chuck jaws. Set the tool rest across the bottom of the bowl, just above centre height. Use a skew chisel on its side as a scraper, pointing downwards to cut on the centre line, and take light cuts to form the dovetail. You can also use the skew to lightly scrape the rest of the recess to improve the finish.

8. Now complete the shaping of the outside of the bowl using the gouge. If necessary sharpen the gouge for the final cuts. The surface can be improved and the use of abrasives reduced by shear scraping either with a shear scraping tool or a standard scraper used at approx. 45° to the wood.

9. Use abrasives to smooth the outside, including the base and inside the recess. Take care not to round over the edge of the recess. Start with a medium grade abrasive, say 120grit, then 180, 240, 320 in sequence. Do most of the work with the coarser grits, don't move on until all marks are removed. Remove dust before inspecting the surface and between grits.

10. If you want to add any decoration to the outside or the chuck recess, such as V-cuts or beads, now is the time to do it. Otherwise, dust off again, then brush on a coat of sanding sealer. Apply sufficient sealer to flow into all the wood pores but not so much that it forms runs. When dry, rub down thoroughly with the finest grit abrasive used above and dust off again.

11. Apply paste wax to the stationary work using a cloth or Webrax. Start the lathe and use a cloth to spread and melt the wax with moderate lathe speed and pressure. Switch to clean area of the cloth and buff to a shine at higher lathe speed and reducing pressure. Do not put wax inside the recess. Finally buff by hand along the wood grain with the lathe stopped.

12. Remove from the lathe, handling carefully to avoid marking the finished outside.

13. Re-mount with the chuck jaws expanding into the recess. Place a piece of kitchen paper towel between jaws and the recess to avoid marking the recess. Check that the bowl runs true.

14. If necessary level off the top surface with the bowl gouge, cutting on centre level from outside to centre.

15. Cut the area that will form the rim of the bowl. Consider the thickness and angle of the rim – a flat rim looks just that – flat !; an outward sloping rim looks droopy; a rim that slopes slightly inward leads the eye into the bowl.

16. Start to hollow the bowl making the first cut about ½" from the centre then moving the start of each cut out a bit. The gouge will tend to skate outwards as you start each cut due to centrifugal force and the lack of bevel support. Point the bevel along the surface you want to cut with the flute pointing to three o'clock and hold the tool firmly to the tool rest with your left hand as you make the entry. Once the edge is in the wood rotate the gouge slightly anti clockwise and lower the handle. Form the shape of the bowl by moving your whole body from a firm base with your feet at least shoulder width apart. Aim to make a flowing shape by cutting from rim to centre in one smooth cut.

17. The inside shape should follow the outside shape with a constant wall thickness. Don't attempt a very thin wall to start with, about ¼" (6mm) is thin enough.

18. Repeat the finishing steps described above (Steps 8 - 11). When shear scraping the inside, on most woods, you will get the best finish by cutting from the rim to where the base flattens out. Cut the rest of the base starting dead on centre and working outwards.

19. When finishing is complete, remove from the chuck, sign and date your work in the recess and polish the recess with a dab of paste wax.

20. Admire !!

 