Galloway Woodturners

Project Notes – Half Log bowl

Examples in Laburnum

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 – a small log about 10"-12" long by 6" diameter cut in two along the length through the pith.

1. The inside surface will become the top of the finished bowl. The process is basically the same as making a standard round bowl but with the consideration that much of the time you are cutting fresh air instead of wood ! The shape of the wood acts like a propeller and creates a draft; the wings tend to vibrate and make a noise as you cut them thinner, and the whole thing is literally a blur. This all adds to the fun of this piece.

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. With a face plate or faceplate ring you might not use all the screw holes, just those which are in the middle of the blank.

3. Mount the wood on the lathe, check that it rotates freely and does not touch the tool rest or anything else. Check that the lathe speed is appropriate for the work, and comfortable for you. It is better to run the lathe faster rather than slower as this will give a smoother cut on the 'wings' and give less time for your gouge to drop into the gaps between the wings. Stand clear of the lathe and switch on.

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. It is safest to use a gouge ground with some degree of sweep back to the edge – called variously the Irish Grind, Ellsworth grind etc. Set the toolrest parallel to the outside of the log and slightly below centre. Stand at about 45 degrees to the lathe bed with your feet about shoulder width apart. Place the gouge on the toolrest so that it is almost vertical with the bevel on the wood and the flute pointing towards you, handle close to you and elbows tucked in. Close the flute by rolling the gouge clockwise so that a shearing cut comes from the left hand side of the tool tip. Move the tool along the rest by swaying from your legs NOT by moving your hands and arms.

5. Gradually increase the length of the cut to form the underside of the bowl. Aim for a smooth flowing shape from base to rim.

 

6. When you have done the initial shaping, flatten off the base, still using the gouge, then mark the diameter of the spigot 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 spigot, cutting to the outside of the line ! Make the spigot about ¼" (6mm) deep. Then use the bowl gouge to form a flat or slightly undercut area around the spigot, cutting outwards so that there is no risk of damaging the spigot. This area must be at least as wide as the top of the chuck jaws to ensure that the bowl runs true when reversed into the chuck. The circumference of the spigot 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.

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. Take care when working on the wings – shear scraping is safer due to the shear angle, standard scraping would be more risky.

9. Use abrasives to smooth the outside. You can work with the lathe running on the solid central area either by hand or by power sanding using a pad in an electric drill. Do NOT attempt to sand the wings with the lathe running – at best you will round over the edges. Either sand by hand along the grain, or power sand, positioning the pad so that the abrasive cuts along the grain as much as possible. 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, 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. The final finish is applied off the lathe.

11. Remove from the lathe and take off the face plate or face plate ring if used.

12. 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 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.

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

14. 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.

15. The inside shape must follow the outside shape with a constant wall thickness. Don't attempt a very thin wing to start with, about ¼" (6mm) is thin enough. The final cuts can be a bit nerve racking but take a deep breath, keep the tool steady and don't rush the cut.

16. Repeat the finishing steps described above (Steps 9, 10).

17. The final step is to remove the spigot so that we have a clean base without any clues as to how the item was made. One way is to hold the piece between a pad in the headstock and a revolving centre in the tailstock. The pad could be a faceplate with some foam or router mat or a wooden pad on a face plate ring held in the chuck jaws. However you hold the piece, carefully turn away the spigot, leaving a small nib to support the work if necessary. Shear scrape and sand the area of the base that you can reach. Decorate the base if you wish.

18. Off the lathe, remove any nib, sand the whole base, sign and date (or number) the piece, and seal.

19. Apply a finishing oil of your choice, following the makers' directions as to number of coats required.

20. Admire !!