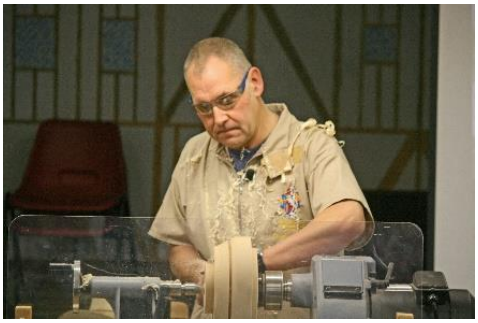
**ALL DAY DEMONSTRATION 2014**

# ANDREW HALL



Andrew started his demonstration by introducing himself and talking through an introductory slide presentation. He met Johannes Michelsen, a well know turner and maker of hats from America, at an Irish Seminar and it is from him that the inspiration for making hats and helmets derives.

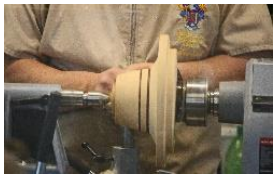
Andrew's first piece was to be a half size Stetson made from Sycamore. The blank needs to be wet and Andrew wraps his blanks in industrial wrapping (similar to clingfilm but thicker) to store them until he is ready to start work. The 16 inch diameter blank was mounted on the lathe with a faceplate and he used a ½ inch bowl gouge to clean up the octagonal blank to the round. With the blank still on the faceplate he created a truncated cone shape at the headstock end to remove waste wood. A recess was cut at the tailstock end to accommodate the 4 jaw chuck.

The blank was reversed onto the 4 jaw chuck and the tailstock brought up for added support and security. As Andrew was starting his cuts he noticed that the tool had lost its sharpness. He then went on to explain that regular sharpening of the tools is essential for clean cutting. Mention was made of the "magic minute" i.e. the time that the tool is cutting at its best, and he recommended that you get to know the feel of the tool and when it requires sharpening.

The next step involved cutting a spigot to fit the chuck on the tailstock end and then marking off the size of the hat. With a parting tool he cut the end of the blank to near this size and to save wood he cut in at this depth from the tailstock and then in from the side to remove a sizeable ring of wood. He explained that this piece can be used to make picture frame, mirror frame or an embroidery frame. He stated that if you stop for a break you should spray the piece with water and cover with clingfilm. It is important not to let the wood dry out.

A 3/8" bowl gouge was used to shape and carry out the finishing cuts to the outside of the hat, this was then moistened and sanded through the grits. Andrew uses a damp sponge to remove the slurry before moving on to the next grit.

To delineate the hat band he used Derwent Coloursoft Pencils; with the lathe turning slowly he applied a black line along both edges of the band and then coloured the rest of the band.



The hat was reversed in the chuck onto the spigot previously formed and a conical core removed from the centre using a parting tool. This core was put on one side as Andrew explained that he would show us how it is not wasted.

He now started to thin down the rim and used a light behind it so that he could see when he had even thickness (checked regularly with callipers to 2mm). He regularly rehydrated the wood by spraying with water to prevent any movement on drying out. He then moved on to hollowing out the centre of the hat again using the light to show an even wall thickness—the intensity of the light changes with end grain and side grain, so some care is needed.

With the hollowing and sanding complete the hat is removed from the chuck and a light box/jam chuck was mounted in the chuck. The light box consists of a turned hollow cylinder packed with small Maglite type torches (all switched on) and the outer of the box is wrapped with non-slip matting.

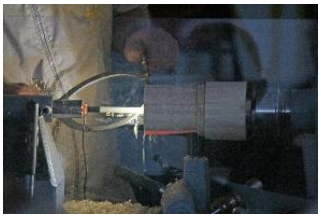
The hat was fitted over the top of this box, the tailstock brought up for support and the spigot carefully turned away. The light from the torches indicating when the correct thickness was attained. A small stub is left in the centre and this was carefully pared away with a craft knife and sanded gently.

Note: When sanding the rim of the hat Andrew damped the wood well and with abrasive in both hands he sanded both sides simultaneously and in this way does not cause any bending of the thin rim as it is fully supported.

He then explained the next stages of the process—the hat was then sprayed with water and allowed to dry for an hour before being put in the bending jig with elastic bands providing the bending force. Periodically the bands are stretched tighter by moving them further down the jig and increasing the bend in the rim. This is then left for 24 hours under tension.

When dry lacquer is applied, cut back with 180 grit, then lacquered, cut back with 240 grit and so on through to 1200 grit and then as may coats of lacquer applied as necessary. Between each sanding the dust is brushed off—Andrew believes this is the way to achieve an excellent finish.

The next project was a Corinthian Helmet but showing how it can be a goblet if required. The blank used was a piece of sycamore and was mounted between centres and reduced to a cylinder. A spigot was turned on each end and one end parted off to be used as a jam chuck if necessary. Andrew deliberately dimensioned the diameter to match that of the chuck.



A 10mm hole was drilled down the centre to the required depth and then with a bowl gouge and a Simon Hope Hollowing tool the helmet was hollowed out leaving a wall thickness of about 5 mm. The top photo shows the wall thickness being measured. After hollowing a light is inserted inside the helmet and the wall thickness reduced from the outside and following the curved shape of the inside. The light enables a visual measure that the wall thickness is even. The second photo shows how the helmet can become a goblet such as shown in the photo alongside.

Once shaping is complete the helmet is parted off and turned round and mounted on the chuck by expanding the chuck jaws inside the helmet (hence dimensioning to the size of the chuck!). The turning of the top of the helmet was carefully completed and then it was sanded. The shape of the eyeholes, nosepiece and cheek guards was drawn onto the piece using templates. These were then cut out using a small Proxxon jig saw and the edges sanded as it was passed around the audience.
Andrew followed this by making a two piece stand from Walnut to display the hats and helmets. The stand was decorated with a texturing tool and had beads cut at the edges to soften them.

The piece that Andrew had removed by coring it out of the centre of the Stetson was turned into a “finger rest” for ladies applying nail varnish. Apparently one of Andrew’s students came up with the design and had become very popular at college with the girls.

A wonderful day, an excellent demonstration skilfully executed with lots of good advice and tips thrown in on the way. Andrew kept up a very informative commentary all the way through and there were a number of amusing anecdotes as well. Thank you Andrew.

The day was made complete with the excellent food from Sonia and Alison.