

## A WINDSOR CHAIR IN THE MAKING 2003

In a corrugated iron clad workshop next to his outback NSW home at the foot of the Barrington Tops, with bare earth and a wood-shavings floor, Howard Archbold runs his 10-day, 6 person courses for making Rare Chairs. For my course the aim was to complete a Windsor chair from raw materials, using only traditional tools originating from the 18<sup>th</sup> century.

The Windsor Chair evolved in the late 18<sup>th</sup> century as a cheap popular chair capable of being made with a minimum of complex tooling and indeed became a model for the cottage industry in England, with families dedicated to mass producing turned legs, seat platforms, bent Bows for arms and backs and final assembly respectively. 'Windsor' was derived from the original orders placed from Windsor Palace that allowed non-royalty to have chairs with backs, rather than stools and the first designs appear to have come from High Wycombe.

Howard Archbold's research into the numerous examples of Windsor chair designs from the late 1700's in England enabled each of us to make our preferred choice based on our aesthetic preferences, our physical dimensions and our own comfort! Howard offers some guideline dimensions within which to work but we could vary these to suit our individual ideas. Daunting at first sight, but it was surprising how quickly each of us came up with our own variations.

Measuring tools available were rules, callipers and adjustable mitre gauges for setting boring angles, boring alignment being by eye, someone else's if they could spare the time!. The only 'fixed' aspect was the angle for boring the leg seating holes since this was and still is the ultimate secret of the structural strength of the Windsor chair.

The basic raw material for legs, stretchers and back sticks were 'green' logs of Robinia (pseudoacacia), 150 - 200mm diameter, split using Axe, Froe and Mallet. Pieces were then rounded down roughly to lathe size on the Shave Horse before turning on a Pole Lathe. These lathes were built by Howard and once we mastered the coordination needed to remove material only on the down-stroke of the treadle while standing on one foot, the results were extraordinary – and much safer than powered lathes!

Seats were from 50mm slabs of Camphor Laurel, sawn to shape with a bow saw and profiled with an adze before finishing with a gutter scorp and then scraper. Seat profiles were made to each individual's bums! Location of the leg holes and their angles for boring were critical and the boring itself with brace and bit was the most crucial stage of manufacture, particularly preventing break-out in the seat base.

The stretcher holes in the legs were bored – again all aligned by eye – followed by final sizing of the leg and stretcher spigot ends which were then heated in sand for about 12 hours to ensure they were completely dried out; this ensures that as moisture equilibrium of the 'green' legs and dried spigots is reached over time, the fit would tighten progressively. Then the ultimate moment of gluing the seat & leg assembly with hot hide glue, followed by chisel and wedging of the legs meant we at least had stools if all else failed! A complex procedure needing at least 4 hands!

Arm and Back Bows were from claret ash (SA), hard work planing to the required size, then steamed overnight before bending to shape over one of Howard's many fixtures. Probably the most tedious phase was shaving the 6 back sticks to size, then the tricky boring of the back stick holes thru



the back bow, arm bow and seat successively, done with a brace and monstrously long bit while standing on a log to ensure the correct alignment.

I had chosen a curved front arm bow support and this had to be steamed and cut to shape, the arm sticks tapered for location in the arms and then a hectic time applying copious glue, aligning all the sticks and final assembly into the base. Not quite final as we then had to chisel and wedge all the sticks before the glue set. 6 hands definitely helped.

I had decided not to stain my chair and instead leave the green timber to dry out. It took more than a year for moisture equilibrium after which the Robinia legs and back sticks were bleached with Oxalic acid & Ammonia solution to remove the yellow hue. I then applied 5 coats of a hardening bleached shellac. After many years it has darkened to a lovely natural golden brown, with the individual timbers and grain patterns still clearly visible.

I have attempted to combine the simplicity of the original 'Windsor' design with a slightly contemporary feel & finish. And it is amazingly comfortable! A trophy yes, but the triumph was in the making with such simple hand tools.

Finally, as a tribute to Howard, I was the only one who had any experience of woodworking, yet by the end of the 8<sup>th</sup> day we all had a chair to take home.

*Jeremy Cottrell*

For those interested, the custom hand-forged tools we used can be viewed on: [www.barrtools.com](http://www.barrtools.com)



*Jeremy discusses the making of the chair at a recent Cooroora Woodworkers Club meeting.*