Martock and District Woodturners
Newsletter

July 2024

News

Just a quick note of thanks to everyone that helped out with the Yandles Craft Fair - the club earns valuable brownie points (and vouchers for raffle prizes) from doing this!

Diary Dates

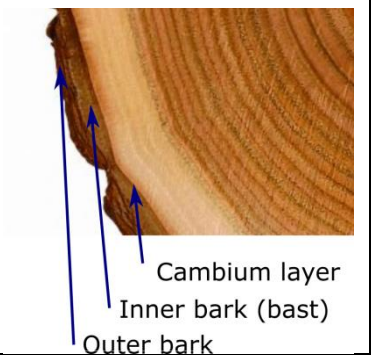
Tues, Jul 30th	Club night – 7pm, Ash Pavilion – Dave Appleby
Sat, Aug 17th	Hands-on – 10am, Yandles Training Room
Mon Aug 26th	Scroll Saw Day with Gianni Deidda at Ash Pavilion. Contact Dave Perryman for details and to book your place (if there are spaces left) - 07791 171838
Tues, Aug 27th	Club night – 7pm, Ash Pavilion – Gianni Deidda
Sat, Sept 7th	Yandles Autumn Craft Fair
Sat, Sept 14th	Hands-on – 10am, Yandles Training Room

June Club Night – Dave Appleby and Liz Kent

In the first half of the evening Dave Appleby gave a talk on trees and timber.

There are about 20,000 species of hardwood tree in the world and about 650 softwoods. Whilst there are exceptions, hardwoods are generally broadleaf deciduous trees with seeds that are either in a nut or in a fruit. Softwoods are generally evergreen with needles and the seed is kind of bare but in a cone.

The tree draws up water and minerals from the ground as it grows, which pass up the soft tissue under the bark to the branches and leaves. Here it takes in carbon dioxide and, by the process of photosynthesis, makes sucrose sugar to feed the tree and gives off oxygen for us to breathe. Most of the water evaporates off (which provides the "engine" to drive the process) and the sugars pass down the sapwood to create new cells at the cambium layer (between the "up" and "down" layers under the bark). Some of the food is stored in the medullary rays, which are made up of cells that run radially through the heartwood.



Moisture

Moisture is important for the woodturner when it comes to timber. You have to get a nice gradient of moisture content slowly leaving the wood in order to get it dry without cracking.

Initially fresh sawn timber can have a moisture content of up 120% of the weight of the actual wood. Most of this consists of "free" moisture which is held in the tubular wood fibres. This moisture will evaporate first.

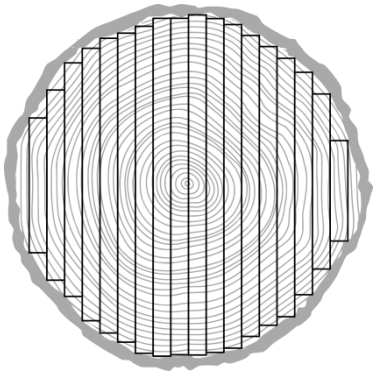
At about 30% you reach "fibre saturation point" when there is very little free moisture and the water held in the cells starts to come out. At this point the cells start to collapse and the timber begins to shrink; this is when cracks will appear if it has not been prepared properly.

Air dried timber will probably retain 20% moisture and kiln dried timber 12%. Drying can be continued in an oven to 0% when the wood has been totally dried (which is how moisture content is calculated, as the ratio between the actual weight of the wood and the weight of the wood when it's got 0% moisture). Very dry timber will begin to take on moisture.

As the cells start to shrink, stresses build up radially around the log, causing cracks. It can therefore be a good idea to make a cut along the log, down to the pith, to relieve the tension, or to cut the log in half through the pith.

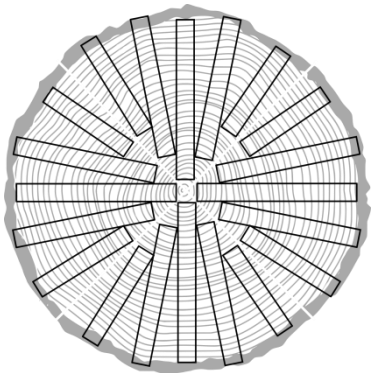
Milling Timber

Most commercial timber is sawn "through and through":



This is the simplest and most economical method of milling and produces wide planks, but because of the grain direction through the plank they are prone to bending as the moisture content changes, due to the same stresses that cause logs to split.

The best method of milling timber for cabinet making is "quarter sawing":



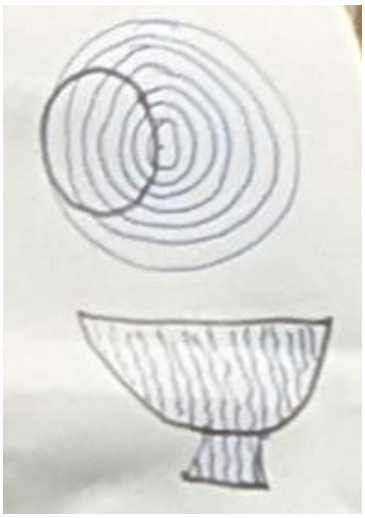
This produces timber with grain running perpendicular to the surface and is therefore much more stable and virtually immune to warping. It is however more complex to achieve and results in a lower yield of useful timber, making it much more expensive. Some through and through planks from the middle of the log also have this grain pattern, so by careful selection you can find some stable timber.

This resistance to warping is the reason Dave uses quarter sawn oak to make his platters, so they don't rock if the moisture levels change.

Shrinkage occurs much more across the grain than it does along the grain. This piece of bog oak was at one time circular, being what was left in the chuck after Dave had turned a bowl. It has shrunk in one dimension from 9cm to about 6cm, and hardly at all in the other dimension.

Cutting Bowl Blanks

There are several ways you can cut a bowl blank from a log, and each one will affect the grain pattern that appears on the inside and outside of the finished bowl.



For end-grain bowls it will depend on where you cut it out of the log.

For side-grain bowls it will depend on diameter of the blank in relation to the log and whether the bowl base is towards the pith or towards the bark.

Of course there many other considerations such as knots and inclusions that you may want to avoid (or include) in the bowl.

Reaction Wood

Generally a tree will grow upright with gravity working straight down through the centre of the trunk, so the pith will run down the middle with even growth all round (unless it is on the side of a hill or subject to prevailing wind).

The branches however are pulled down by their weight, so that at the junction with the trunk the top is under tension and the bottom under compression. Because of this the tree builds extra wood to strengthen it – a hardwood tree builds the extra wood on the top and a softwood tree on the bottom. This shifts the pith away from the centre of the branch which can make it harder to dry as the fibres have a different structure and moisture will not escape evenly all round.

In the second half of the evening Liz Kent shared some of her colouring and texturing skills.

Liz enjoys applying colouring and texturing to her work, particularly on the rims of bowls. One technique she has used in many ways with ash is to apply a colour and then highlight the grain pattern using coloured wax or gilt cream. Ash lends itself to this because of its open grain and the effect can be quite striking.

Although the process is quite simple the results are not always predictable; if you are not happy with them don't be afraid to put it back on the lathe, turn it off and start again.

On a bowl, Liz always turns the rim to have a slightly domed profile, never flat. This is sanded down to 400 grit using an inertial sander, making absolutely sure there are no sanding lines or scratches which will get highlighted by the gilt cream.

The grain is made deeper using a bronze-bristled liming brush which will remove the dust and some of the soft fibres from the grain without scratching the surface. Gently brush the surface along the grain. Use a bristle brush to remove any remaining dust.

Following a tip from Nick Agar, Liz applies a thin coat of spray sanding sealer first which stops the lacquer from going dull. The lacquer is Chestnut ebonising lacquer which works better than a lot of spray paints and gives a nice satin finish (the coloured examples in the picture above are Hampshire Sheen Intrinsic dyes). The lacquer is applied as one coat, making sure that it is applied evenly and thoroughly, and left overnight to thoroughly dry.

The grain is filled with Liberon gilt cream, although there are plenty of other options to experiment with (liming wax, verdigris wax, and various embellishing waxes from Chestnut and Hampshire Sheen). This is applied with kitchen roll and pushed into the grain as it is rubbed on – do not use more than you need to fill the grain as any excess will need to be removed and go to waste.

The excess gilt cream is removed using finishing oil, which is gently rubbed over the surface. It can take a while to do this properly and if you have been over-zealous in areas you can rub on a little more gilt cream and redo that bit. When done it is left overnight for the oil to dry.

Liz completes the bowl by turning a small bead on the outside edge of the rim and a little recess on the inside edge to frame the decorated section. The centre is hollowed out and finished.

This next technique is one Liz has just started working on. At the last AWGB Seminar she saw Bob Rotche using some Manpa Tools Mini Carving bits in a Dremel. They took a bit of finding but eventually Liz got hold of a couple and has recently started trying them out.

This was her first effort at producing a completed bowl, and the technique will probably be developed further.

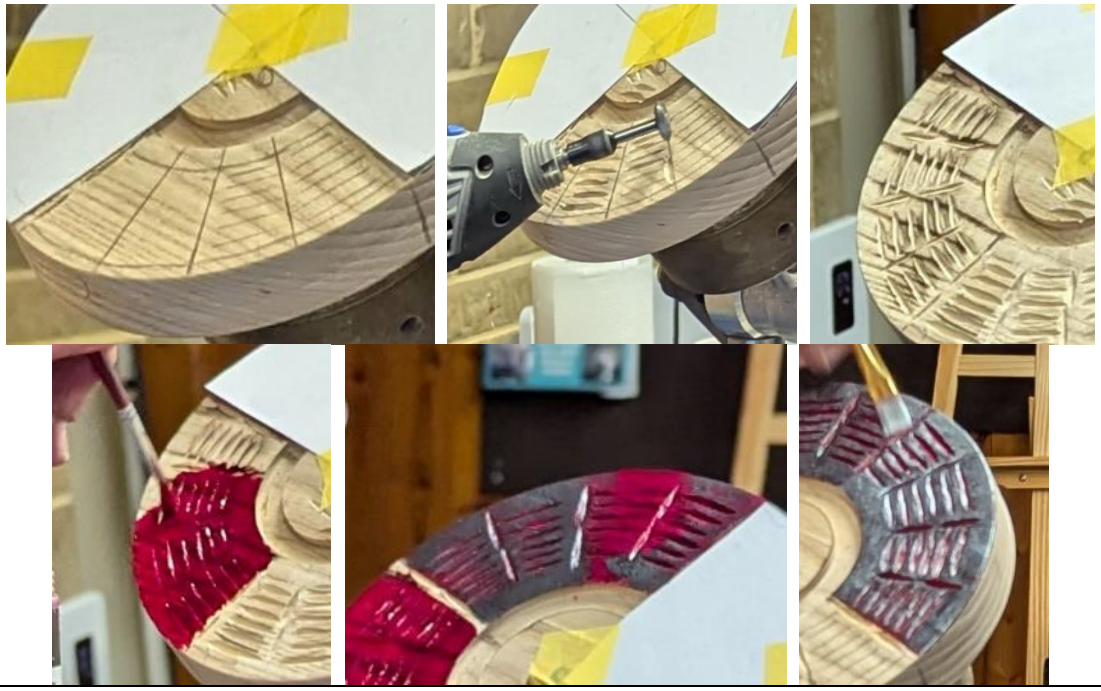
Liz had produced a practice piece split into four areas to show the four stages in the process.

The first step is to draw out the design. Two circles define the inner and outer edge of the pattern. Liz uses a hardboard template to mark out the radials and roughly marks out the cutting lines by hand.

The cutter used is a triangular design. Once the cutting is complete, Liz uses a bristle disk fitted to a mini-grinder to remove any pencil lines, swarf and loose fibres. This is then lightly scorched with a blowtorch to clean up the surface (this also removes some of the soft grain to add a bit of texture to the final finish).

The paint Liz used for the base coat is a satin finish acrylic paint made by Liquitex, applied as two coats and left to dry between.

Liz tried dry-brushing the highlight coat, but because there is a large flat surface to cover it was not very effective. Instead, she decided to simply brush it on as a thin coat. The paints used are sold as Liquid Metal, in this case a coat of Silver Grey, followed by Pewter (once the first coat has dried).



Gallery

Here is where we display any items made by club members in recent weeks.

Natural edge crotch-piece bowls turned by Charlie W

Lattice-work sphere by Phil O

Please send photographs of anything you have made to newsletter@madturners.co.uk, or better still bring them along on a club night to put on the inspiration table for all to admire.

Notes from the June Committee Meeting

Treasurer's Report: - Club account summarized and costs for Les Thorn Day outlined.
Increases to fees agreed on 9/1/24 at the A.G.M. to start in September 2024.
Adult Subs p.a. £65.00, Student subs p.a. £30.00, Half year subs. £30.00 (from March), Guests £10.00. Would it be appropriate to charge all-day events £20.00 + 1 raffle ticket, Guests £20.00?

Steve said there were many people from the Men's Shed who may be interested in joining.

Secretary's Report: It was asked to encourage members to wear their name tags for the many new members. Thank you to Dave for keeping up with the Club e-mails while Ray was on holiday for 3 weeks.

Programme Report: -No-one here to give an up-date. Tonight we have in-house demonstrators.
Dave Appleby to give a talk about wood, tree-growth and how the growth rings affect turning. Liz Kent to talk about colouring and engraving.
There is a Yandles Craft Fair on 13/07/24 and we need Car Parking volunteers.
Dave P joined us at the end - He is looking for ideas for next year. He is trying to think of different people to invite.

Hands-On Report: - Unfortunately, Colin was not at the meeting. There were very few people at the last Hands On Saturday. We are all looking forward to having Colin back.

Health & Safety Report: - Steve is making good progress in redoing the Health and Safety documents for the club. The question was asked about PAT testing. Dave found someone in Yeovil for about £60.00. It was agreed to proceed with getting this arranged. All the electric equipment at Ash Hall should be done. The equipment kept at Yandles would need to be moved from Yandles to be tested.
The equipment stored and not used should perhaps be sold.

A.O.B.
1. At the Axminster Tools visit it was suggested by the shop manager that the club could hold a publicity event in-store one Saturday with demonstrations and display of work. It was thought that there would be little to gain from this that we could not get from Yandles.
2. Is there anyone who could arrange a wood buying trip to Ottery St Mary's? Also visits to other local timber merchants?
3. The news on Colin L is that he is slowly improving.

The next committee meeting will be on 27th August 2024. If there is anything you would like the committee to discuss please email Caroline (secretary@madturners.co.uk).

Timber of the Month – Brown Oak

English Brown Oak is not a distinct species of oak, but refers to oak that has been infected with a fungus which has the effect of turning the heartwood a deep brown colour. The colour is caused by an acid produced by the fungus which will eventually break down the cell structure and kill the tree but has a minimal detrimental effect on the timber. Once the wood has been cut and dried, the fungus dies. It is more or less unique to British woodlands.

The fungus (*Fistulina Hepatica*) is commonly known as Beefsteak Fungus and appears on the trunk as a beautiful red bracket which can be up to 25cm across and 6cm thick. The fungus attacks the roots of the tree, causing the wood to turn a chocolate brown. Often streaks appear rising up from the base of the tree and tapering out further along the trunk. In contrast European Brown oak which found in European forests is very different and takes on more of a pinkish tone.

Often mature trees with a branch which has fallen off will attract the fungus and the colouring starts at the 'wound' and slowly penetrates the tree, so there may be a mix of white and brown in some trees, running to solid brown eventually. This mix of brown and white is sometimes referred to as Tiger Oak.

Often silver medullary rays are displayed on the quarter sawn boards and these provide a stunning contrast to the brown colour. English Brown Oak is rare to discover and extremely beautiful so is much sought after by furniture makers as solid timber or veneers. It is sometimes available as turning blanks.

Don't Forget to Use Your Club Discounts

Just present your club membership card (it may be worth checking beforehand whether a discount will apply to your intended purchase)

AXMINSTER TOOLS
We share your passion.

10% off most items, except power tools.

Yandles

10% off all timber and finishes

If you have anything you would like to share through this newsletter, or have any ideas of what you would like to see included, please let me know by emailing me at mailto:newsletter@madturners.co.uk.

Thanks, Dave H