This week's TUTOR'S TIDINGS

Hamilton Woodturners Club

Week 6

Friday 11th March, 2016

Here's a bit more about using OIL as a finisher

TUNG OIL - a drying oil

Tung oil comes from the seeds of several species of **Aleurites**, primarily **Aleurites fordii**, a deciduous shade tree **native to China.**

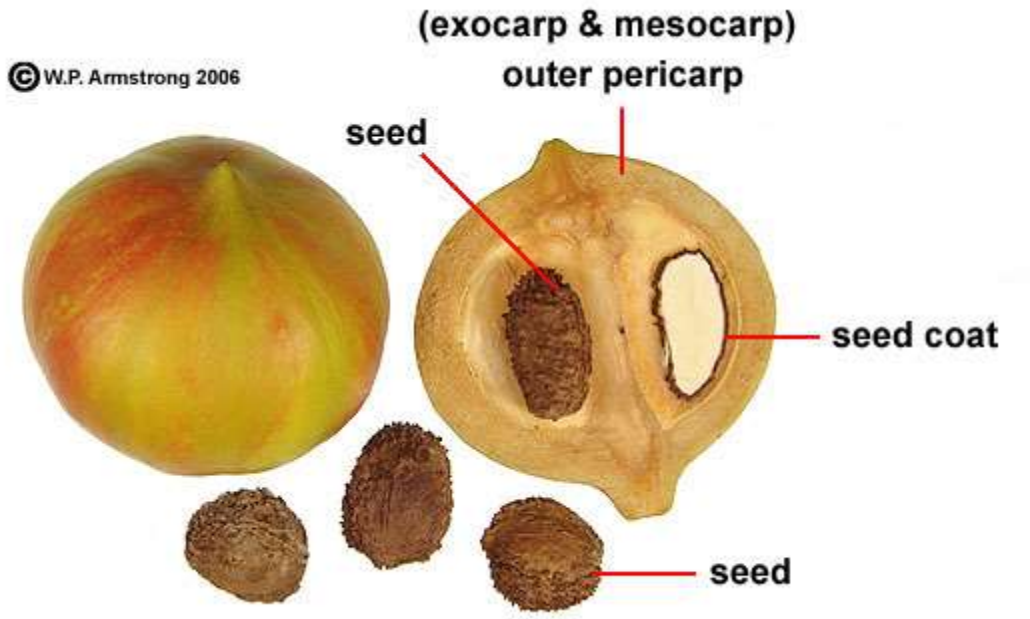
For centuries tung oil has been used for paints and waterproof coatings, and as a component of caulk and mortar. It is an ingredient in "India ink" and is commonly used for a lustrous finish on wood. **In fact, the "teak oil" sold for fine furniture is usually refined tung oil.**

*Many woodworkers consider tung oil to be one of the best **natural** finishes for wood*

*Tung oil tree (**Aleurites fordii**) showing two male flowers and one female flower (left) in which the petals have fallen off exposing the pistil.* *(Another picture further on)*

Other unsaturated plant oils, such as **castor oil and linseed oil,** take longer to dry and leave an oily residue until they soak into the wood surface. **Tung** oil's ability to dry quickly and polymerize into a tough, glossy, waterproof coating has made it especially valuable in paints, varnishes, linoleum and printing inks.

Fruit and seeds of the tung oil tree (**Aleurites fordii**). The **oil-rich seeds are the source of tung oil** used on fine furniture.



The oil and its use are believed to have originated in ancient China and appear in the writings of Confucius from about 400 B.C.

As a drying oil, **tung** oil hardens (dries) upon exposure to oxygen in the air. The resulting coating is transparent and plastic-like. Related drying oils include **linseed, safflower, poppy,** and **soybean.**

Raw Tung oil tends to dry to a fine wrinkled finish; the US name for this is gas checking: this property was used to make wrinkle finishes, usually by adding excess cobalt drier. To stop this, the oil is heated to gas-proof it, and most oils used for coating are gas-proofed.

The name is often used by paint and varnish manufacturers as a generic name for any wood finishing product that contains the real tung oil and/or provides a finish that resembles that obtained with it.

History

- The tung oil tree originates in southern China and was cultivated there for tung oil, but the date of cultivation remains unknown.
- During the Song Dynasty, tung oil was used for waterproofing on ships.
- Tung oil is etymologically derived from the Chinese *tongyou*.

When applied in many fine coats over wood, **tung oil** slowly cures to a satin "wetted wood" look with slight golden tint. The oil is often diluted with hydrocarbon thinner so that the **viscosity** is very low and enables the oil to penetrate the finest grain woods.

One commercial grade is known as Danish oil.

- Tung oil resists liquid water better than any other pure oil finish, though it still provides little protection against water vapour exchange or scratches.
- **Tung** oil does not darken noticeably with age and is claimed to be less susceptible to mould than linseed oil.
- Heating tung oil to about 500 °F (260 °C) in an oxygen-free environment will substantially increase the viscosity and film-forming quality of the product.
- Most polymerized tung oils are sold mixed with mineral spirits to make them easier to work with.

BLO	Pure tung oil
Has added metal compounds	Pure
Dries faster (because of added compounds)	Dries more slowly
Will yellow with age	Doesn't yellow
Can go rancid	Nope
Can mildew	Nope
Nope	Has waterproofing qualities
Nope	Retains some flexibility when hardened
Cheaper	More expensive

After studying this table of facts which oil would you choose for general use in your workshop?

Boiled Linseed Oil (BLO) or Pure Tung Oil.

Harvest Time *A Paraguayan farmer checks his tung oil crop.*

Paraguay is second to only China in worldwide tung oil production

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Big Business *– China is by far the world's largest tung oil producer, providing 83 percent of the world's supply.*

This week's Workshop Happenings

JAMES *has completed his small lidded pot. The wood used is a bit of a mystery but he wishes he had more of it.*

JAN's *first experience with turning Australian burr wood found amongst the roots of a Mallee tree.*

Our Aussie neighbours most certainly have some extraordinary turning timbers eh.

Think Big!

CHRIS *turns a big block of kauri wood. When blocks are this big, achieving* ***balance*** *can be an issue. Fixing lead weights to critical spots is often a solution.*

Caution: The lead weights MUST be securely held.

Guess who has been to Tasmania for a holiday and brought back a 2kg block of myrtle wood?

Yes, it is OK to import wood and bring through NZ Customs so long as there is no bark, knots or deep cracks. ***MALCOLM's*** *block of myrtle was entirely covered in sealing wax but he soon discovered the wood was still wet. So it was quickly resealed and will be set aside for a few more months to season (dry- cure).*

Welcome back to the Tuesday group ***RICHARD.***

Felled in 2012, cut up into blocks in 2014 then put on the lathe in 2016, Richard's blocks of rimu make excellent wood for large turnings.

Missions not-Impossible

Enhancements/embellishments drawn from creative thinking will be added to member's turnings this year

DAVID *looks a bit surprised because whatever he had a few minutes ago has somehow disappeared.*

"It's in here somewhere"

Mission Not- Impossible projects

MUHANNAD *shapes the base of his 2,500 year old swamp kauri wood bowl. Power sanding is a quick method to remove all signs of scratch and stria.*

Note the fine dust coming off so a respirator is good safety practice.

DONAL *has used a 13mm gouge to remove wood from his macrocarpa block, he has created a spigot and now needs to adjust the lathe speed for power sanding.*

COLIN's *special project is taking place at his home workshop. At our clubrooms he works on another turning of swamp totara. It's critical measuring time so wall calipers come into play.*

DYLAN *is enjoying is first experience with using old matai wood - beautiful, flawless, richly grained, turns and responds to sanding really well. This wood was often used for doorsills in days gone by as it is hard and durable to foot traffic.*

MURRAY *starts on his hollow form using a high-quality piece of eucalyptus saligna (Sydney bluegum).*

Those Aussies really do have some great turning wood eh.

ROBERT *uses his Easy Wood tools with the skill of a master.*

Wood shavings easily fly off all Robert's turnings and bowl shapes are achieved in quick time pronto.

His special project piece of coloured walnut has more interesting grain patterns than an old Leonardo da Vinci painting.

ANDRE's *project is on hold while he turns handles for the club's new 10 and 13mm gouge tools. Club members are really grateful for this generosity. Many thanks Andre`*

SPENCER *forms a spigot on the base of his exceptional block of highly-figured rimu wood. This wood is outstandingly beautiful.*

(Hey Spencer, if the spigot finishes being too small you can switch to a 35mm chuck)

MIKE *has a big block of box elder for his project. However he seems to have misplaced something he needs in order to finish another platter in preparation for the upcoming Terry Scott "embellishment" experience.*

CHRISTINE and STEPHEN *share their thinking about their projects…..*

"now, if you put a small curve here…. then turn a bit here…"

Have a great weekend. Go the Chiefs! *Clive*