Hamilton Woodturners Club

TT

2019 - Issue No 13 - Friday 31st May

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I have had several enquiries from worried readers that they have not been getting our weekly newsletter.

No, you haven't been left off the mailing list. Yours truly has been on annual holiday cruising in Alaskan waters. Unfortunately that meant that the TT went into hibernation for a while. But…..I'm back! The Weekly TT club newsletter resumes publication this week.

P.S. I'm really chuffed to learn that readers look forward to receiving and reading the TT. I'm grateful for the feedback about the service provided.
Onward and upward!

Thanks Clive

NOTE: Lots of useful info about toxicity level of timbers in this TT edition.

Created by Denis Whittle

The PLINTH

An excellent choice of colour-contrasting woods in this outstanding creation.

This is Denis' contribution to the laminated woods project.

The plinth features a marble tile insert at the top.

Project -LAMINATED WOOD

This whole-club initiative has now closed.

All completed projects can now be placed
in the special spot reserved for the display of completed items.

Place a sticker on the back of your contribution(s) clearly indicating your name.

Do remember to bring your items to next week's sessions.

DAVID ROSE turned this natty bowl out of a block of wood that was given away *free to a good home* .
Why? ..well it had several flaws which could (possibly) have resulted in disappointing outcomes.
Undeterred, David boxed on and look what he achieved.

Underneath all those defects was a healthy chunk of good wood.

You just never know eh.

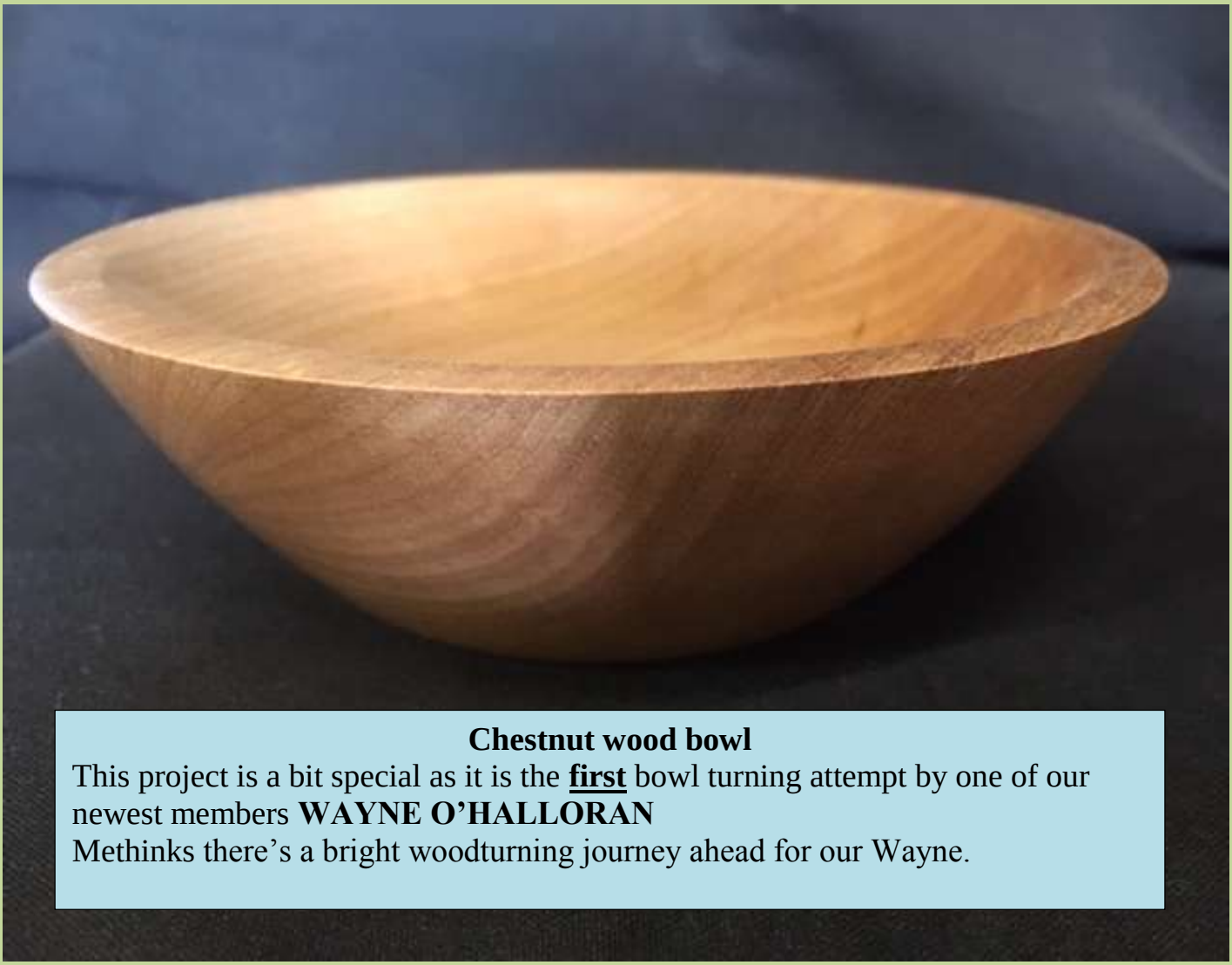
MICHAEL really launched himself into the laminated wood project turning out four projects.

This one was made up of segments and turned into an interesting platter

WAYNE is one of our new members who has taken to woodturning with great enthusiasm and made early inroads into success.

This is a project linked to the club's induction programme.

Maybe this pot-making gadget will be used to propagate Wayne's brandy wine pink tomatoes this coming season.



Chestnut wood bowl

This project is a bit special as it is the **first** bowl turning attempt by one of our newest members **WAYNE O'HALLORAN**

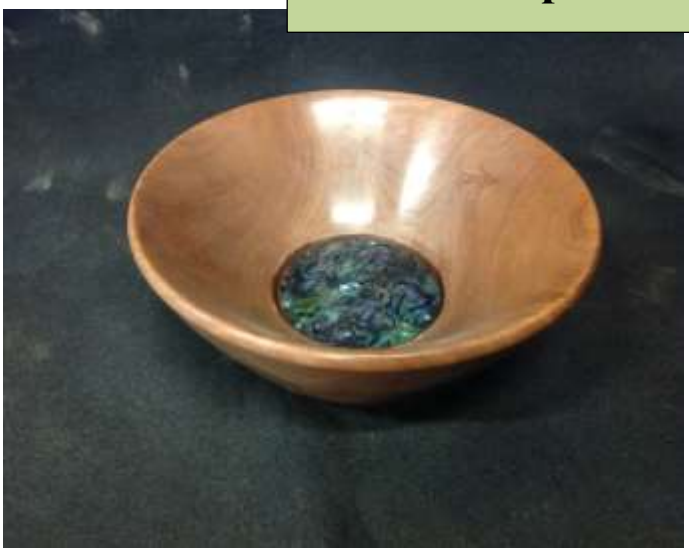
Methinks there's a bright woodturning journey ahead for our Wayne.

A duo from RICHARD

Thin walled pot/vase complete with carved patterns. A turning such as this requires patience, skill and a sense of adventure.

Stems for goblets.
Porcelain cups will be added to these nifty stem shapes. Some very delicate turning here.

…..and a pair from GARY



Casting resin was used to embed the paua-dot base to **GARY's** Bowl. The basic conical shape is one favoured by many tourists who like to take home a Kiwi souvenir.

GARY's first shot at turning a spiral. "Holy Moley" (*as Gary would say*), our Gary has made great progress with his turning skills.

Wow! Removing the spigot from the base was a challenge.
RIC's macrocarpa wood platter was so big he needed to modify a set of Cole jaws by adding XXL wings. The plan worked and an excellent job was completed safely.

Raffle Raffle Raffle Raffle Raffle Raffle Raffle

25mm Roughing Gouge

$5.00 for three tickets

To be drawn on Thursday 6th June

Wood Toxicity and How to Protect Yourself

Woodworkers need to take precautions against dust when working with any lumber, whether the wood is **domestic or exotic.** Wood dust is no good for your lungs or eyes, and some wood dust can also react with your body. Possible reactions include skin rashes, watery eyes, respiratory problems, headaches, dizziness, or nausea.

The degree and type of reaction d**epends on an individual's susceptibility to certain allergies,** as well as the concentration of dust and the amount of time exposed to dust. The same reactions from person to person are not always a certainty.

In general, toxicity is in **one of three categories**: **irritation, sensitization, and poisoning.**

Irritation

Skin, respiratory tracts, and mucous membranes get irritated easily by any fine dust because dust absorbs moisture, thereby drying out the surface with which the dust is in contact. **Itchy skin and sneezing are examples of basic irritation thanks to wood dust.** The level of irritation is proportional to the exposure time to, and concentration of, wood dust.

But irritation is not necessarily benign. Woods like walnut and rosewood emit pleasant odors with low levels of dust, which most woodworkers equate with being one of the benefits of working with woods. However, the natural substances in these woods that cause the scents are also potentially toxic with greater dosage exposure and concentration. Long term effects of exposure to wood dust can include developing an allergic reaction to the dust or possibly nasal cancer.

Sensitization

Substances in wood that cause an emerging (and potentially serious) allergic reaction after repeated exposure are called sensitizers. This type of toxicity is specific to individuals and takes time to develop – some people may experience a significant reaction to a wood while others do not. While sensitization typically takes time and repeated exposure to develop, it is possible for some individuals to have an allergic reaction to a wood upon their first contact.

Even if you do not have any reaction to a wood (or its dust) the first few times you use it, **it's still vital that you take precautions and avoid as much exposure as possible.** It's possible that your body will develop a reaction the more you are exposed.

Poisoning

Universally lethal chemicals are rarely found in *natural* wood that's available on the commercial market. Most poisons in plants and trees are located in the bark and/or sap – there are some exceptions for rare woods.
Sometimes poisonous chemicals are introduced to wood products, such as with pressure treated lumber. Hardwoods cut for cabinetry, flooring, and furniture are not pressure treated.

Some common woods demand that woodworkers be aware of their own allergies. **Those who have an allergic reaction to aspirin should avoid using woods from birch and willow trees (*Betula spp.* and *Salix spp*.) because these contain good concentrations of salicylic acid, the key ingredient in aspirin.** See A Guide to Useful Woods of the World *Appendix B* for more.

Prevention

You should limit your exposure to wood dust by doing the following things.

1. Use vacuum dust collection in your workshop, and keep your working spaces ventilated with fresh air.
2. Use protective equipment while woodworking: dust mask, goggles or a full-face respirator, and a protective barrier cream on your arms or exposed skin.
3. Immediately after woodworking change your clothes, wash them, and take a shower. This will prevent transferring wood dust to your house where you or your family may be repeatedly exposed to it.

What about toxicity of wood in my finished project?

Baby cribs and food utensils are popular projects, and ones that woodworkers are often curious about “safe” woods and finishes. The short: a sealed and finished wood poses no toxic risk.

What about the sealer or finish then? Solvent-based finishing products (lacquer, varnish, etc) are highly toxic in their liquid state, but cured lacquer and varnish finishes are perfectly safe.

For projects that come in contact with food, such as salad bowls and cutting boards, you really don’t want a hard shell finish (lacquer or varnish) that can chip or rub off. Mineral oil, teak oil, and butcher block oil are all popular and safe choices for these projects.

A popular finish for baby cribs is shellac, as the FDA approves this for use in the capsules of medications. This approval makes many woodworkers feel that shellac is more safe than other finishes. But cured lacquer is safe, as is any cured solvent- or water-borne finish.

Toxicity Table – Mostly imported timbers

Type	Reaction	Site	Potency	Source	Incidence
Bald Cypress	Sensitizer	Respiratory	+	Dust	Rare
Balsam Fir	Sensitizer	Eyes, skin	+	Leaves, bark	Common
Beech	Sensitizer, nasopharyngeal cancer	Eyes, skin, respiratory	++	Leaves, bark; dust	Common
Birch	Sensitizer	Respiratory	++	Wood, dust	Common
Black Locust	Irritant, nausea	Eyes, skin	+++	Leaves, bark	Common
Blackwood	Sensitizer	Eyes, skin	++	Dust, wood	Common
Boxwood	Sensitizer	Eyes, skin	++	Dust, wood	Common
Cashew	Sensitizer	Eyes, skin	+	Dust, wood	Rare
Cocobolo	Irritant, sensitizer	Eyes, skin, respiratory	+++	Dust, wood	Common
Dahoma	Irritant	Eyes, skin	++	Dust, wood	Common
Ebony	Irritant, sensitizer	Eyes, skin	++	Dust, wood	Common
Elm	Irritant	Eyes, skin	+	Dust	Rare
Goncalo aves	Sensitizer	Eyes, skin	++	Dust, wood	Rare
Greenheart (Surinam)	Sensitizer	Eyes, skin	+++	Dust, wood	Common
Hemlock	Nasopharyngeal cancer	Respiratory	?	Dust	Unknown
Iroko	Irritant, sensitizer, pneumonia	Eyes, skin, respiratory	+++	Dust, wood	Common
Mahogany (Swietenia)	Sensitizer, pneumonia	Skin, respiratory	+	Dust	Unknown
Mansonia	Irritant, sensitizer, nausea	Eyes, skin	+++	Dust, wood	Common
Maple (C. Corticale mold)	Sensitizer, pneumonia	Respiratory	+++	Dust	Common
Mimosa	Nausea		?	Leaves, bark	Unknown

Type	Reaction	Site	Potency	Source	Incidence
Myrtle	Sensitizer	Respiratory	++	Leaves, bark; dust	Common
Oak	Sensitizer, nasopharyngeal cancer	Eyes, skin	++, ?	Leaves, bark; dust	Rare, unknown
Obeche	Irritant, sensitizer	Eyes, skin, respiratory	+++	Dust, wood	Common
Oleander	Direct toxin, nausea	Cardiac	++++	Dust, wood, leaves, bark	Common
Olivewood	Irritant, sensitizer	Eyes, skin, respiratory	+++	Dust, wood	Common
Opepe	Sensitizer	Respiratory	+	Dust	Rare
Padauk	Sensitizer, nausea	Eyes, skin	+	Dust, wood	Rare
Pau ferro	Sensitizer	Eyes, skin	+	Dust, wood	Rare
Peroba rosa	Irritant, nausea	Respiratory	++	Dust, wood	Unknown
Purpleheart	Nausea		++	Dust, wood	Common
Quebracho	Irritant, nasopharyngeal cancer, nausea	Respiratory	++, ?	Dust, leaves, bark	Common, unknown
Redwood	Sensitizer, nasopharyngeal cancer, pneumonia	Skin, eyes, respiratory	++, ?	Dust	Rare, unknown
Rosewoods	Irritant, sensitizer	Skin, eyes, respiratory	++++	Dust, wood	Common
Satinwood	Irritant	Skin, eyes, respiratory	+++	Dust, wood	Common
Sassafras	Sensitizer, nasopharyngeal cancer, direct toxin, nausea	Respiratory	+, ?	Dust, wood, leaves, bark	Rare, unknown
Sequoia	Irritant	Respiratory	+	Dust	Rare
Snakewood	Irritant	Respiratory	++	Dust, wood	Rare
Spruce	Sensitizer	Respiratory	+	Dust, wood	Rare
Walnut, Black	Sensitizer	Skin, eyes	++	Dust	Common

Type	Reaction	Site	Potency	Source	Incidence
Wenge	Sensitizer	Skin, eyes, respiratory	++	Dust, wood	Common
Western red cedar	Sensitizer	Respiratory	+++	Dust, leaves, bark	Common
Willow	Sensitizer, nausea	Respiratory	+	Dust, wood, leaves, bark	Unknown
Teak	Sensitizer, pneumonia	Skin, eyes, respiratory	++	Dust	Common
Yew	Irritant, direct toxin, nausea	Skin, eyes, cardiac	++,++++	Dust, wood	Common
Zebrawood	Sensitizer	Skin, eyes	++	Dust, wood	Rare

More about toxic timbers common to New Zealand woodturners– Information sourced from NAW website

There are various forms of toxicity caused by exposure to woods through dusts or by direct contact. **As a general rule: dust from every wood is toxic if you inhale enough of it.**

You can develop allergies following contact by touch (sap, shavings, or dust on your skin) or through the inhalation of dust. In other words, both large and small particles can sensitize you to the allergen. The reaction can be a skin or lung reaction. Skin reactions are generally itchy rashes, often worse when sap is present in the chips. Lung reactions are generally chronic coughs or wheezing, but may be merely annoying nasal irritations.

Other types of problems come from chronic exposure to dusts that are small enough to reach the small airways and alveoli (the tiny sacs deep in the lung tissue were oxygen in the air gets transferred to the blood). Dusts larger than 10 microns settle out in the upper airways (nasal cavities and back of the throat). Less than 0.1 micron particles are so small that they don't settle anywhere very much. They go in and out. Between 0.1 and 10 microns they reach the small airways (branching of the main windpipes into the lung tissue) and some of them stay.

The risk isn't just cancer, but also scarring, inflammation, and other damage, that eventually causes stiffening of the lungs so that the work of breathing increases. It's not quite the same as your typical smokers' emphysema, but it's similar enough, and less responsive to treatment (eg. Anti-inflamatories and the inhalers that can be used to open constricted airways).

Of course, woodworkers and boat builders can develop problems due to exposure to other materials such as epoxies and silicates. Glass, being basically silica, and of course colloidal silica, both could cause silicosis. Epoxies, particularly the hardeners, are well known as allergy sensitizers, and can cause long term chemical damage to the lungs if inhaled in sufficient amounts.

In books, medical journals, and on websites, more than 100 tree species are listed as having some toxic effect on persons who use the wood. Unfortunately many lists use common names which may refer to many different species, eg "blackwood" which is a common name for vastly differing genera on most continents.

This toxicity of wood dusts should not be confused with toxicity of fruit, seeds, and leaves as some toxic woods come from trees with edible fruits and some trees with toxic fruit have wood which is not known to be toxic.

The list below brings together information from published and proven records on woods with which **New Zealand** wood turners may work.

Name of the tree	**Reported effects**
Alpine Ash, or Messmate, or Tasmanian Oak *(Eucalyptus delegatensis*, or *E. obliqua*, or *E. regnans).*	Irritation to nose, eyes and throat, dermatitis [1,3,5]
Apple *(Malus spp)*	Nothing reported
Beech, European*(Fagus sylvatica)*	Nasal cancer.[1,3,4,5] Dermatitis. [1,3,5] Decrease in lung function.[2,3,5] Eye irritation. [3,5] Sensitiser. [4]
Beech, NZ (*Nothofagus spp)*5 species	Irritation to mucous membranes. [7]
Black maire *(Nestegis cunninghamii).*	Nothing reported
Black walnut *(Juglans nigra).*	Sensitiser of skin and eyes.[4,5]
Blackwood *(Acacia melanoxylon).*	Dermatitis, asthma, irritation to nose and throat.[1,3,5] Sensitiser of eyes and skin. [3]

Name of the tree	Reported effects
Brush box *(Tristania conferta)*	Nothing reported
Camellia (*Camellia japonica*)	Nothing reported
Camphorwood *(Cinnamomum camphora)*	Nothing reported
Cherry (*Prunus*spp).	Nothing reported
Chestnut*(Castanea sativa*	Dermatitis (possibly from bark lichens). [2,3,5]
Ebony. (*Ebeaceae*spp)	Skin inflammation.[1,2,3,4] Acute dermatitis, sneezing.[1,2,3] Conjunctivitis.[1,2] Possibly a skin sensitiser.[3]
English elm*(Ulmus procera).*	Dermatitis, irritation of mucous membranes, cancer.[1,3,4,5]
European ash *(Fraxinus excelsior).*	Decrease in lung function.[2,3,5] Rhinitis, asthma.[5]
European box *(Buxus sempervirens)*.	Sensitiser, dermatitis, irritant to eyes, skin, nose and throat.[3,5]
European walnut *(Juglans regia).*	Dermatitis, nasal cancer.[1,5] Sneezing, rhinitis.[2,3] Sensitiser.[3]

Name of the tree	Reported effects
Grapefruit	Nothing reported
Gum *(Eucalyptus*spp.).	Nothing reported for most species
Holly *(Ilex*spp).	Nothing reported
Jarrah *(Eucalyptus marginata).*	Irritation to nose, throat and eyes.[1,3,5]
Kahikatea *(Dacrycarpus dacrydioides).*	Dermatitis, irritation to nose, throat.[1,7]
Kamahi *(Weinmannia racemosa).*	Nothing reported
Kanuka *(Kunzea ericoides).*	Nothing reported
Kauri *(Agathis australis).*	Non-specific respiratory symptoms reported. [6]
Kowhai *(Sophora tetraptera* or *S. microphylla)*	May be toxic if chewed. Light to severe coughing and sneezing. (Sid Ware pers. comm.)
Laburnum *(Laburnum anagyroides).*	Seeds highly toxic.[5] Wood may be toxic if chewed.

Name of the tree	Reported effects
Lacebark (*Hoheria populnea*).	Nothing reported
Lancewood *(Pseudopanax crassifolium).*	Nothing reported
Lawson cypress *(Chamaecyparis lawsoniana)*	Nothing reported
Lawsoniana (*Chamaecyparis lawsoniana*)	Nothing reported
Macrocarpa *(Cupressus macrocarpa).*	Nothing reported
Magnolia *(Magnolia*spp.).	Nothing reported
Mahogany *(Swietenia mahogani)*	Dermatitis, mucous membrane irritation.[2,3] Respiratory disorders.[2,3,4] Sensitiser.[4] Giddiness, vomiting, furunculosis.[5]
Matai *(Prumnopitys taxifolia).*	Nothing reported
Miro (*Podocarpus ferrugineus*).	Nothing reported

Name of the tree	Reported effects
Mountain ash *(Eucalyptus regnans)*	Dermatitis, irritant to nose, eyes and throat.[3]
Ngaio *(Myoporum laetum)*	May be toxic if chewed.
Norfolk Island pine *(Araucaria heterophylla).*	Nothing reported
Oak, European *(Quercus robur*and *Q. petraea)*..	Asthma, sneezing, eye irritation.[2,3] Dermatitis.[5] Sensitiser.[3,4] Nasal cancer.[4,5]
Olive *(Olea europaea)*..	Irritant and sensitiser of eyes, skin and lungs.[3,5]
Pear (*Pyrus communis*).	Nothing reported
Pine (*Pinus radiata*).	Contact allergen.[7]
Plane *(Platanus*spp).	Nothing reported
Plum (*Prunus*spp.).	Nothing reported
Pohutukawa *(Metrosideros excelsa).*	One report of headaches and nasal irritation lasting several

Name of the tree	Reported effects
	days.
Puriri *(Vitex lucens).*	Nothing reported
Rata*(Metrosideros robusta* and *M. umbellata).*	Nothing reported
Rewarewa *(Knightia excelsa).*	Nothing reported
Rimu *(Dacrydium cupressinum)*	Irritation to nose, eyes, cough.[1,3,5]
Robinia, black locust, false acacia *(Robinia pseudoacacia).*	Irritant to eyes and skin, nausea, malaise.[2,5]
Sheoak *(Casuarina*spp.).	Nothing reported
Silky oak (*Grevillia robusta*).	Sap may cause blistering of skin, inflammation of eyelids.[1] Green timber and dust may cause dermatitis.[1]
Silver birch *(Betula pendula).*	Dermatitis and respiratory health problems.[5]

Name of the tree	Reported effects
Sycamore *(Acer pseudoplatanus).*	Nothing reported
Taraire *(Beilschmiedia taraire).*	Nothing reported
Tawa *(Beilschmiedia tawa).*	Respiratory symptoms reported.[6]
Teak *(Tectona grandis).*	Dermatitis.[1,2,3,5] Conjunctivitis, over sensitivity to light, swelling of scrotum, irritation to throat and nose, nausea.[1,3,5] Nettle rash.[2] Respiratory disorders.[2,3,4] Sensitiser.[4]
Titoki *(Alectryon excelsus).*	Nothing reported
Totara (*Podocarpus totara*).	Nothing reported
Wattle *(Acacia*pp.).	Nothing reported
Yew *(Taxus baccata).*	Congestion of lungs, nausea, fainting, irritation of alimentary tract, visual disturbances.[1] Dermatitis, headache.[1,2,3] Blood pressure drop, cardiac effects.[2,3] Direct toxin.[4]>

This googie is bigger than an ostrich egg in a fancy cup.

This is Spencer's contribution to the whole- club laminated wood project.

A well-proportioned turning sporting an immaculate finish.

Which was turned first? The chicken or the egg?

CLEO's induction programme is flying along. Project No 3, the Garden Dibber, is now complete.

Confident use of the roughing gouge ensures square sections are quickly turned into cylinders for shaping with bowl gouges.

Next week we make way for face plate turning using a block of macro to turn a shallow bowl.

This month's whole-club turning challenge.

Turn something small enough to fit into a drinking cup. (shown right)

Any wood, any design, any mixed media any embellishment, any shape…. But the size is restricted by the **size** of the drinking cup. Your finished project MUST fit into the cup. The height of your object is restricted by the height of the cup.

Happy turning and have something to add to the display at the end on JUNE

You will find some of these cups in the morning tea cabinet.

CHIEFS™

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Vs

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Clive (the optimist)