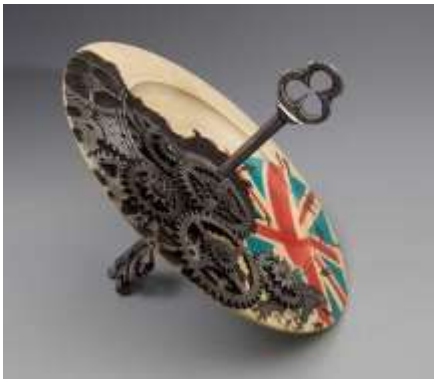


August 2019

Crosscut

◄ Piece by Nick Agar titled "Key to the City" - 2014

Secretary: Lynton Dennill secretary@wwwa.org.za Editor: Trevor Pope tpope AT iafrica.com

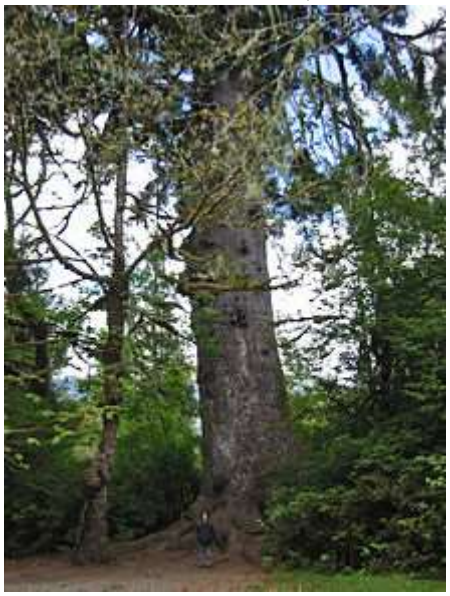
Next Turners Meeting on **Monday, 5th August 2019** from 18h00 at the Living Link Hall —
Roy Gibbs will demonstrate turning a platter
Wood of the Month – White Stinkwood – please bring items made from white stinkwood to show.

Next General Meeting on **Wednesday, the 14th August 2019** from 18h00 at the Living Link Hall
With an emphasis on Workshop Safety over the next few meetings, Herman will cover dust extraction and Hardware Centre will show the new Dust Deputy range.

News

1st July 2019 – Turners meeting. Finishing on the lathe – Steven Barrett demonstrated the use of cabinet scrapers in turning and the colouring of turnings. Stephen showed how to sharpen and use a small curved scraper to refine the surface of a turned bowl. Stephen also showed how to use a Robert Sorby texturing tool and colouring to create spiralled patterns on a bowl.

Wood of the Month – Picea Sitchensis – Sitka Spruce. Chris van Heeswijk explained that spruce is lightweight, with exceptional strength-to-weight, so it was used for aircraft, such as the famous Spruce Goose (Howard Hughes' ill-fated project). This tree is native to North-western North America. It is an evergreen conifer that can grow to be exceptionally large, with examples over 90m high, 5m diameter at the base of the trunk, as found in mature forest (such as the example in the picture below from Wikipedia).

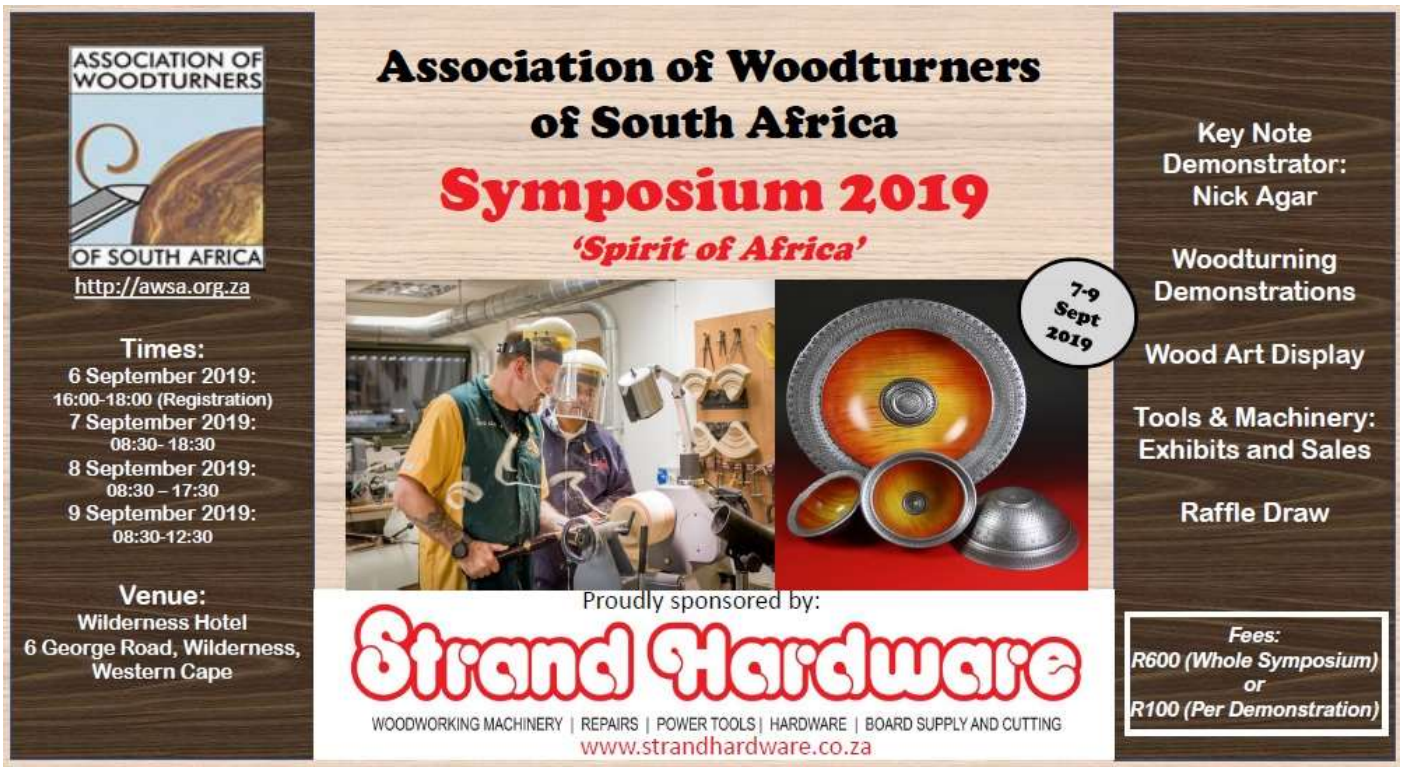


Locally, it may be stocked by Echo Timber traders.

10th July 2019 -General Club meeting. Pierre Mouton demonstrated the use of a shooting board. (Thanks to Winston for lending him your example to show off at the club.).
Trevor Pope explained how plane blade camber works and how much plane camber is enough. He measured the thickness of plane shavings to illustrate the numbers. The article at the bottom gives more background to this topic.

WWA symposium 6th to 8th September 2019 in Wilderness.

Nick Agar has been confirmed as the headline demonstrator. He will also be conducting a Master Class at Strand Hardware in Randburg, for those who will be unable to make it to the symposium in Wilderness.



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For more information, go www.awsa.org.za

Woodworking 101 – The next beginners course (Woodworking 101) is scheduled for **Saturday the 3rd Aug 2019 starting at 09h00 at the Albertskroon workshop**.

The project for the day is how to make a mortice joint. The idea is to prepare members to make a small coffee table with mortice joints., at the next meeting on the 7th Sept 2019.

The idea is to divide the morning into three stages:

1. I will make a mortice joint using only hand tools.
2. I will try to make a mortice joint using the electrical machines and power tools available in the workshop of the club.
3. Visiting members can practice making a mortice joint in the workshop.

If members have the following tools, please bring a square, mortice gauge, 6-, 8- and 20-mm mortice chisels, mallet and a tenon saw.

To practise, you will need two pieces of timber not thinner than 18mm thick by approx. 60 mm wide

It would be great if those members who made the *bankie* (bench), can show their finished product.

For any further information, you can contact Bobby at 0838733872 or gmail at bobbymel109@mail.com

See you Saturday

Bobby

. Regular Events:

(Please send updates to the editor)

Every Wednesday and Friday – Graham Rudings will open the workshop, but reserves the right to cancel at short notice. Graham is setting up an email circulation list for announcements and any cancellations. Please email Graham grahamcr AT mweb.co.za to be added to the list. Graham can be contacted on 082 900 0242.

Ken's Saturday Workshop. Ken Bullivant holds a Saturday workshop at his house in Boksburg. The location is 13 Franklin Avenue, Comet, Boksburg on the first Saturday of the month from 09:00 to 12:00. They decide on an annual project and work

throughout the year making it. Individual projects are discussed and problems solved. Ken also offers private lessons too. Contact Ken on 082 809 0020 if you wish to take part.

SPIRIT OF THE WOOD - WOODTURNERS

Offering Woodturning lessons, One-on One Training, Classes and Club, Willing to assist persons with limited physical/intellectual abilities. Contact Johan Kramer on 083 251 0183 or Johankramer300@gmail.com

Saturday meetings

1. First Saturday – Bobby Bezuidenhout – Woodwork 101 for beginners. Contact Bobby on 083 873 3872 or milesiabez AT gmail.com
2. Second Saturday of month - Herman will open the workshop – all things turning related – 083-631-0501 hermanpotgieteresq AT gmail.com
3. Third Saturday of month – Contact Pierre at 083 308 7917 or pm9917 AT gmail.com
4. Fourth Saturday of month – Graham will open the workshop – 082 900 0242 grahamcr AT mweb.co.za If you plan to attend, please send your email to Graham, so that he can send out any last minute cancellations.

"SHOULD NO ONE ARRIVE BY 10h00 THE WORKSHOP WILL BE CLOSED."

Please can the conveners complete the attendance register on the bar counter, so we can gauge attendance?

The closing up instructions must please be followed by the convener when leaving. Graham has placed the procedure in prominent positions in the workshop.

ALBERTSKROON.

Report on Wednesday and Friday activities for July 2019

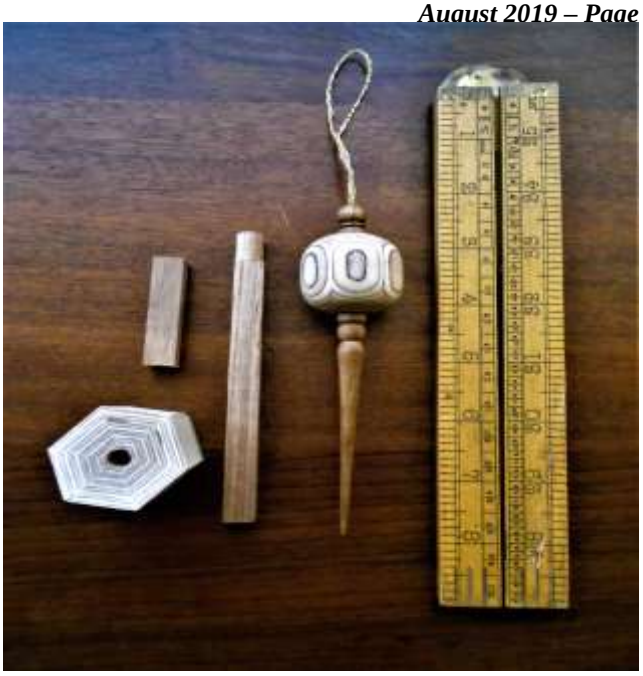
By Winston Klein

The Wednesday and Friday meetings continue to be well supported. Total attendance for July was 80 with Fridays still being the most popular days as there is always an added attraction in the form of a demonstration or a sharing of ideas or problems. There is always lively discussion with questions and answers.

Demonstrations:

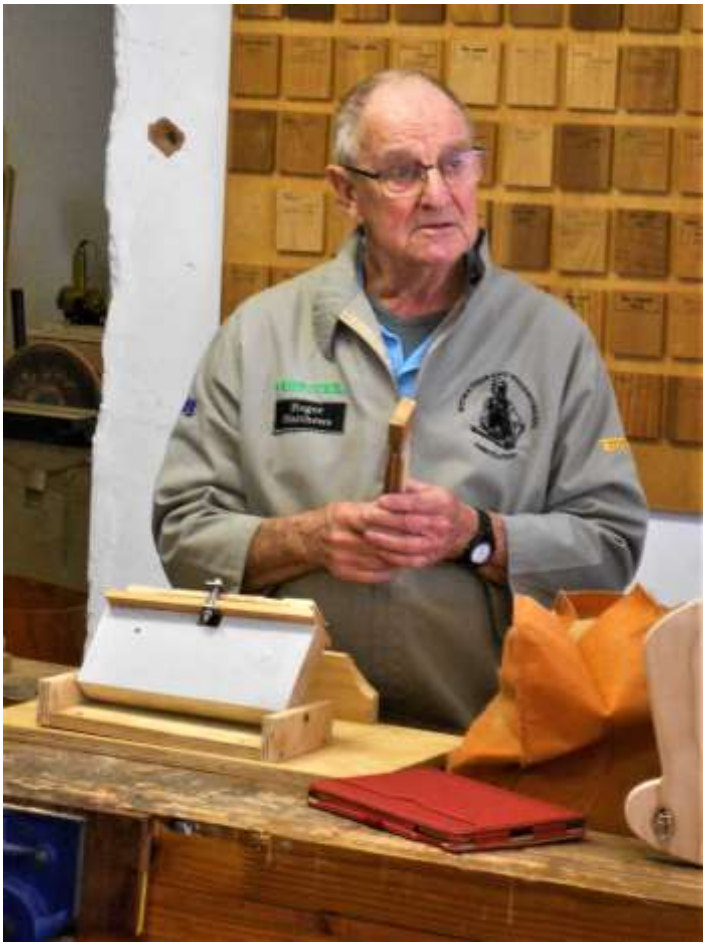
Roger Mayes gave a talk with lots of examples of how he does marquetry to enhance boxes. Some boxes are completely covered in marquetry patterns. He explained in detail how he goes about designing and the cutting small pieces of veneer to construct the various patterns. The process is very labour intensive and needs extreme patience and accuracy. A very interesting insight into the work that goes into one of his masterpieces.

Eugene demonstrated the use of a jig for use with a router to produce mortises for using loose tenons. The jig saves a lot of work when making a lot of joints, as once setup repetitive cuts become routine. As usual the demonstration also elicited many questions and generated a lot of discussion.



Winston demonstrated turned Christmas Tree decorations made up of a bauble made from segmented birch plywood with a finial of a contrasting darker wood. He explained how he goes about making up the segmented bauble blank and then showed how he turns a finial using techniques learned from making lace bobbins. Once a bauble has been turned it exposes interesting grain patterns in the plywood. As usual enthusiastic question and answers were generated.

JIGS.



Roger Matthews (see above and right) is making a coopered pot plant container which has a slight taper. He showed a jig he devised to cut a groove in the staves to accept the copper hoop. The jig took a lot of engineering skill and design and attracted a lot of interest.

Eugene showed a set of jigs for holding sash cramps when gluing up jointed boards. It not only holds the cramps but there is also provision for space to use G-Clamps for holding down the work. A very useful set of jigs, which are simple to make.

Camber and Bench Planes – what is it and how much do you need?

Trevor Pope - 2 August 2019

Brent Beach (http://www3.telus.net/BrentBeach/Sharpen/camber.html) defines camber thus:

> Camber refers to the convex shape of a tool edge when viewed from the front or back. We specify the amount of camber either as the height of the middle of the blade above the line between the corners of the edge, or by the radius of the circle implied by the edge.

For smoothing planes, the blade is ground with a small camber so that the sharp edges don't leave obvious tracks in the planed surface. This doesn't apply to more specialized planes such as rebate planes, where a straight edge is important.
The simplest approach is to knock off the corners when you are sharpening. The purists will mark out a radius and carefully grind and hone the edge to the radius. If you sharpen free hand, this is up to muscle memory. Most sharpening stones (except diamond stones) become dished with use, so you may have ground a camber on your blade without realizing it. If you use a jig for sharpening that has a narrow single wheel, then the camber can be shaped and sharpened simply by tilting the jig from side to side. Jigs with a wider roller like the Veritas, are more difficult to use to put a radius on the edge, but it can be done.
Christopher Schwartz provides a concise description of how to do this here - https://www.popularwoodworking.com/chris-schwarz-blog/camber-with-a-honing-guide/

How much camber do you need? The short answer is not very much - probably less than you think. The camber just needs to be more than the depth of the thickest shaving you are planning to take with the plane. By using simple geometry, from the maximum depth, you can calculate the radius to grind to.

If you visit Brent Beach's website at the top of the page, you can see an example calculator.
He also quotes some typical figures:

Plane type	Blade width	Shaving thickness	12 degree bed		45 degree bed	
			Camber	Radius	Camber	Radius
Smoother	2"	0.001"	0.0046	104"	0.0014	357"
		0.003"	0.0144	34.7"	0.0043	119"
Jack	2"	0.01"	0.048	10.4"	0.014	35"
		0.025"	0.12	4.2"	0.035	14"
Scrub	1.25"	0.05"	0.24	.93"	0.07	2.8"
		0.1"	0.48	.65"	0.14	1.45"

The bed angle is important because the effective radius decreases with decreasing bed angle. Most bench planes have the blade set at 45°. Some specialized planes have a lower bed angle, specifically the so-called bevel-up planes. Your low angle Stanley 60½ block plane has a blade with the bevel on top and a bedding angle of 12.5° - this is lowest bed angle you are likely to encounter.

To understand how the camber and radius change as the blade is tilted, first picture a blade bedded at 90°. A camber of 0.001" will plough a furrow 0.001" deeper at the center, as one would expect. A blade tilted to a bed angle of 45°, will cut a furrow shallower by $1/\sqrt{2} = 1/1.4$. So at 45°, to get a furrow of 0.001", the camber needs to increase to 0.0014" (by the factor of $\sqrt{2} = 1.4$). The increase is even more

pronounced with a bed angle of 12.5°. At this angle, the factor is 1/Sine (12.5°) = 1/0.21 = 4.6. The camber increases to 0.0046", as you can see in the table above.

What Brent doesn't answer is ***What is a typical shaving thickness?***

The table suggests some camber radii. Starting at the first entry of the table above:

- A perfectly-set smoothing plane, with the blade sharpened to 8000 grit and stropped, may approach a shaving thickness of 0.001" (One thousand of an inch = 0.0254mm).
- A coarser shaving of 0.003" (Three thou = 0.076mm) is a useful thickness for a smoothing plane, probably what you would use in practice. The table gives the corresponding radius, which is very large compared to the length of the blade.
- The upper limit given of 0.025" (0.64mm) for the jack plane is very thick, even in a softer wood such as pine. In a hardwood, I challenge you to make full width shavings 0.64mm thick!

This an interesting exercise to try at your bench: Put a piece of pine into the vise, wider than your plane blade – say 50mm or wider and plane it smooth with a properly sharpened and set smoothing plane, such as a #4 or #5. Then set the blade to take increasingly thick shavings until you feel that you really can't manage to push the plane over the length of the piece and achieve a full shaving.
Take a micrometer and measure the thickness of the shavings. Anything over 0.5mm (0.02") will be very difficult to achieve. The finish will also be very coarse, and the shavings will be almost crumbly unless the wood is wet.
You can also repeat the exercise to see the thinnest useful shavings you can make. Shavings of 0.1mm are quite thin and will give you a very good surface finish.
0.25mm = 0.01" requires a radius of 35" = 890mm which is very large relative to the length of a typical #4 plane blade of 250mm.

So, I suggest you just follow Christopher Schwarz's advice and simply knock off the corners when you are sharpening. Any more is unnecessary.
I have reproduced his advice below to save you looking it up:

Camber with a Honing Guide

From: https://www.popularwoodworking.com/chris-schwarz-blog/camber-with-a-honing-guide/

A curved cutting edge is critical to most operations with your bench planes. The curve prevents the corners of the iron from digging into your work, and it allows you to correct the flatness of the face or edge of a board.

But how do you create this curve, sometimes called a "camber?" And how do you create it with a honing guide, which seems to encourage a cutter that is sharpened straight across?

There are lots of valid ways to create the curve. Here's how I do it. My method has the provenance of a stray dog, a little David Charlesworth, a little Robert Wearing, and a little bit from everyone else who has ever taught me sharpening.

I start with the #1,000-grit waterstone. This stone cuts quickly enough to shape an edge or remove small nicks or chips. Clamp your cutter in your honing guide then (mentally) divide its edge into five "positions" (see the photo above for details).

The trick to creating a curve is to put finger pressure at each position. At position "1," put your fingers firmly against the corner and sharpen the corner for 10 strokes.

Then move your fingers to the other corner (position "2") and go for another 10 strokes. Then, at positions "3" and "4," go for seven strokes. Then do a few strokes in the center at position "5." Now check your work with a square.

You need to learn what the curve should look like for each of your planes. Here are the basic principles: If the iron is bedded at a high angle greater than 45°, you need less curve. If the iron is bedded at a lower angle such as 12° or 20°, you need more curvature to get the same effect.

And what is the desired effect? You want to take the widest shaving possible without the corners of the cutter digging in. There is math here. Having a .005" arc-to-chord curve at 45° results in a curve of .0035" being exposed out of the mouth. (If you have a bevel-up plane bedded at 12°, the same .005" arc-to-chord curve will result in .001" curve being exposed in the mouth , thanks to woodworker Rob Porcaro for the formula.)

The honest truth is you just need to learn what the right curve looks like when you show the cutting edge to a straight edge. If there is too much curve, sharpen some more in the middle position (5) to flatten the curve. If the curve is too flat, add more finger pressure or strokes at the corners to increase the curvature.

When you have a satisfactory curve, advance to the polishing grits (#4,000 then #8,000) and repeat the same regimen. The polishing grits will remove less metal, but you definitely can increase or decrease the curvature while polishing.

It takes a little practice to find the right curvature for your plane, but the rewards are enormous: Shimmering handplaned surfaces with a sensuous, scalloped and touchable texture. It's worth the effort.

– Christopher Schwarz