



Crosscut

Newsletter of the Witwatersrand Woodworkers' Association
PO Box 411346, Craighall, 2024

< From www.forgedknives.co.za – Stuart Smith's website showing forging of a blade.

Secretary: Ken Mutch ([Ken.woodman AT gmail.com](mailto:Ken.woodman@ gmail.com) or 083 276 2351 - replace AT with @ to email)

Editor: Trevor Pope (tpepe AT iafrica.com). All written content and opinions are those of the editor, unless stated. © Copyright reserved.
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Next General Club Meeting on Wednesday, the 13th June 2012 from 18h00 at the WWA clubhouse at REEA. Gunter Haacke from Klingspor Abrasives will talk about abrasives.

Next Turner's monthly meeting is on Monday, the 4th June 2012 at 18h00 at the WWA clubhouse at REEA. Presentation on hollow forms.

News

May Turner's Meeting

Turning a box with a lid. Steven Barrett demonstrated turning a box with a close-fitting lid. He used a chuck to hold the work and showed the three stages of work holding required to make the base and lid. He showed how to carefully fit the base to the lid for a suction fit.

Wood of the Month – Natal Mahogany - Trichilia Dregeana or Trichilia Emetica. Chris described this wood, which is also called Red Ash or Rooiessenhout. It is a light pinkish colour, even grained and well suited for carving. It is found from Central down to Southern Africa.

May Main Club Meeting

AGM. The AGM was held prior to the presentation. The secretary Ken Mutch kept an attendance register and minutes and these were distributed to the members via email. The headlines from the meeting are:

- Herman reported on another successful year for the turner's section. Herman is standing down as chairman of the turner's section and Steven will lead this section in the forthcoming year.
- Alistair reported on a number of highlights in the main club, such as the record number of toys made for the year-end braai. Alistair recognised the contributions of many of the members to the running of the club and thanked them for their contributions.
- Uncertainty of tenure of the club house. We are now on a month-to-month rental, and the search for suitable premises continues. A prospectus on the club has been compiled by Alistair and is available if required.
- Ken Mutch is standing down as secretary and Annie will take over.
- The annual subscriptions were confirmed at R320- please use the invoice details given below for payment.
- The members of the 2012/1013 committee are:

- ❖ **Chairman:** Alistair Brande
- ❖ **Vice-Chairman:** Steven Barrett – will also chair the Turners meetings.
- ❖ **Treasurer:** Rick Florence
- ❖ **Secretary:** Annie Conway
- ❖ **Member:** Grant Mackay – Wednesday Workshop
- ❖ **Member:** Rose Spurr
- ❖ **Member:** Shaun Sampson
- ❖ **Member:** Greg Hirschson

Support Members:

- ❖ Costa Carastavrakis – Catering
- ❖ Trevor Pope – Crosscut
- ❖ Chris van Heeswijk – Wood of the Month

Helping Hands:

- ❖ Peter Middleton
- ❖ Frans Joubert
- ❖ Barries Badenhorst

Knife Forging. Stuart Smith (shown with the bandana on the right – image from www.sabladesmith.co.za) demonstrated parts of the knife making process. Stuart is a professional blade smith, who forges his knives the traditional way using a forge and an anvil. He brought his post-box forge and anvil to the meeting, and proceeded to fire up his forge with LP gas. He showed how he heats up blanks to red heat in the gas flame and then hammers them to shape on an anvil. With many heats, hammerings and considerable skill, the blade took shape. He uses traditional carbon steels for his knives as these are amenable to forging and hardening without specialised equipment. He also makes his handles from wood amongst other materials, as well as the sheaths. He showed some fine examples of his work. See www.forgedknives.co.za for more information.



Club Notices:

Club house. We have moved onto a month-to-month lease in our clubhouse after we were given notice. **We are still on the look-out for new premises.**

As you may know, we are unusual amongst the woodworking clubs in having our own workshop, so we can't just meet anywhere. We need a place where we can keep our machines and benches. Ideally, a venue that has a store-room where we can store our equipment would be ideal. Then we can move it out into the meeting area for demonstrations and workshops. The meeting area should accommodate at least 40 people for a demonstration or talk. Our present schedule is 2 formal meetings and 4 informal workshops per month – a total of about 20 hours per month. We cannot afford a commercial rental without a large increase in our subscriptions. Also, the area would be idle most of the time, so some sort of sharing arrangement for the meeting area would be preferred. We would like to continue with the present way the club operates, but if need be, we can make changes.

The committee is exploring all alternatives, so any suggestions and participation from members are welcome. If you have any suggestions on how the club should operate or on premises, please contact a member of the committee. You may be expected to do a bit of following up of any opportunities to the point where they become real before the committee will become involved.

Reminder - ANNUAL MEMBERSHIP SUBSCRIPTIONS: 2012 / 2013 year

Subject to approval at the meeting, membership subscriptions for 2012 / 2013 are due on 1 May 2012 for R320- per year. Delivery of Crosscut by email is included, postal delivery of Crosscut is R80- extra per year.

Please pay the Treasurer before the end of April to maintain continuity of your membership. Post cheques to the address in the masthead of this newsletter. Details for direct deposits are on your *personal* invoice below.

Thank you.

Ken Mutch Secretary (2011/2012 year)

INVOICE		01 April 2012
DUE DATE		AMOUNT
01 May 2012	SUBSCRIPTION for the Witwatersrand Woodworkers Association - 2012/2013 year	R320-00
	Direct deposits to: Witwatersrand Woodworkers Association. Nedbank Main St. branch - Code: 198765. Account No: 1979-321833 – Put your name in the comment line, so that the treasurer can identify the source of the payment.	

For Sale:

Clear dust extractor hose P.U. wire support. 100m diameter, industrial quality can be bought from Shauenburg-Flexadux, 24 Spartan Road, Spartan. M.D. Johan Tucker 011-794-0006 R140- per meter. It is generally in stock, if not it will be made up with a 2 - 3 day delay. (The advantage of the internal galvanised wire spiralling around the hose is that it can be earthed, to avoid any build-up of static electricity.)

Saturday Workshop. Ken Bullivant previously held the Saturday workshop at the clubhouse, but when we moved from Helpmekaar, he decided to move it to his house in Boksburg. Currently 5 of our members attend these meetings and more are welcome. 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. They also make toys, several of which were displayed at the braai, and individual projects are discussed and problems solved. Contact Ken on 082 809 0020 if you wish to take part.

Please Note:

Toymakers. The toymakers meet on the first and third Mondays of every month, at 09h00 till 12h00 at the clubhouse. Contact Eddie Marchio on 011-678-8062 or [rm22 AT mweb.co.za](mailto:rm22@mweb.co.za) for more information.

Wednesday Workshop. The Wednesday evening workshops are on the first and third Wednesdays of every month, from 18h00 till 20h00. Contact Grant Mackay on 082-391-9769 or [mackay.grant AT gmail.com](mailto:mackay.grant@gmail.com) for more information.

Wood Ash

Trevor Pope

Last winter we installed a Morso wood-burning stove in our lounge at home, which was most welcome over the coldest part of the winter. It has a rated output of 5 kW of heat, with a wood consumption rate of 2kg per hour. The Morso was plumbed into the existing chimney, in front of a classic Edwardian fireplace. The original fireplace was close to useless. It was small, and clearly designed to burn coal, but it didn't do that very well either. I estimate that it had about the same effect as a 2 kW heater. Some figures published for open fireplaces quote efficiency figures as low as 10%, which means that 90% of the heat goes up the chimney. Our Morso is rated at 70%, and this can be improved if the flue is run up inside the room. The larger Morso stoves have higher efficiencies and outputs. (See www.morso.co.za) The stove is smokeless, although it does smoke at startup, for about 10 minutes. The exact model we picked is designated the 1442 ribbed, which we picked because it has a double skin on the sides, so the safe distance on the sides is relatively small.



It does need feeding fairly often – about once an hour. I have a lot of off-cuts from turning blanks –with cracked ends and corners to be removed, about half the weight of a blank can be removed on the bandsaw before going to the lathe. Also, we took down a large Australian Blackwood last year, which had been dead some time. I estimate that about 2 m³ of dry wood is lying in the wood pile, which, with our relatively mild winters, should last us quite some time.

In the instruction book for the stove, they state that wood ash should **not** be put onto the garden and should be disposed of with normal domestic waste, making sure that it has cooled down. Of course. I questioned this – clearly some research was required.

We have a large compost heap in the corner of the garden and all our garden refuse goes onto the heap. Once it has composted, it is then recycled onto the garden to complete the cycle. On the compost heap, the worms and bugs and bacteria all feed on the vegetable matter reducing it to compost over a few months to years.

Compared with composting, wood ash is a special case – all the water and hydrocarbons in the wood are burned off in the fire, and what remains is essentially the mineral content of the wood that was burned. Given that this wood all arose from the same soil to which is being returned, I wondered: Why do they recommend that wood ash not be used on the garden? What is different between composting and burning?

When wood burns completely, the organic compounds that are essentially hydrocarbons are converted into carbon dioxide and water vapour. The more volatile constituents also go into the atmosphere, and the minerals remain. The exact processes depend on the conditions prevailing in the fire such as the temperature, moisture content of the wood, oxygen available, and the wood composition.

The weight of ash remaining is typically between 0.5% and 2% of dry weight of the wood that burned. The largest constituent of the ash is calcium carbonate (CaCO₃) comprising 15% to 45%. Next is potash (potassium compounds in various forms) at about 10% and about 1% is phosphate. Then there are all

sorts of trace elements – magnesium, iron, manganese, zinc, copper and various heavy metals that were taken up and used by the tree. There may be significant amounts of silica as well, depending on the species of tree. Some woods such as eucalyptus species contain enough silica to noticeably wear tool edges – ask the turners about this.

As you may know, commercial fertilisers are labelled with the N-P-K composition, indicating the proportion of Nitrogen, Phosphorus and Potassium respectively. A common, general purpose garden fertiliser is 2-3-2 which contains:

- 2 units of nitrogen, probably in the form of ammonium nitrate (NH_4NO_3)
- 3 units of phosphorus, probably in the form of phosphate (P_2O_5)
- 2 units of potassium, probably in the form of potassium chloride (KCl)

Wood ash varies depending on the tree species, but typically it is 0-1-3. If you combine wood ash with ammonium nitrate, you can create a balanced fertiliser to suit your application. (These days, it is difficult to buy ammonium nitrate, as it is an ingredient in explosives – to render it safe, it is usually sold as LAN – Lime Ammonium Nitrate.)

Calcium carbonate is the main ingredient in agricultural lime, which is used by gardeners to reduce acidity in soil, and improve the uptake of other nutrients from acidic soils. Wood ash is effective as a liming agent because the very small particle size makes it more reactive than other sources of lime. Weight for weight, about twice as much ash is required as agricultural lime.

You can't dump unlimited quantities of wood ash on your garden, like you can with compost. You need to be careful not to make your soil too alkaline (increased pH). In Gauteng, due to the long-term deposition of lime from the municipal water supply, gardens can tend to become too alkaline (basic) with time. The calcium carbonate in the ash can make this worse. If you are a keen gardener, you will probably have tested the pH of the soil and you will know where you stand. Apparently, wood ash should never be used on acid loving plants such as potatoes, blueberries, azaleas, conifers, etc. Another problem with wood ash is that it is very fine, so to prevent it blowing away, it should be watered into the soil after application.

Probably a better use for wood ash is mixing it into your compost heap – a study done in Finland and backed by another in Austria showed significantly faster decomposition with controlled amounts of wood ash mixed into the heap. Up to 20% by weight was found to be beneficial.

If you are into self-sufficiency, then wood ash has many uses – soap making, as a cleaning agent, for scouring pots, etc.

What about coal ash? The problem with coal ash is that the origins are unknown, so you don't know what the mineral and heavy metal content is. Generally, coal ash is dumped in landfill sites if the composition is unknown. There are numerous industrial uses for coal ash, such as cement, brick-making, roads. However, due to risks of groundwater contamination from heavy metals, it should not be used in your garden.

Health and Safety. Wood ash contains very fine particles, so a dust mask should be worn and then the ash should be watered into the soil. Varying amounts of silica may be present, so precautions against silica dust apply. Also, wood ash is alkaline, so skin contact should be avoided. Make sure that the ash is cool when removing it from the fireplace – ash is an excellent insulator, and it is surprising how long hot coals can persist in a bed of ash.

Sources:

Wikipedia: www.wikipedia.org

<http://www.humeseeds.com/ashes.htm>

<http://hubcap.clemson.edu/~blpprt/bestwoodash.html>

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<http://www.aseanenvironment.info/Abstract/41017048.pdf>

http://en.wikipedia.org/wiki/Fly_ash