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## Advice from a tree

By Hannel Ham

“Mom, will your job save life’s?” While driving through bumper-to-bumper traffic, I am confronted with this loaded question. I am a forester, not in the medical profession, just a simple nature lover. So how do I compete with stories of other parents with more important careers because they save lives?

Ilan Shamir is well known for his ‘Advice from’ series. This simple poem on the opposite column of this page reached more people worldwide than any active forestry marketing company could reach. Various other artists and writers use trees as example to give us ‘advice’ or encouragement for daily survival in the jungle.

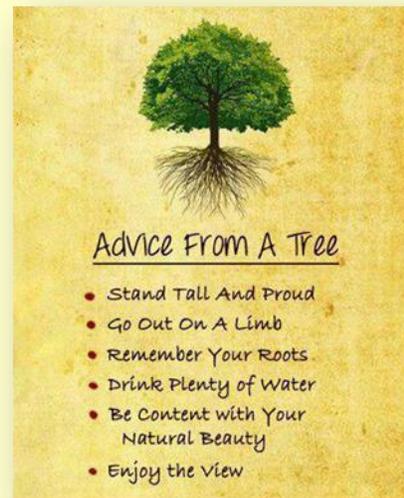
Readers Digest published an article entitled: 7 weird facts about trees you never knew. These are: trees can be male, female or both; are boon to breathing; are decent compost; can produce a bitter chemical to ward off predators; are amongst the world’s oldest living things; stress makes trees stronger; and fungus help trees grow. I wonder how a boardroom (forest) smells when budget cuts, fire damage, re-structuring and wage increases as the atmosphere is loaded with bitter chemicals to dominate the decision making process.

But, lesser known facts are that well maintained trees can increase your property value by 14%, reduce air conditioning needs by 30%, a mature tree removes almost 70 times more pollution than a newly planted tree, one tree can absorb as much carbon in a year as a car produces while driving 41 600km, and trees reduces stress levels. There are plenty of scientific facts available to cite on the importance and usefulness of trees. As foresters, we can be all the medical professions rolled into one.

So how did I answer? I might not save people lives directly on a daily basis. However, as a forester, every tree I plant will contribute to global health and every tree we harvest will make someone’s live easier. But, the most awesome feature of my work is to be close to nature and contribute positively to nature. Remember: stand tall and proud; go out on a limb; remember your roots; drink plenty of water; be content with your natural beauty; and enjoy the view (ride).

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## Reminder: SAIF AGM

**Date:** Monday **17th July 2017**

**Venue:** Ascot Conference Venue, 210 Woodhouse Road, Scottsville, Pietermaritzburg

**Time:** 16h45 for 17h00 – 18h00

**RSVP:** saif@mweb.co.za before 10 July 2017 please!

**Guest speaker:** Mr. Izak van der Merwe

“Trees and the Heritage of Forestry in South Africa”

## Fun Facts: Special Gems of Forestry: July 2017

*Senegalia caffra* (previously *Acacia caffra*): Family Fabaceae (SA no. 162)

**Common name:** common hook-thorn, gewone haakdoring, mositsana, umtholo, moruthare

The species name *caffra* was an epithet frequently bestowed on plants from the eastern parts of South Africa in previous centuries. It is from Hebrew and means "person living on the land". *Senegalia caffra* is the most common naturally occurring *Senegalia* species in the Witwatersrand National Botanical Garden. It is easily spotted by the bright green feathery looking foliage. The leaves are drooping creating a soft look.

**Habitat:** it occurs naturally from coastal scrub to bushveld and highveld grasslands although the distribution appears slightly patchy. It is mainly found in the coastal areas of Kwazulu Natal, Eastern Cape and Western Cape. *Senegalia caffra* prefers sandy soil with a low pH. Although it can withstand drought and frost, it prefers areas with a higher rainfall.

**Allergies:** Unknown

**Growth rate:** grows up to 18m tall with an annual growth rate of 700 to 900mm.

**Pollinator:** bees and other insects

**Wood characteristics:** it is dense, hard but beautifully grained and used for fencing posts, tanning and the beautiful rootwood.

**Uses:** foliage is eaten by game and stock. It is considered a lucky tree in traditional African beliefs and is highly valued by Xhosa women for tobacco pipes. It has medicinal value as well.

**General:** as it occurs in grasslands and savannas, it can withstand fire. *Senegalia caffra* responds well to pruning and grows easily from seed after hot water treatment. The Van Son's Playboy (*Deudorix vansonii*) and Pennington's Playboy (*D. penningtonii*) butterflies breed in galls on the branches of this species.



*Eucalyptus globulus*: Family Myrtaceae  
Common name: globulus, Tasmanian blue gum

*Eucalyptus globulus* was first described in 1799 by Jacques de Labillardière (French botanist) during the d'Entrecasteaux expedition (1792). The species name *globulus* is Latin for globe-like or spherical and refers to the shape of the seed. There are four sub-species differing in bark, habit and flower arrangement, but some authorities recognise the sub-species as separate species. The sub-species are:

- Tasmania blue gum – *E. globulus* subsp. *globulus* (syn. *E. globulus*). Better known as the floral emblem of Tasmania.
- Maiden's gum – *E. globulus* subsp. *maidenii* (syn. *E. maidenii*). Flowers are in groups of seven in the leaf axils and the bark usually shed to base.
- Gippsland blue gum – *E. globulus* subsp. *pseudoglobulus* (syn. *E. pseudoglobulus*). Flowers are mainly in groups of three in the leaf axils and the bark usually shed to base.
- Southern blue gum – *E. globulus* subsp. *bicostata* (syn. *E. bicostata*). Flowers are mainly in groups of three in the leaf axils, while the bark is rough and usually retained at the base.

**Native:** occurs mainly along the east coast of Tasmania, including Bruny Island, while small populations are found on Flinders, King and Cape Barren Islands in Bass Strait. On the mainland it occurs in the Strzelecki Ranges–Wilsons Promontory region of Victoria.

**Growing conditions:** it prefers undulating subcoastal hills, good quality or sandy soils.

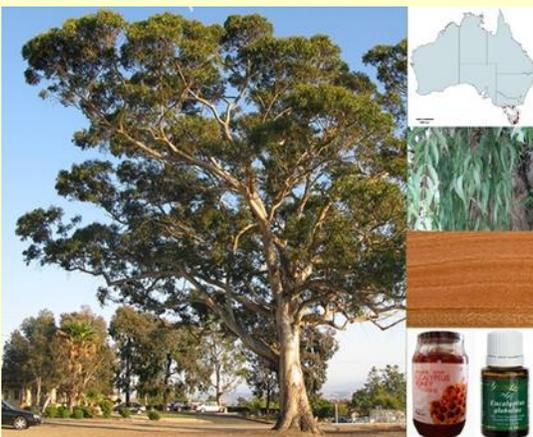
**Allergies:** unknown

**Growth rate:** up to 70m tall with a trunk diameter of 2m.

**Wood colour:** it has an open textured yellowish brown wood with distinct growth rings and an interlocking grain. Timber is strong and durable.

**Wood odour:** unknown

**Uses:** been used for a variety of purposes including railway sleepers, piles, paper making, fire wood and charcoal. *Eucalyptus globulus* coppices well and has been used for fuel. The oil from leaves is pale yellow in colour and used in perfumery, soap making and medicinal



References:

- Australian Native Plants Society. 2017. *Eucalyptus globulus*. <http://anpsa.org.au/e-glo.html> [assessed 21 June].
- Bugwood wike. 2017. *Eucalyptus globulus*. [http://wiki.bugwood.org/Eucalyptus\\_globulus](http://wiki.bugwood.org/Eucalyptus_globulus). [assessed 21 June].
- Florabank. 2017. *Eucalyptus globulus*. [http://www.florabank.org.au/lucid/key/species%20navigator/media/html/Eucalyptus\\_globulus.htm](http://www.florabank.org.au/lucid/key/species%20navigator/media/html/Eucalyptus_globulus.htm). [assessed 21 June].
- Greenplanet. 2017. *Acacia caffra*. <http://www.greenplanet.co.za/plant/Acacia-caffra>. [assessed 21 June].
- Kew Science. 2017. Plants of the world: *Eucalyptus globulus*. <http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:592965-1>. [assessed 21 June].
- Pacific Forest. 2017. *Eucalyptus globulus*. <http://woodexportchile.com/wood-species/eucalyptus-globulus/>. [assessed 21 June].
- Palgrave KC. 1996. Trees of Southern Africa. Struik Publishers, Cape Town, South Africa.
- Pooley E. 1994. The complete field guide to trees of Natal, Zululand and Transkei. Natal Flora Publications Trust, Durban, South Africa.
- Poynton RJ. 1979. Tree planting in southern Africa. The *Eucalyptus* Vol 2. Department of Forestry, South Africa.
- SANBI. 2017. *Senegalia caffra*. <http://pza.sanbi.org/senegalia-caffra>. [assessed 21 June].
- Van Wyk B, van Wyk P. 1997. Field guide to trees of Southern Africa. Struik Publishers, Cape Town, South Africa.
- Von Breitenbach F. 1965. The indigenous trees of Southern Africa. The government printer, Pretoria, South Africa.
- Please mail any suggestions to Hannél Ham ([hamh@basacr.co.za](mailto:hamh@basacr.co.za)).

## W Cape Branch news: Forestry Education at Stellenbosch University: 85 years young!

By Anton Kunneke and David Drew

The Department of Forest and Wood Science (DFWS) at Stellenbosch University celebrates 85 years of quality forestry education this year. This long history is testament to the ability of the program in its many forms to adapt to continuous challenges and change!

Studies in forestry commenced in 1932 with the formation of a Department of Forestry as part of what was, then, the Faculty of Agriculture and Forestry. Initially, a decision was made by the minister that a four-year degree in forestry should be offered at Stellenbosch University for a “proof” period of five years. The aim: to provide scientific and professional training for forestry officers for the country. A professorship in forestry was awarded to the new Department of Forestry, helped by a donation by Dr. Hans Merensky of 250 pounds per year to the University. The first professor in forestry, Mr. Ernest Jacob Neethling (commonly known as “Forestry–Neethling”) was appointed in November 1931. The position was maintained until after the proof period, but only permanently installed in 1943.

The new forestry school went from strength to strength: when Prof. Neethling died in 1949, it was estimated that 60% (to grow to 90% by 1956) of all senior forest officers in the State forestry department had been educated at Stellenbosch University. A second Chair in Wood technology was installed at the department in 1950, thanks in large part to a yearly contribution from the Transvaal Chamber of Mines. By 1956 the number of students had grown to 50, and in that year the department became the Faculty of Forest and Wood Science, with Prof. C.L. Wicht as Dean. From 1957, the program increased in scope, to include also forest products and forest utilization in 3rd and 4th years. Two separate departments of Wood Science and Forest Science were formed. Scientists who would manage processing plants were now trained in this new department. Students worked in the State forests in the last two years of study. In 1977 the university changed to a new semester system with semester modules as part of the curriculum. The Faculty of Forestry by now consisted of four departments; namely Forest Science, Wood Science, Nature conservation and Parks and recreation.

A major upheaval occurred in 1996: The longstanding grant-in-aid that the Faculty had received from the National Department of Water Affairs and Forestry since 1956 was terminated. This posed severe financial challenges in supporting the programmes at the Faculty and the University had no choice but to close two programmes in the faculty: Parks and Recreation and Pulp and Paper. In 2000, the Faculty of Forestry was absorbed into the newly created Faculty of AgriSciences and became known as the Department of Forest and

Wood Science (DFWS) with two directions of study, Forest Science and Natural Resource management and Wood and Wood Product Science.

The department has made a huge contribution through the years and is still going strong! To date, 1030 BSc degrees, 262 Honours degrees, 260 MSc degrees and 59 PhD/DSc degrees have been conferred through the program. In its current form, DFWS offers a broad undergraduate programme and a pure research based postgraduate programme. Stellenbosch University is still the only tertiary institution in South Africa that offers BSc, MSc and PhD programmes in wood product science, forest science and natural resource management. Currently, about 70 undergraduates and 30 graduate students, many of whom from different African nations, are enrolled at DFWS. The department continues to grow in stature, with an excellent reputation internationally and in South Africa. There is much to look forward to as we look towards our centenary.

## SAIF and other upcoming events

- **45th International Forestry Students' Symposium** (IFSS 2017). 2–17 July 2017. [www.ifss2017.wordpress.com](http://www.ifss2017.wordpress.com)
- **SAIF National AGM:** 17 July 2017, Pietermaritzburg, KZN. Exact venue TBC. For more information contact Corine at [saif@mweb.co.za](mailto:saif@mweb.co.za).
- **7th Forestry Science Symposium.** 18–20 July 2017. One Life Church, Pietermaritzburg. Contact [Sally.Upfold@icfr.ukzn.ac.za](mailto:Sally.Upfold@icfr.ukzn.ac.za)
- **An Introduction to Modern Tree Breeding Course.** 28 August – 1 September 2017. Pretoria. Contact [SVerryn@CreationBreeding.co.za](mailto:SVerryn@CreationBreeding.co.za)
- **IUFRO 125th Anniversary Congress.** 18–22 September 2017, Freiburg, Germany. <http://iufro2017.com/registration/>
- **SE Asia Tree Health Conference 2017.** 1 – 2 November 2017, Kuching, Sarawak, Malaysia. [2017SEATH@gmail.com](mailto:2017SEATH@gmail.com).

## The further away we drift – the closer we need to be

By Rob Thompson

We all need to spare a thought or two to those people and organisations so tragically affected by the recent fires in the Knysna / Plettenburg Bay region. Who would have thought that a region so tranquil and naturally blessed would experience so extensive a natural disaster? Accolades to all of those volunteers and professionals who fought the fires and supported (and continue to support) the communities and individuals affected.

This fire event caused arguably, the largest deployment of fire fighters ever assembled on South African soil and proved, albeit under the harshest of conditions, the necessity for, and ultimate effectiveness of concerted and united human endeavour.

It also illustrated that there is little stopping Mother Nature when she has her hackles up.

A vast, and yet to be fully quantified area of plantation, was annihilated during the course of a few days, which has to sting the sensibilities of most forestry practitioners. It is obligatory, in my opinion, that lessons learnt during this catastrophe, be shared formally with the broader forestry and related communities, in order that applicable measures be adopted extensively to prevent a similar occurrence elsewhere. It is also opportune that practitioners review current forestry practice across all disciplines and ensure best fit to radically changing conditions.

Almost as if to endorse the fact that climate and environmental change is real, radical and requires mankind's full attention, no sooner was the Knysna fire under control, nature presented a disastrous fire along similar magnitude, in Portugal!

Recent field days that my organisation arranged, which targeted private timber growers, further illustrated to me, the ever changing conditions that we are being forced to deal with and test methodologies employed to deal with such.

Take wattle rust for instance. A pathogen rapidly spreading across KZN and beyond, revelling in the extended warmer climatic periods and reaping havoc on bark and timber yields. Opportunistic pests such as wattle myrid move in to capitalise on the stressed trees, causing further damage. Mist blowers (demonstrated on the days) to apply broadcast fungicide and insecticide are necessitated in some instances to extend the reach of the chemical into tree canopies and keep costs within acceptable limits. The stressed wattle stands then present sparser stocking, smaller trees, and less lush green fire retardant leaf material. A chain of events that results in less reliance on wattle for its once well-known fire retardant properties and more emphasis on expensive silviculture, prepared breaks and associated maintenance.

Social challenges driving an expanding modernisation approach within the South African forestry industry now place far higher reliance on mechanical operations than ever before. Less own labour and more contracted capacity is often the consequence of this approach. The mechanical planting machines demonstrated at our field days for instance, effectively replace manual planting teams providing that the terrain is accessible. In the absence of live-in own

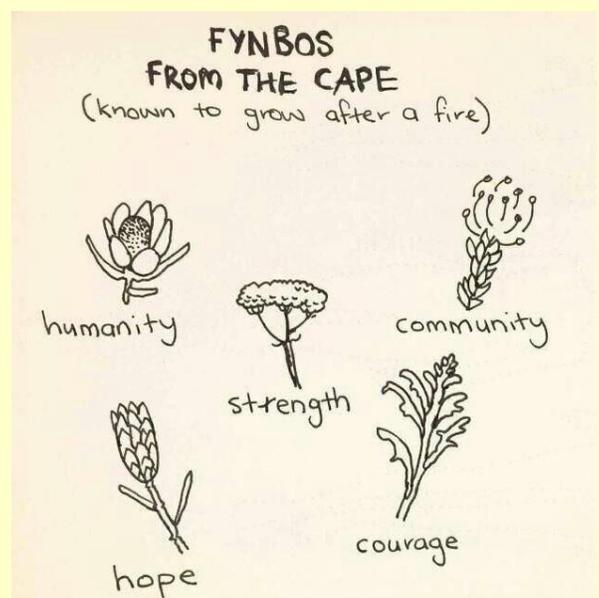
labour, contracted fire-fighting capacity in the form of shared-cost fire protection agencies with aerial capabilities, are now generally the first call in fire emergencies. These contracted approaches are not necessarily wrong, but they do present a changed ownership and responsibility mind-set that needs to be carefully understood and managed appropriately. When an emergency strikes, one could after all argue that people with direct vested interests in the continued wellbeing of the organisation affected, are generally the more effective defence.

Exploring these concepts leads me to conclude that whilst forestry practitioners are forced to operate more remotely and with greater reliance on service providers, we will never totally overcome the emerging risks emanating from an ever changing environment and climate. We will always be reliant on extended human intervention in cases of intense natural emergency. In the light of the Knysna fires we need to take this opportunity to reflect as an industry, on the incredible selfless inputs rendered by communities, volunteers and neighbours to the plight of the property owners and forestry organisations affected.

How can we better interact with communities into the future and create a sustained symbiosis with our neighbours? How can we better share forest resources and become critical components of surrounding people lives? What can we do and what should we do better to prevent future disasters and embed our industry indelibly in the hearts and minds of South Africans.

Let's use the Knysna fires as stimulus to be introspective and brutally honest with ourselves. Work on omitting what should not be there and embrace that which should.

Nature definitely will not allow us any time reprieve. We must do this now!



Picture source unknown

## World Forestry Students Symposium: The countdown begins...!

The 45th International Forestry Students' Symposium (IFSS 2017) which will be hosted by the South African chapters of the International Forestry Students' Associations (IFSA), spearheaded by Nelson Mandela Metropolitan University is set to attract more than 130 students from 56 countries to South Africa between 2 and 17 July.

The event will commence with the Official Opening and Dialogue at the NMMU George Campus on Monday, 3 July. The theme for the symposium is "Forestry in a diverse environment: Siyaphi? (Where to from here?)" It aims to explore the rapidly changing nature of forestry since socio-economic components are becoming as important as the traditional biophysical components. "Landscapes are transforming and humanity has become a key driver of global change. This is relevant to the youth because forestry can now be explored from a wide array of angles. In the South African context in particular it is anticipated that this important forum will enable the youth to leverage social business models in forestry", the local organising team explained.

The symposium will consist of lectures, workshops, seminars, educational excursions and dialogues throughout the event which will revolve around the main theme. Issues that are critical to the forestry industry will be debated and could include sub-themes such as: Forestry and the inclusion of rural areas; Mechanisation within forestry; Land reform and tenure and how this affects the forestry industry; Youth involvement in forestry; Environmental impacts of forestry and possible mitigation measures; and Global warming and forestry. The event presents an excellent opportunity for South African forestry students for exposure to international opinions and thoughts regarding the forest industry, specifically regarding our local industry.

The IFSS 2017 Organising Committee consists of students from the Forestry Associations of NMMU, the University of Venda, Stellenbosch University, Fort Cox and the University of Pretoria. This will be the first time in the history of IFSA that this global conference (an annual event) will be hosted by a team of collaborating local chapters from one country, hence making it a truly South African symposium.



## Southern Forests special issue

Southern Forests Vol 79 issue 2 is a special issue on Forests, People, and the Environment. Selected papers from the African Forest Forum workshop held on 4–5 September 2015 preceding the XIV World Forestry Congress in Durban, South Africa. The workshop was structured under the following subthemes: rehabilitation of degraded lands using trees; managing forests in the context of climate change; forest governance, marketing and trade in forest products; and socio-economic issues in Forestry.

In this issue, the main drivers of land degradation are highlighted vis a vis population growth, agricultural expansion, climate variability, drought and energy needs.

Chirwa, Mahamane and Kowero, in their overview, "Forests, people and environment: some African perspectives," note that the issue also highlights the methodological challenges of quantifying carbon in African forests. Finally, the issue covers a people-centred approach in tree planting and management, where studies demonstrated that there are still problems of poor participation of local communities, due to poor implementation of enabling policies, lack of involvement in initial planning and subsequent lack of clear benefit-sharing mechanisms.

Also reported in this special issue is an evaluation of the expected return on investment in these resources made for products from various tree species at their rotation age (the time of their harvesting) and considering forest carbon offsets in the compliance and in the voluntary markets as explored in eastern Africa.

The studies in this issue underscore the importance of forests to the livelihoods of African people both in rural and urban areas through the ecosystem goods and services highlighted.

The studies also emphasise the need to recognize traditional forest management practices, institutional frameworks and ecological manipulation of the forest species in order to contain degradation through forest and tree restoration, and promote favourable adaptation approaches to climate change.

In concluding their overview Chirwa, Mahamane and Kowero state that poor participation in the management of the forest resource, weak policies on land tenure, and lack of capacity and skills for value addition and marketing, must be addressed in order to encourage local communities to become viable custodians of the forest resource for future generations. See more at

<http://www.nisc.co.za/news/85/announcements-and-notice/special-issue-forests-people-and-the-environment>

## Gauteng branch: News from the concrete jungle

By Steve Verryn

Gauteng may not boast of large forests, however we can be proud of the SAIF Gauteng branch and their contribution towards forestry! Our previous AGM in May 2016, was held at the Sappi Innovation Centre. The tour of the Sappi facilities very interesting and valuable, and many people were impressed by this world-class facility on their doorstep! Thank you once again to Sappi for hosting this event!

Prof Paxie Chirwa was elected at this meeting, and he has certainly brought new capacity to the committee – welcome again! We also held a meeting at the Safcol building in August, during which we officially handed over the prestigious Distinguished Forestry Award to the well-deserving Prof Coert Geldenhuys. He kindly gave a very interesting talk on “My life amongst the trees in African forests & woodlands in pursuit of sustainable forest management: dealing with conflicting perceptions.” Prof Geldenhuys has a wealth of fascinating experience and innovations, working on the interface between communities and forests. The meeting was well attended with over 20 people, and thank you to Safcol and the individual sponsors.

Our branch membership has shown encouraging signs of growth, with growth recorded every consecutive year, since 2012/13! In fact, with the latest registrations, we are at a record membership since our records start at 2005/06! We have elected a new branch committee. Many thanks to the outgoing committee– for all your support over the last two years– without your dedication, this branch would not exist!! The new committee consists of Dr Brett Hurley (chair), Lee Raath-Brownie, Prof Paxie Chirwa, Dr Stuart Christi, Izette Greyling and Churchill Mkwalo. Congratulations to the new committee!! We are hoping to see a younger group in the future too, and the indications are that this is likely to happen in coming years!

On the theme of a younger SAIF branch, we elected to have younger people present their research activities to the SAIF at this 2017 AGM. It was an exciting event, with Prof Bernard Slippers organising six presentations, each of 6 minutes long, and no slide was presented for longer than 20 seconds!! The presentations were (in short):

- George Dowse “Breeding Eucalypt sawtimber”, where he described how he is developing technologies to genetically improve solid wood properties in eucalypt using early, non-destructive screening techniques.
- Kassahun Maru “The importance of agroforestry in Ethiopia”, where he described how agroforestry is adopted by up to an impressive 70% of households in some areas, and how this adoption is being implemented to address serious soil erosion concerns and to enhance social well-being.
- Izette Greyling “Field extension: Linking industry with world class research”. Here we learn of the challenges of identifying pests and diseases and other causes of poor plant health, and how some diseases are very good at hiding their identity from the ‘detectives’.
- Darryl Herron “Plant clinics in the Anthropocene: a TPCP/CTHB example”. This presentation, with some amazing illustrations, highlighted the migration of pests and diseases around the globe and the economic impact of this on forestry.
- Danielle Roodt “Plant Genetic and Evolution”. Here we were treated to a very interesting and refreshing global view of the evolution of plants.
- Tayo Adenigba “Can we use mating patterns to manage pitch canker”. It seems like there is a lot to learn about the ‘birds and the bees’ of pitch canker.... And if we understand this more, there may be new mechanisms to control the disease!

The 2017 AGM of the Gauteng branch was certainly one with a difference! Thanks to UP and FABI for their sponsorship and the whole team involved in the event!! Looking forward to other events....We may have a concrete jungle in Gauteng, however Johannesburg is a large urban forest, with over 10 million trees (Alan Buff, from Johannesburg City Parks)..... one of the wishes for a future meeting is to invite talks on this treasure! Another is to visits Pretoria’s very own “Wonder Tree”, the Wonderboom.



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## July 2017 birthdays

01-Jul	HAYTER G.E.	21-Jul	TYHODA L.
01-Jul	HOPE C.A.	22-Jul	COLDWELLS J.L.
03-Jul	VALINTINE S.	23-Jul	DE WAAL N.
08-Jul	PALLETT R.N.	24-Jul	McINTYRE P.
08-Jul	STAAL D.L.	24-Jul	STANSFIELD P.J.
10-Jul	HUDSON E.A.	25-Jul	DA COSTA D.
11-Jul	HUBBLE J.H.	25-Jul	GARDNER R.A.W.
11-Jul	PAQULA T.	25-Jul	SIBHAKABHAKA T.
14-Jul	POKWANA S.	30-Jul	COUTINHO T.A.
16-Jul	WINTER A.M.	31-Jul	MACK R. C.
19-Jul	EATWELL K.A.	31-Jul	McARTHUR R.
20-Jul	HOWARD M.D.		