



Southern African Institute of Forestry, Postnet Suite 329, Private Bag X4, Menlopark, 0102
www.saif.org.za, saif@mweb.co.za

The Value of Big Trees

By Wayne Jones

The contribution of forests and trees to meeting the present and future challenges of food security, poverty alleviation and sustainable development depends on the availability of a rich diversity between and within tree species. These forest genetic resources are the heritable materials maintained within and among tree and other woody plant species that are of actual or potential economic, environmental, scientific or societal value. Genetic diversity is needed to ensure that forest trees can survive, adapt and evolve under changing environmental conditions. They are crucial to the adaptation and protection of our ecosystems, landscapes and production systems, yet are subject to increasing pressures and unsustainable use. Conservation and sustainable management of these genetic resources is therefore critical to ensure that present and future generations continue to benefit from forests and trees.

Genetic diversity is essential for artificial selection, tree breeding and domestication programmes for the development of adapted varieties or to strengthen useful traits and resilience to stresses such as pests and diseases. Trees contribute to their environment by providing oxygen, improving air quality, climate amelioration, conserving water, preserving soil, and supporting wildlife.

The value of big trees in a commercial forestry context in an exotic environment is equally important. With anticipated adverse climate change, a reality, having big trees across the landscape, made up of multiple species from various wild sources, provenance origins and population structures is an investment well worth having.

With the movement of genetic resources across the world becoming more difficult and access to some species and populations no longer possible, conserving local resources is essential. These genetic resources are managed to ensure effective population sizes to capture alleles at high frequencies but also several rare alleles.

South Africa has a long history of successful tree improvement programmes starting with pure species of both hard and softwoods. Environmental challenges and market demands are necessitating a greater shift towards deployment of hybrid varieties to maintain production. This has seen a shortening

Inside This Issue

The Value of Big Trees	1
SAIF Dedicated Service Award: Dr Andrew McEwan	2
SAIF Merit Award: Ms Samantha Bush	2
Early Forest Men: Part 2	3
The collective can	4
2019 KZN branch committee members	5
Early Forest Men: Part 2 cont.	5
Western Cape Branch news	5
SAIF contact details	6
July 2019 birthdays	6

of breeding cycles to produce new genotypes for commercial deployment. This is only possible by conserving a large genetic base of pure species immediately accessible (seed, pollen and floral structures) to breeders by having large, managed trees across the landscape. These wonderful genetic pools come in the form of a variety of seed orchards, conservation parks and arboreta. Through both in-house industry programmes and collaborative projects with organisations such as Camcore and the ICFR (Institute for commercial Forestry Research) the forest industry is well positioned to develop genotypes for the future.

Big trees in the landscape also offer an insight into exposure to changing climatic conditions and potential pests and diseases. In addition to the genetic value of these giants, they also provide various ecosystem services in their exotic homes by providing shade, nesting sites, foraging for bees and aesthetic beauty.



SAIF Dedicated Service Award: Dr Andrew McEwan

Andrew McEwan has a long standing relationship with the SAIF and council. He served on council as Chair of the Southern Cape Branch (2008 – 2012), as Vice President (2012 – 2014), President (2014 – 2016) and Past President (2016 – 2019). Since 2015, Andrew was responsible for the annual photo competition, SAIF calendar and monthly newsletter. He is well known for his dedication, enthusiasm, good time management, friendly demeanour and love for the institute. Other initiatives that Andrew spearheaded, include:

- Fire bursary: meeting with stakeholders to compile a protocol
- Forester of the year trophy: compiling the criteria document
- Represented the SAIF with the reversal of plantations in the Western and Southern Cape. He met with various stakeholders (DAFF, PG Bison, Cape Pine etc.)
- Wood Foundation: represented the SAIF
- Continuous Professional Leadership: Andrew is passionate about a CPL system for the SAIF and is compiling the terms and conditions documents
- New SAIF web site: in 2016 Andrew and Hannes van Zyl revamped the SAIF website to be mobile and user friendly

Andrew is a good example of a committed council member that is willing to run the extra mile for the Institute. Without council members such as Andrew, the SAIF would not have survived the past 51 years and be such a well-respected organisation. With this award, we want to show Andrew our sincere appreciation for contributing to the success of the SAIF.



SAIF Merit Award: Ms Samantha Bush

Ms Bush recently completed her MSc at the Forestry and Agricultural Biotechnology Institute (FABI), University of Pretoria, where she was registered in the Department of Zoology and Entomology. Her MSc project examined the host preference of the red gum lerp psyllid, *Glycaspis brimblecombei* on different commercial eucalypt species. She also investigated the specificity of a biological control agent, namely *Psyllaephagus bliteus*, which could potentially be used to manage populations of this pest. Samantha's research provided important information to the South African forestry industry. This included the finding that the parasitic wasp *P. bliteus* is also capable of parasitising another eucalypt insect pest in South Africa, namely the shell lerp psyllid, *Spondylaspis c.f. plicatuloides*.

Output from Samantha's MSc research has included a publication in the journal African Entomology, "Six recently recorded Australian insects associated with *Eucalyptus* in South Africa", as well as another paper currently under review and one more that will be submitted shortly. During her MSc, Samantha was also a co-author on a review paper with international researchers and published in the journal Biological Invasions, titled "Exotic biological control agents: a solution or contribution to Arthropod invasions?". Her work has been presented at numerous national and international conferences, including at the 5th International Symposium on Biological Control of Arthropods in Langkawi, Malaysia, where she received a prize for the best poster.

In addition to the substantial scientific contribution to forestry in Southern Africa, Ms Bush is an employee at the FABI Biocontrol Centre, where she has made a substantial contribution to a number of key biological control projects of forest insect pests.



Foresters who contributed towards the protection of the indigenous forests of the garden route

Part 2: Forest Conservators, by Georg von dem Bussche

The first scientifically trained forester in the Cape was Comte M. de Vasselot de Regné, who was appointed as Superintendent of Woods and Forests at the Cape in 1881. He was a graduate of the school of forestry of Nancy in France. He was a person of superior personality, profound knowledge and wide experience. However, his shortcoming was that he did not learn to speak and write English and had to rely on his secretary, A.W. Heywood, a younger forestry graduate, for translation. His fame however is that he produced in 1883 the first Forest Regulations and then in 1885 a management manual "Introduction of Systematic Forestry" which advocated sustained yield in accordance with scientific principles (Von Breitenbach 1974). During his term of office, the revenue of the forestry section increased six-fold and the capital value of the forest also increased. He also organised an annual Arbor day and started testing exotic tree species at Tokai and Kluitjieskraal, a forest station near Wolseley.

He also officially introduced the Section system, which was originally introduced by the German foresters Hartwig and Von Carlowitz, who are both regarded as the fathers of sustainable forest management. The "Section" system replaced the Shelterwood system of Harison. Only at selected Sections and "Vireés" trees were marked and then sold to the woodcutters. His main impact was also the training and motivation of all forestry officers, who followed him, like D.E. Hutchins, James Rawborne, H.G. Fourcade, James Cooper, A.W. Heywood and C.B. Mac Naughton who all managed and further improved his system of conservation orientated forest management. His term of office was not extended by the colonial authority and he left South Africa in 1892 after he had produced the first Forest Act (Von Breitenbach 1968). His name has been immortalised by the naming of the "De Vasselot Nature Reserve" consisting of prime forest and fynbos areas between the Craggs and the Grootrivier in the Tsitsikamma. This Nature Reserve is now managed by SANParks.

The history of the woodcutters is well known and has been well documented. It must be mentioned that the woodcutter episode has been glorified by the books of Daleen Mathee. The woodcutters, called "poor whites", had a strong political power as voters and were therefore tolerated by the authorities. In 1913 the woodcutters were registered, meaning that no new woodcutters could start operating. As of 1939 the remaining 258 woodcutters were either put on pension or were employed by the newly established plantation management of the Forestry Department or at the railways.

D.E. Hutchins, one of the competent and professionally trained foresters, followed Captain Harison as conservator of forests in Knysna in 1888. His main achievement was that he introduced the system of "Demarcated State Forests" in 1890, which ensured that Demarcated State Forest land could not anymore be alienated without the approval of parliament. This system is still valid legislation today and has secured the land holding of the State. He also introduced the interplanting of the gaps in the indigenous forest with fast growing exotic species, including *Acacia melanoxylon* (Australian Blackwood) {Von Breitenbach 1968}. This silvicultural sound but also environmental sacrilege must be understood considering that the tremendous damage to the forests had endured for over hundred years and that the very slow

pattern of our indigenous trees, compared with fast growing exotic trees, needed improvement.

A.W. Heywood followed Hutchins as conservator of forests in 1996. He stopped the interplanting of the forests with exotic trees, introduced by his predecessor.

James Cooper followed Heywood for a short period. He was a very much liked manager and introduced the so called "Outright System", which prescribed that only one contractor had the right to work a specific section at a time, even though the contractor could hire woodcutters to attend to the harvesting. This enabled a much easier control of the forest operations.

Prior to Hutchins and Heywood, a self-trained Frenchman, H.G. Fourcade, made a great contribution towards the protection of the forests by surveying the "Sections" introduced by Harison and de Vasselot. He also was district forest officer at Knysna for a short period before he left the forest service after his benefactor Comte de Vasselot left South Africa. He became subsequently one of the most outstanding botanists of the Garden Route flora. He also invented aerial survey systems and equipment subsequently to a career as land surveyor. He later owned a saw mill at Witelsbos, from where he collected his many botanical specimens.

C.B. McNaughton became forest conservator at Knysna in 1898. His scientific contribution towards the conservation of the forests is evident by the first "Permanent Sample Plots" which he established to monitor the growth of indigenous tree species. He realised the slow growth pattern of most indigenous tree species and advocated that a minimum of a 20-year interval between the working of the sections should be implemented. He also drafted the first forest working plan for the Sourflats area at Goudveld. His name is immortalised by the rare and beautiful forest tree *Faurea mcnaughtonii* (Terblans), which occurs at the Garden Route only at a very remote and restricted area at Gouna State Forest, the Lilievlei Nature Reserve.

J. Storr Lister was appointed Chief Conservator at the Cape in 1906. He had already in 1876 established the first commercial plantation of eucalypts at Worcester to provide fire wood for the railway locomotives and had started the School for Foresters at Tokai in 1906 (Olivier 2009). He promoted plantations with fast growing exotic trees in order to alleviate the pressure for wood from the indigenous forest; an idea, which had been proposed previously by De Vasselot.

J.S. Henkel was forest conservator at Knysna from 1909 until 1914. He introduced *Acacia melanoxylon* (Australian Blackwood) as nurse tree into the openings of the indigenous forest. He was also an eminent botanist and ended his career after a period as conservator in Natal and later as Chief Forester in Australia (Von Breitenbach 1968). The introduction of *A. melanoxylon* into the indigenous forest (cont. on page 5)

The collective can

By Rob Thompson

Over the past weekend, my wife and I were besieged in our house.

Our only potential exit was sealed by in excess of 16 000 crazed individuals, all eying us with 1000 meter stares as they slowly moved forward with awkward sideways gaits, drool cascading down their chins, and knuckles dragging on the ground.

We were forced to "go bush".

We went to ground and disguised ourselves as harmless layabouts. We broke out the emergency liquid rations, coaxed a fire into life and braaied chunks of wild animals in a quest to survive the seemingly endless onslaught on our freedom. As the first shot rang out, the stream of broken bodies passing by, appeared to become even more agitated. Unlike the "walkers" in the hit TV series "The walking dead", these individuals were capable of engaging with each other in a strange, barely discernible code. "Issit de end?" asked one particularly weathered individual. "Uh-uh, jussa bronze" replied his mate, sucking on his bleeding knuckles. "We gotta nuvva hour". The two comrades supported each other with an arm around each other's shoulder and loped off towards more pain and the heavenly sight of a banner that read "FINISH".

And so the increasing stream of Comrades Ultra Marathon runners (now walkers) passed our house which is situated some 400 meters away from the end point. Being so close to these athletes, who, by then, had completed some 86.5km, and had been on their feet for more than 11 hours, brought the human condition into wonderful perspective. These were people who had offered up a fair deal of their recent existence on training, had paid the race entrance fee, had run a marathon to qualify, had travelled long distances to the race start, had struggled through 11 plus hours of torment and were about to receive the ultimate reward... a R10 medal! Many of them had done this year in and year out and were determined to do so again and again.

One had to admire the onlookers as well. Here were people who literally spent the whole day, on the side of the road, encouraging and coaxing total strangers to perform and complete the race. Race, class, education, and societal position were all ignored and for one whole day, a significant population of people, were able and willing to engage and respect each other, over a shared interest in exercise and running, and without any thought to material gain, politics or advantage.

Just prior to the running of the Comrades Marathon, I had been privileged to hear about another form of selflessness that left a distinct impression on me and also involved thousands of individuals. This time however the individuals were not human...no...not to worry...not another zombie-type analogy...this time it involved Amur Falcons.

I attended a talk given by two permanent employees of the FreeMe Wildlife Rehabilitation Centre based in Howick KZN. This is a voluntary organisation that assists in rehabilitating wildlife species that have fallen foul of the human interface. They presented the story of the Amur Falcon that migrates to RSA KZN from China for

the summer, with enormous roosts comprising thousands of individuals occurring in Mooiriver and Newcastle.

In the late summer of this year, just prior to the birds' return to the East, a massive hailstorm decimated the Mooiriver roost. A security guard at the local supermarket witnessed the carnage and sounded the alarm. FreeMe volunteers rallied to assist with all manner of people, from all walks of life and with various skill-sets, assembling, to deal with literally thousands of injured and stressed birds. Days of effort eventually saw hundreds of recovered birds released, and those injured, stabilised and recovering.

Fate then dealt another cruel hand, as fate is often want to do, by smashing the Newcastle roost with a vicious and random hail storm. Again the volunteers rallied to assist. Many of the previously recovered birds became patients yet again, all whilst the window of preparation for the long flight home became smaller and smaller.

With around 30 still recovering birds, remaining in aviaries to over winter, the rest headed off eastwards. The new rings that the birds carried on their legs were to tell yet another tale. On the border of China, some 11 000 km away from Howick, two young boys captured a falcon in a rudimentary trap and were about to have an avian snack, when their parents fortunately intervened, prevented the demise of the bird and reported to the local wildlife rehabilitation centre. The bird was set free, FreeMe was contacted with the ring detail, and the wonderful tale of an Amur survivor, nicknamed The Iron Lady, was established.

Now, if we give this all of this some thought...from Comrades runners through to FreeMe volunteers, the security guard who made all the difference, the parents of the boys, to the Chinese rehabilitation staff for passing on the details of The Iron Lady - none of them had to do what they did. They chose to do what they considered right. They chose to interact with likeminded people and contributed towards the success of the collective.

My task now, is to try and drag all of this commentary into some relevance to forestry. It's not all that difficult given the array of people and communities reliant on the industry, rather like the varied and vast participants in the Comrades Marathon and the FreeMe volunteer gathering.

You might argue that the industry is not an endurance race. Neither is it a project of grandeur. It is however an industry relying on thousands of like-minded individuals to contribute towards its sustainable success. Why wait for the special events? As practitioners within the industry, we are all capable of taking the conscious decision to see past our obvious differences, and support each other towards our common goals of industry and career success.

Who knows...we might bump into each other on the road between PMB and Durban soon, as well?

2019 KZN branch committee members

By Mmoledi Mphahlele

The new 2019 SAIF KZN branch committee members have been announced. From the left, they are Mmoledi Mphahlele – Mondri (Branch Chair), Noku Maplanka – Mondri (Secretary), Lelethu Sinuka – Sappi (Treasurer) and Sphelele Mbanjwa – Mondri (Events coordinator).

The team is ready to deliver on a comprehensive 2019 programme. We have a full programme for the year as always. The branch is planning to increase our visibility to schools and the industry in order to attract more younger members to the SAIF.



Forest Conservators (cont.)

(Cont from pf 3.) enabled the wood of this species to become an important furniture timber even though today the further cultivation is being phased out, because the species has become one of the most aggressive invader plants along the Garden Route after his close relative the Black Wattle (*Acacia mearnsii*).

During this time James O'Connor was district forest officer at Knysna for a short period. His name is mentioned in this context because he became one of the most outstanding forest scientist of South Africa. He established research trials called “Correlated Curve Trend” to study the influence of various silvicultural treatments on pine plantations. The data from these trials are still today the main growth information available and are used for growth modelling and yield predictions.

References

OLIVIER, W., 2009. There is Honey in the Forest. South African Institute of Forestry

VON BREITENBACH, F., 1974. Southern Cape Forests and Trees, The Government Printer, Pretoria

VON BREITENBACH, F., 1968. Southern Cape Indigenous Forest Management Manual, Volume 1, Foundations of Management (unpublished report by the Department of Forestry)

SAIF, Western Cape Branch hosted Misha Teasdale, “Tree-EO” of Greenpop International

By Adrian D. A. Simmers

Greenpop is an international NGO that has a local origin and strong global footprint. Their core focus is to promote active citizenship in tree planting, forest restoration, ecosystem and natural vegetation conservation by education workshops, camps and restoration programmes. On the 24th of April 2019, Misha Teasdale, gave a talkshop and information seminar at Stellenbosch University on their envisaged Knysna forest restoration work.

Greenpop is active in large scale natural restoration work and collaborate where possible

In June 2017 and again in October 2018, devastating fires wreaked havoc on large areas along South Africa’s beautiful Garden Route. Greenpop has been partnering with various Universities, NGOs and community organizations in the area in order to contribute towards addressing the socio-ecological challenges that this magnificent biosphere reserve is facing.

The extremity of the fires was exacerbated by the uncontrolled spread of alien plant species along this coastal area. The impact of these fires has been immense on a social and environmental level. The general consensus is that, alongside immediate rebuilding efforts, long-term efforts need to be focussed on regeneration through planting of indigenous trees and urgently removing alien vegetation which assisted in spreading and increasing the intensity of the fires.

According to Mr Teasdale, in this landscape of forest/fynbos mosaic, Greenpop looks forward to taking a hands-on approach, working closely with key role-players and experts as part of the new paradigm of nature conservation, community cohesion and regrowth in the area.

“We are looking to partner with South African University faculties as well as any citizen that are connected to the environmental wellbeing of our country. Greenpop understands the value of working together.” Please visit www.festivalofaction.com for more details.

Venue: Knysna. Date: 22 June – 7 July 2019

(Photo: Adrian Simmers, Misha Teasdale, Philip Crafford)



SAIF contact details

President:	Wayne Jones	president@saif.org.za	033 3302455
Vice-president	Braam du Preez	southern-cape@saif.org.za	044 874 0682
Past-president:	Dr. Hannél Ham	past-president@saif.org.za	076 452 5567
National secretary:	admin@saif.org.za	saif@mweb.co.za	082 523 8733
SF Journal Editor:	Dr. Neels de Ronde	journal@saif.org.za	
KwaZulu-Natal:	Mmoledi Mphahlele	kzn@saif.org.za	033 329 5415
Gauteng:	Prof. Brett Hurley	gauteng@saif.org.za	082 909 3211
Mpumalanga:	Vacant	admin@saif.org.za	082 523 8733
Southern Cape:	Braam du Preez	southern-cape@saif.org.za	044 874 0682
Western Cape:	Dr. Philip Crafford	western-cape@saif.org.za	021 808 3303
DAFF representative	Tendani Mariba	tendanim@daff.gov.za	012 309 5753

July 2019 birthdays



01-Jul	HAYTER G.E.	21-Jul	TYHODA L.
03-Jul	VALINTINE S.	23-Jul	DE WAAL N.
08-Jul	PALLET R.N	23-Jul	KUNNEKE A.
08-Jul	STAAL D.L.	24-Jul	McINTYRE P.
11-Jul	HUBBLE J.H.	24-Jul	STANSFIELD P.J.
14-Jul	POKWANA S.	25-Jul	DA COSTA D.
16-Jul	WINTER A.M.	25-Jul	GARDNER R.A.W.
19-Jul	EATWELLMK.A.	31-Jul	MACK R.C.
20-Jul	HOWARD M.D.		

Newsletter compiled by Andrew McEwan