

Southern African Institute of Forestry



Delivering a professional service to forestry

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Photograph from the 2020 Calendar taken by Jolanda Roux (KZN Branch) showing a pine emperor moth.

SAIF AGM : Provisional date **19th of May 2020** in **KZN**. More details will follow in the next Newsletter.

From the President's desk In the Canopy

As a child, climbing a tree is not only essential, it's an irresistible temptation as the branches provide steps to make you climb higher and higher. As an adult, climbing trees becomes a highly specialized job or career as a tree climber, cherry picker operator or an arborist using an array of equipment and power tools to manage the trees canopies. Forestry programmes worldwide rely on well trained specialist operators capable of several functions including seed and pollen collections, sampling and accessing genetic material, surveying the canopy to estimate crop yields and conducting pest and disease assessments.

The specific task activity will dictate the method of access to the canopy and techniques employed, typically when conducting detailed surveys, assessments and controlled pollinations using cherry pickers, is most suitable as the operators have access to the outer canopy where new reproductive structures and pollen can be found. Cherry pickers are used to work at heights of up to 17 metres, have a platform maximum height of 15.2m, a maximum outreach of 8.7m and a turret rotation of 360° with a carrying capacity of 200kg.



Tree climbers are best suited for tall trees when conducting seed collection and genetic material sampling operations, as they have the capacity to move throughout the canopy using branch walking techniques and specialised pruning saws and chainsaws to conduct operations.



Cherry Picker operation in typical pine orchard



Tree arborist at work in eucalypt stand

What does the future hold and can we find alternatives? Where it is not possible to reduce canopy heights the answer might come in the form of a new specialised operator, **“The Drone Operator”**. Drones offer the most promising way to reduce working at heights for monitor flowering, crop yields, tree health and collect genetic samples. The UAV systems allow scanning the trees from above. They obtain high quality images and high-resolution spectral data. It's not just about the speed of scouting the forest or orchard, it's the sensors and cameras that are much more reliable and objective than visual assessment. They provide quantitative information versus qualitative information. Recent developments using what is known as the **“Dropcopter”** increase almond, apple, cherry and pear crop yields by between 25-50% with drone-augmented pollination. This could be applicable to produce high value pine seed crops.



Dropcopter in action

Using drones and artificial intelligence, data can be collected throughout the season in specific target areas to monitor and record the outbreaks of pest and diseases, where access to the canopy is not possible. planning and harvesting operations.



Another example is the “DeLeaves” UAV which provides a new way to collect genetic plant samples from the top of tree canopies. Using the latest UAV technologies, DeLeaves is working with top forestry companies and leading research groups to enable the sampling of previously unreachable plants and trees. The DeLeaves sampling tool is compatible with a great variety of drones, allowing customers to easily integrate this tool into their current operations.

*When life is getting hard for me,
I climb up in my favorite tree
and look down on the world below
where grass is green and flowers grow.*

*I start to feel good sitting there,
secure within my branchy chair.
Up high, the things that made me frown
look way too small to bring me down.*

*The sky's more blue; the sun's more bright,
and all my dark clouds turn out white
when I climb up my favorite tree.
Oh, what a friend he is to me*

*Susan
Noyes Anderson*

Southern Forests – NOW on ScholarOne

Southern Forests: a Journal of Forest Science is now accepting manuscript submissions through ScholarOne:

<https://mc.manuscriptcentral.com/sfjfs>, a comprehensive workflow-management system for scholarly journals.

With the world of research constantly moving, *ScholarOne* Manuscripts make the submission and peer-review process simpler for authors, editors and reviewers, while providing the publisher with a reliable and stable tool.

The system allows the full peer-review process of new submissions to happen seamlessly and completely online.

Authors are fully involved via automated email alerts and can also track updates on their submissions in their online. Should you wish to submit your research to Southern Forests: a Journal of Forest Science via the *ScholarOne* platform you can view the journal's Instructions for Authors online and visit this link to submit.

The journal publishes scientific articles in forest science and management of fast-growing, planted or natural forests in the Southern Hemisphere and the tropics. Papers are also encouraged on related disciplines such as environmental aspects of forestry, social forestry, agroforestry, forest engineering and management as well as the goods and services that are derived from forests as a whole. Articles published by the journal are of value to forest scientists, resource managers and society at large.

The journal particularly encourages contributions from South America, Africa and tropical/subtropical Australasia and Asia. The mission of the Southern African Institute of Forestry is to assist the profession to achieve and maintain excellence in the practice of forest, wood and conservation science and Southern Forests is a tangible expression of this mission.



Rob Thompson's Food for Thought

From caterpillars to butterfly's. Quite an effect!

I was conducting a field inspection with a few of my colleagues recently, when one of the party came across a looper-like caterpillar, consuming the leaves of a young wattle plant. The hapless creature was dislodged and ruthlessly dispatched under a hefty forester boot, all of course, in the best interests of pest-free wattle production.

Witnessing my colleague scrape off the sticky residue of the recently late caterpillar, from the sole of his boot, brought back the memory of a similar image I had seen years ago, in an old science fiction movie called "The Sound of Thunder" which popularised interpretation of chaos theory, which hypothesises that the flapping of a butterfly's wings in one part of the world, could create a hurricane on the opposite side of the globe.

Intrigued by the recollection, I referred to Wikipedia (in my own time of course) to refresh my memory of the film and the message it carried.

In the movie, a time traveller offers dinosaur hunts to wealthy hunters. These hunters were obliged to stay on a specially designed levitating path given that any deviation would be punished with hefty fines because this risked change in the time-line and disruption of the environment.

Prior to a hunt Time Safari scouts had been sent back to select and tag specific prey, which would have died within minutes anyway, and whose death had been calculated to have minimal effect on the future.

A German fellow named Eckels was assigned to shoot a Tyrannosaurus Rex seconds before it was due to be killed by a falling tree. He panicked in the process, and unwittingly stepped off the path leaving his guide to dispatch the beast. Eckels was obliged to remove the bullet in order to minimise the time effect and the hunting pair returned to the present time.

On arrival, the pair noticed a distinct change. A different language was being spoken, people were behaving differently and a new ruthless political order was in power. Eckels glanced down at his mud-encrusted boot and discovered the crushed remnants of a butterfly which he had inadvertently stepped on when off the path. He realised that its' death had likely created a rift in the time-line from that point to the alternative present. There was no going back. He ended up losing his mind and took his own life using his hunting rifle (which sounded like thunder).

My quick Wiki research also revealed a poem by a poet called Benjamin Franklin who also had a day job as USA President for a while. It illustrates the Butterfly Effect quite well. Enjoy!

*For want of a nail the shoe was lost,
For want of a shoe the horse was lost,
For want of a horse the rider was lost,
For want of a rider the battle was lost,
For want of a battle the kingdom was lost,
And all for the want of a horseshoe nail.*

Now, I don't think that the caterpillar incident is cause for you to immediately brush up on your grasp of Icelandic or ice-age survival skills.



In any event, I'll deny all responsibility should I notice the sudden onset of a premature permafrost. After all, I only watched the other chap step on the gogga! It was clearly the other guy. Anyway, its' bound to be a couple of centuries before the full time-line effect is felt and you are therefore unlikely to be too worried about any changes emanating therefrom...and there we were thinking that we were doing a good thing!

Interestingly, "Chaos Theory", dubbed the "Butterfly Effect" was widely referred to in the early days of meteorology and weather prediction, given the idea that small causes may have large effects in general, and in weather specifically. As foresters we all know how frustrating inaccurate weather forecasts can be. We now know that this is attributable to the wing beats of all of the white butterflies currently flying eastwards towards Madagascar. True! Believe me...I'm a forester. It is quite interesting to consider some of the more modern and fathomable events and their ramifications, in line with the Butterfly Effect. A while ago, in a previous SAIF article, I explored the Chernobyl disaster, which in itself delivered a Butterfly Effect of tremendous and immediate magnitude, literally resulting in the continued well-being of millions of people.

Three volunteers, with knowledge of the layout of the now severely damaged nuclear plant, volunteered to enter the highly radioactive cooling-water of the central core in order to access and shut down the water sluices leading to outside water sources, thereby sealing the plant off. impact on humans and the environment.

Experts now say that had the trio not done what they did (and successfully so), the greater part of European waterways would now

Present high levels of radio-activity with all of the associated destructive impact on humans and the environment.

Another event that grabs my imagination pertains to the hypothesis that the coronavirus originated via a man eating a virus-carrying snake obtained from a Chinese wet market. Just imagine the changed course of events had that man decided to rather go for a Big Mac on the day? Of course, we would never have known about the background time-line circumstances, but the world would certainly have been in a better place economically...and someone would have been buying our timber!

I came across another fascinating study of the ramifications of events within Chaos Theory which I share with you as a final example for this article. In the early 1900's The Academy of Fine Arts in Vienna twice rejected a young Adolf Hitler's application for art school, ironically this likely done by a Jewish professor. It is up to us to speculate just how different history would have been had Hitler applied himself to painting!

So even the smallest disruption in time can hugely influence downstream outputs. This in either positive or negative fashion, or indeed both. When one starts to consider matters along these lines, countless permutations come to mind. Think of all of the key leaders and innovators in our own industry. At a point in time, as youngsters, these "influencers" thankfully decided to embark on a forestry related career path.

Erratum: The height of the *Pinus taeda* tree quoted in the Champion Trees Article should be 60.1m and not 10.1 m



Just what would the ramifications have been had they decided, at the last minute, to rather take up dentistry, engineering, teaching, beer tasting or to specialise as beach-bums etc. No doubt those arenas would have profited considerably, but can you just imagine a forest industry with reduced to nul focus on tree health, precision forestry, forest engineering, research and technology transfer capacity, business skills, et al. Single decisions, taken by eventual key individuals, causing less physical disruption than a butterfly wing beat, have ultimately lead to huge gains for the South African Forestry industry. We need to be grateful for that!

Whilst understanding that we cannot control all events occurring along the time-line, my brushing up on the Butterfly Effect has convinced me once again of the need to do the right things right, first time. With its long term nature, forestry lends itself to this approach. A wrong decision now will present as a reduced yield ten years hence. Give thought to everything that you do today!

In the spirit of the discussion contained in this article, it is quite appropriate that that one single random caterpillar, encountered by chance during a plantation field trip, has contributed to this articles' genesis and hopefully triggers off a positive thought process amongst readers. The butterfly's wing has moved!



Forestry South Africa launches new corporate website

“In an effort to consolidate its web presence, FSA has gone live with a brand new website under a new domain,” says Dr Ronald Heath, Research and Protection Director who also oversees the communication and promotions function within FSA. “Not only does this web address match the association’s email domain, but it allows FSA to better position itself with its members, government and civil society.”

Subsequent to the development of a communications and promotions strategy, the FSA management team felt that a new website be developed to house corporate and sector related information. This included the consolidation of FSA’s web presence with the very successful Forestry Explained pages being absorbed into www.forestrysouthafrica.co.za as one complete website with www.forestryexplained.co.za remaining as an active URL.

New content, new functionality

Apart from presenting an overview of the FSA’s roles, functions and structures, the new website details the industry’s contributions to the economy, society and the environment by detailing its eight functional areas. The website development team has also introduced a number of useful features including ‘FSA members only’ section.



The password-protected section houses a database through which members can access:

1. **FSA documents** - annual reports, audited financials, forestry statistics, presentations and position statements, as well as relevant legislation.
2. **Forestry photographs** – these can be viewed as thumbnails before a request is submitted for high resolution images.
3. **Forestry research** – members can access ICFR bulletins and technical notes between 2002-2018 and other FSA-funded research going forward.

FSA members will need to [register](#) on the website in order to access these features. [Click here](#) to go to the member login page.

Subsequent to the launch of the new FSA website, FSA has launched a mobile phone communication platform using the Telegram application.

The Telegram Channel will be used solely to inform our members of “hot off the press” information through a short heading which will direct them to the new website for full details. The Channel will be a private broadcast service and not a group or a discussion forum ensuring you will not be inundated with messages and replies from us and other members.

Advantages of Telegram as an instant messaging platform:

- It is free to use; however, just like WhatsApp, will require data or an internet connection to send/receive messages.

- It is the same format as WhatsApp but allows for organisations like FSA to continue to inform their members via a broadcast message for free and with no risk to contacts’ security.
- It will not share your data with any organisations or government entities, for advertising purposes or any other reason.

To receive FSA news and information through the “Forestry South Africa” Telegram Channel, simply follow the steps below:

1. Open the App Store (IOS/iPhone) or the Play Store (Android) and search for Telegram.
2. Once you have found the app, select “Get” (IOS/iPhone) or “Install” (Android).
3. Now that it has installed, open the app and follow the prompts.
4. If you have registered on the new FSA website as a member, we will have your number automatically added to our list.
5. If you have not registered on the new site, please do so, but until then please send your details and a request to be added to the Forestry South Africa Channel to Judy on judy@forestrysouthafrica.co.za

For further information, please contact Ronald Heath at ronald@forestrysouthafrica.co.za



H G FOURCADE

Who exactly is H.G Fourcade ?

He was born in 1865 in Bordeaux, France and died in 1948 at the age of 83 after having lived his last 35 years at Witelsbos in the Eastern Cape.

He was a forester, forest surveyor, geodetic surveyor, photogrammetrist, inventor, mathematician, agriculturist and in his later years an outstanding botanist.

As botanist he is commemorated in the names of 28 plants, best known is *Erica fourcadei* and he was the author of the names and synonyms of 72 other plants, mainly of the Southern Cape and the Tzitzikamma region. His "Check List of the Flowering Plants of the Division of George, Knysna, Humansdorp and Uniondale" for the Botanical Survey of South Africa was published in 1941.

He studied land surveying at the South African College in Cape Town and achieved fame as the inventor of the stereoscopic method of photographic surveying. As a surveyor he undertook the extensive survey of the whole Garden Route area and constructed the still used white tapered, cylindrical, concrete 'trig' beacons, still positioned at all peaks and elevated positions in the area.

His career in forestry started when he became assistant to de Vasselot in 1882. From 1885 to 1889 was district forest officer at Knysna for all forests from George to Gouna. He then investigated the indigenous forests in Natal and was thereafter offered the position of Conservator for the Natal Colony, which he declined. He then returned to Knysna but practiced mainly surveying.

After 22 years working in the Civil Service as surveyor and forester he resigned and bought "Ratel's Bosch" in 1905 from the Anglican church. The farm was then 2227 ha in extent. He also bought a part of Bloubosch (high up in the mountains above Lottering, now managed by SANParks). He sold the farm for 2200 Pounds in 1913 to the Forestry Department and started shortly afterwards his sawmill at Witelsbos, first at Rogge Hoek and later close to the N2 at the present sawmill site. Some remnants of his dwelling at Ratelbos are still visible at the North-East corner of the indigenous forest under the old oak and camphor trees.

He bequeathed his estate to the development of science, which is still used to meet the costs of botanical publications in South Africa.

Drafted on request by Koos Lourens from Lottering

by

Georg von dem Bussche

January 2020

Reference:

- Storrar, C. D., The Four Faces of Fourcade; Maskew Miller, 1990.
- Caveney, Philip; Responsible Government, Draft, 2016.



Photo of Henry Georges Fourcade



View of Ratelbos (MTO Lottering Plantation)

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Birthdays – February 2020



| BIRTHDAYS: MARCH 2020 | | | |
|-----------------------|--------|-----------------|--------|
| KIRKMAN K.E. | Mar 02 | NEL A. | Mar 20 |
| BREEDT V.B. | Mar 04 | CHRISTIE S.I. | Mar 21 |
| LITTLE K.M. | Mar 12 | NAIDOO N. | Mar 22 |
| MULLER B.G. | Mar 12 | POOLE R.J. | Mar 23 |
| CHIVINGE T. | Mar 13 | KANZLER A. | Mar 24 |
| VILANE T.C. | Mar 13 | BEPETE F. | Mar 25 |
| MUIR I. | Mar 17 | DE BEER (Anton) | Mar 26 |
| GELDENHUYS C.J. | Mar 18 | STANGER T. | Mar 29 |
| KEYSER V.G. | Mar 19 | CELE M.J. | Mar 30 |
| DE KOCK L.S. | Mar 20 | JACOBS W.S. | Mar 31 |
| GREYLING I. | Mar 20 | | |



The Southern African Institute of Forestry

Handbook order form

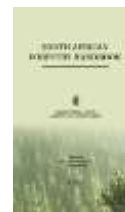
The Southern African Institute of Forestry publishes three industry specific handbooks.

I would like to order:

South African Forestry Handbook

Price: SAIF members: R400

Non members: R500



Fire Manager's Handbook on Veld and Forest Fires

Price: SAIF members: R300

Non members: R400



There's Honey in the Forest

Price: SAIF members: R100

Non members: R150



International orders must contact the Secretariat for a quote due to currency and postage fluctuations.

A bulk discount of 10% applies on orders of 10 or more copies.

Price includes VAT and postage **(within SA)**

I am a member non-member of the SAIF.

| | |
|-----------------------|--|
| Name | |
| Company | |
| Postal address | |
| Contact number | |
| Email address | |

**Bank details: Nedbank Retail Park Branch code: 169745 Account: 1697009913 Account name: SAIF
Fax order and proof of payment to: SAIF Secretariat fax 086 689 6430 or email saif@mweb.co.za.**