



all Fired up

Lowveld & Escarpment Fire Protection Association Newsletter

Issue 51 April 2020

Greetings,

First Spekboom, now a *melktert* challenge? It's a wonder the team finds the time in the midst of fires and commissions but if you need something done give it to the person with the busiest schedule. LEFPA willingly took on *melktert* challenge with a *lekker* milk tart. One month to go until the next season is upon us, are you geared up and ready? Until next time.

22nd Session of the Forestry & Wildlife Commission

The 22nd session of the Forestry & Wildlife Commission was held at Skukuza, Kruger National Park 9 - 13 March. The session focused on two main themes: the forestry and wildlife profession and education for youth and women and the illicit exploitation and trade of forest and wildlife products. The agenda was packed with 11 items and over five days fascinating and relevant discussions were held, including the effects of climate change on Africa's forests and building resilience as well as examining forest value chains for sustainable development, energy and food security.

The LEFPA Mbombela team was invited to form a Guard of Honour for distinguished delegates, Deputy Minister (Dept. Environmental Affairs, Forestry & Fisheries - DEFF) Honourable Maggie Soty, Dr. Guy Preston, Deputy Director-General (Environmental Programmes) and DEFF Acting Deputy Director-General Susan Leseke.

A field day was held in Sabie for delegates to visit the SAFCOL plantations at Tweefontein. The poor weather didn't put a spoke in the wheel of LEFPA Mbombela's fine drilling performance and the spectator favourite, a Fire Walk demonstrating the importance of personal protective equipment when dealing with fire. As always when playing with fire, safety comes first and as a precaution ER24 was on site. The team were 'All Fired Up' and in high spirits showing off their skills to the distinguished audience.

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L - R Dr. Guy Preston, Hon. Maggie Soty & Ms Susan Leseke welcomed by the LEFPA Guard of Honour

Waiting for gate clearance at the Kruger National Park

Smart drilling before walking through fire



Milking *Melktert* for a Good Cause

Andre Scheepers always leads the pack when it comes to a good cause and this is one challenge he eagerly embraced - milk tart! Canary Walk Mall, Citybug and Lowvelder teamed up with BUCO Nelspruit and Immanuel Trust to use our love for traditional *melktert* as a fundraiser for five local retirement homes. Every true blue South African has a treasured recipe that is better than the rest and few could resist the opportunity to prove it.

LEFPA entered a milk tart baked by Ivina and Lourens. A staggering R100 000 was raised and the retirement homes sharing the funds were undoubtedly the winners.

Rustig in White River - funds used to re-upholster chairs.

Sabie Ouetehuis - gutters for two houses.

Mpumalanga Frail Care - blender and hand towels.

Herfsakker - tiles and labour.

Laeveldrus - ceiling fans and paint.

It's clear that the homes have very humble but essential needs and we applaud everyone involved. You HAVE made a difference.



Ivina Alberts and Lourens Prinsloo show off the delicious LEFPA entry, which cleverly used strawberries to represent fire and kiwi grass!

Choppers in Action at Du Toit's Kloof

Leading Edge Aviation's Mark Jackson introduced the Black Hawk helicopter to South Africa's aerial fire suppression armoury in 2018 but it was only recently this year that the opportunity for a like-for-like comparison between the sleek Sikorsky craft and the legendary Huey's all working on the Du Toit's Kloof fires arose. The fire was intense, threatening a large number of crops, farm properties and infrastructure. Mark writes:

"On the 28th February, my Huey flew 8.9 hours between Charles Burger and I, and dropped 158 tons. Two Huey's would have dropped 316 tons. That same day, the Hawk flew 8.6 hours (0.3 hours less) and dropped 445 tons. The Hawk was able to safely drop water on the properties where the Huey's were not able to get to due to the severe wind conditions.

I'm using the 28th as the example as we were both flying the same fire and had the same conditions. This equates to two Huey's doing 70% of what the Hawk drops."

According to Mark, the Black Hawk pilots have become accustomed to the shorter strop, half the original length. He repeated Mark Wagner's comment that "it would take some time to find our feet after all the years of flying the legendary Huey's." We'd say those feet are firmly on the rudder, Mark. 445 000 litres dropped in one day by one aircraft is magnificent work, thank you.

A good pilot becomes at one with his machine, flying the aircraft at a level of instinctive response achieved by many hours in the air. The Black Hawk is a complicated, sophisticated aircraft with a lot more automation than the Huey so reaching the high level of competency and familiarity the pilot has on the older chopper comes with experience.

Supporting this learning curve is an interesting article in *Heliops* magazine, which gives readers insight into the challenge faced by pilots new to the Black Hawk.

www.heliopsmag.com/the-challenge-of-change



Choppers on the job in Du Toit's Kloof



Black Hawk demonstrating a drop



An Indigenous Treasure - Spekboom



We thought we'd turn the tables on our regular feature about alien invasive plants and asked Johan Louw to tell us a bit more about Spekboom, a plant that's got everyone excited.

Portulacaria afra is commonly known as Porkbush, Spekboom, Elephant's Food; Olifantskos; isiDondwane, iNdibili, isiCococo; iGqwanitsha; iNtelezi; isAmbilane.

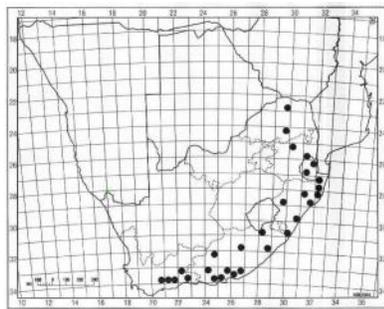
Conservation Status: listed in the National Red List as Least Concern (LC) - not threatened in its natural habitat.

Description

The Porkbush is an attractive, evergreen succulent shrub or small tree that can reach 2 - 5 m in height, although usually around 1.5 - 2 m in a garden situation. It has small round succulent leaves and red stems. Small star-shaped

pink flowers are produced in dense sprays at the ends of branches from late winter to spring although flowering in cultivation is often erratic. They are a rich source of nectar for many insects, which in turn attract insectivorous birds.

Distribution



It is found in warm situations on rocky slopes in succulent karoo scrub, thicket, bushveld and dry river valleys in the eastern parts of South Africa from the Eastern Cape into KwaZulu-Natal, Swaziland, Mpumalanga and the Limpopo Province as well as Mozambique. (Graphic www.magiminiland.org/Portulacaria.htm)

The Spekboom and Climate Change

Recent research has shown the Spekboom to be an excellent 'carbon sponge' as it has the ability to sequester (absorb) free carbon from the atmosphere. Carbon is one of the major greenhouse gases responsible for the warming of the earth's atmosphere produced in excess by the burning of fossil fuels. Spekboom has the unique ability to absorb more carbon from the atmosphere than most other plants and it does so efficiently. A stand of Spekboom thus has the ability to remove more carbon from

the atmosphere than an equal amount of deciduous forest.

How does it manage this? Spekboom makes use of two different photosynthetic methods. When conditions are favourable it manufactures its food by using the same method that most other plants use. However, when conditions are not favourable and other plants have to shut down and wait for sufficient rain, Spekboom can switch to a different pathway called CAM (Crassulacean Acid Metabolism) whereby it can continue to grow and slurp up huge amounts of carbon despite adverse climatic conditions.

In addition to enjoying carbon, the large spreading shrub covers and shades the soil from harmful rays of sun, creating a favourable environment under the bush for insects and other wildlife to inhabit. The dead organic matter which accumulates under the bushes has an enriching effect on the soil, this further enrichment of the soil improves its water-holding capacity, further benefitting Spekboom as well as other plants and animals including micro-organisms which occur in the area.

Projects now active in the areas where the Spekboom occurs seek to utilize it as a rehabilitation aid to restore over-utilized natural habitats to their formerly productive state. At the same time these sites act as carbon sinks (a sort of carbon bank) collecting carbon to use where needed, thus is productive to both humans and the environment. Potential earnings through carbon credits could be translated into social upliftment in the areas where this plant is being utilized.

Reasons to plant Spekboom

1. It improves air quality and helps fight climate change,
2. Spekboom is a proudly South African plant,
3. It's water wise,
4. Suitable for all seasons and weather conditions,
5. Easy to grow.

Suggestions on where forestry can plant Spekboom:

Spekboom makes a wonderful ornamental plant around offices. It's an excellent plant for erosion-prone areas, steep slopes and embankments as Spekboom binds the soil effectively and combats soil erosion. It favours North facing slopes where it is exposed to maximum sunlight. Spekboom can be planted as a hedge where needed or to rehabilitate areas where plantations are no longer being planted.

References

<http://pza.sanbi.org/portulacaria-afra>

<https://www.all4women.co.za/116901/food-home/garden/5-reasons-to-plant-spekboom-in-your-garden>

<http://www.magiminiland.org/Portulacaria.htm>

After the Wildfire - Tree Regeneration

Wildfire Today has published the key findings and a brief summary of a paper entitled: "Post-fire tree regeneration and fuels across the Northern Rockies following large wildfires: science meta-analyses, scenarios and manager workshops". Principal investigators Penelope Morgan and Jarod Blades from the University of Idaho along with Camille Stevens-Rumann, Colorado State University, explored how landscapes recover after a large wildfire.

Tree regeneration in high-severity burned landscapes determines if and how these landscapes become forested again, while changes in fuels structure influence how these landscapes may burn again. In this study the researchers compiled two large datasets to understand region-wide patterns and drivers of tree regeneration and surface fuel accumulation post-fire. The results demonstrated that natural tree regeneration in the Rocky Mountains is declining with increasingly hotter and drier climatic conditions and that close distance to living trees is critical for tree establishment. **Key findings** are:

- Fewer tree seedlings established far (>90m) from living tree seed sources.
- Hot, dry climatic conditions in the years after fires resulted in lower tree regeneration.
- Climate and distance to a living tree are two of the most important factors in determining tree regeneration responses. These factors should be considered when making post-fire tree planting decisions.
- Fuels increase over time since a fire, but this is mediated by site productivity and burn severity. Managers should carefully monitor burned landscapes and reduce risk during these peak tree fall periods for 9-14 years post fire. Subsequent burning may reduce fuel loads, however, vegetation considerations should be taken into account to mitigate the effects of repeated high intensity disturbances.
- The need for ongoing research-management partnerships that synthesize and translate current science is imperative in the face of increasing agency workloads that constrain agency specialists from adequately addressing climate change in post-fire planting and management decisions. The findings suggest that workshops were effective for the rapid delivery of science in a setting that capitalized on the use of visualization and interactive participation. Perceptions of the usefulness and credibility of the workshop materials and decision tree was high.

wildfiretoday.com/2020/01/22/analysis-of-tree-regeneration-following-large-wildfires



Teacher, Teacher

Caught on camera at Skukuza catching up on the good old days were Andre and Guy. Rumour has it that Guy was Andre's Science teacher at Broadlands Private Boarding school many, many, many years ago. What a small world it is.

Activities for the Month - April

- Check all radios.
- Prepare manual tracers.
- Attend LEFPA meetings regularly.
- Obtain LEFPA rules and regulations.
- Train your employees in fire management.
- Check that water points have adequate supply.
- Burn open areas on rotational burning programmes.
- Implement a daily vehicle checklist to ensure fire readiness.
- Match your fire-fighting resources based on the fire risks identified.
- Prepare roads bordering open areas and firebreaks that will be burned.
- Obtain LEFPA standard operating procedures related to high FDI periods.
- Slash burning allowed if weather permits - get a burning permit from LEFPA.
- Implement procedures to ensure the availability and supply of fuel, rations, etc.
- Implement operational procedures to ensure a quick response to provide medical and mechanical protection and other services.



Important Note:

- Basic Firefighting Training is available to LEFPA members. Interested parties can contact the LEFPA office.
- FDI weather emails and SMSs are available to LEFPA members; contact Ivina for more information.

- SUCCESS cannot be spelt without U. Attend and participate - we need your contribution!