

Southern African Institute of Forestry



Delivering a professional service to forestry

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From the President's desk

The World's Southernmost Tree

Isla Hornos, also known as Cape Horn island, is the last stretch of land in Tierra del Fuego, which supports a small population of *Nothofagus betuloides* – the Magellan's beech. Cape Horn island is one of the windiest places on the planet, with hurricane-force winds of 120 km per hour battering the landscape for days at a time.

According to forest ecologists from the University of Colorado, in the 21st century it can seem as if there are no places we've not yet surveyed down to the very last inch. We take selfies on the world's tallest mountain, pilot submarines to the ocean's deepest trench and explore the planet's driest deserts. But we've never identified – at least not correctly – the final stands of trees at the top or bottom of the world. Tierra del Fuego is where the world's southern-most wind-battered tree can be found on an island at the edge of South America, which means that all trees in the world are to your north, with nothing behind you but some grasses, ocean and Antarctica. The westerly winds appear to be the main constraint for arboreal life in the area with trees only found in sheltered locations behind cliffs and hills. While the area hasn't warmed dramatically, climate change is intensifying the westerly winds that rake the region. Evidence from the nearby Falkland Islands also indicates that the wind direction is shifting. Because of this, forests on Cape Horn that were previously growing in sheltered areas are now exposed to wind. Long stretches of dead trees can be found along the edges of the small forests, suggesting that shifting winds caused by climate change may be killing off trees even as new



Photograph by Dr. W .R Bainbridge (KZN Branch) showing Fly agaric Fruiting body of *Pinus patula* mycorrhiza





Location of the southernmost tree, *Nothofagus betuloides* (adapted from Welch 2020).

sheltered areas emerge. Under these conditions *N. betuloides* grows horizontally rather than vertically, stretching several meters along the ground and only reaching heights of half a meter.



Nothofagus betuloides growing on an exposed slope (left) and in a protected area (right, adapted from Welch 2020).

Currently there are 36 recognised *Nothofagus* species, 26 of which occur in Australasia and the remaining ten in South America. Of the total number, 78% are evergreen and 22% deciduous. The evergreen *Nothofagus* species can grow equally well at tropical latitudes in the mountains of New Guinea and in sub-Antarctic areas. *Nothofagus betuloides* is the species with the southernmost distribution.

Nothofagus betuloides is commonly known as 'coihue de Magallanes' in Chile and 'guindo' in Argentina. It is also well known to the Indian tribes of South America who refer to it as 'coigüe' (Mapuche name), 'yerkianop' (Alcaluf name), 'ouchpaya' (Ona or Shelknam name) and 'shushchi' (Yahgan or Yamana name).

It is one of the longest-living South American *Nothofagus* species, with specimens reaching 500-600 years of age. The trees can grow to heights of 20 m, and in a few cases up to 35 m, but can also remain as only metre low shrubs in sub-Antarctic shrublands.

The bark is grey or reddish in colour and relatively smooth. The twigs are covered in fine hairs, rarely smooth.



The leaves are ovate-elliptical to elliptical-almost circular, acute to obtuse, The wood of *N. betuloides* has a slight lustre and a fine and homogeneous texture. The grain is generally straight. The wood density has been classified as low with a basic density of 615 kg m³. The wood is long lasting, even without treatment. The timber can be used for poles, flooring, indoor panelling, roofing (joist and rafter), pillars, furniture, decorative veneers and panels. *Nothofagus betuloides* forms an important part of the economies where it grows and through sustainable forest management can allow the derivation of goods and services from forest landscapes, while certain levels of biodiversity and ecosystem processes can be maintained.

Forests are now on the move. As the climate warms, all over the planet, tree lines are moving higher up the mountains. Tree species are also extending their ranges toward higher latitudes; scientists have documented this poleward march in Europe, the Canadian Rockies and across China. As trees move, ecosystems change.

Species must either migrate, adapt or die [in response to climate change](#). By monitoring the geographic edges of where a species is found, like the southernmost tree, scientists can get an indication of a species migration ability. This is important for prioritizing conservation plans or when considering more extreme measures, like assisted migration, to help species keep pace with climate change.

References

Promis A, Cruz G, Reif A and Gärtner S. 2008. *Nothofagus betuloides* (Mirb.) Oerst. 1871 (Fagales: Nothofagaceae) forests in southern Patagonia and Tierra del Fuego. *Anales del Instituto de la Patagonia*. 36: 53-67. DOI: 10.4067/S0718-686X2008000100005.

Welch C. 2020. The tree at the bottom of the world—and the wind-blasted trek to find it. *National Geographic* (<https://www.nationalgeographic.com/science/2020/07/journey-to-the-worlds-southernmost-tree/>).

The Rob Thompson Column: Know what counts!

So what lesson does the combination of a popular TV travel programme, the recent Living Planet report, a health scare, being a forester, a rather depressing Afrikaans TV series, and coffee, teach us ?

Now that I have committed to the previous sentence, I am the first to admit that it certainly does appear to be rather arbitrary! Anyway let's continue to explore the original idea and see just where it ends up! Bear with me for as long as you can...or are able! (Coffee does help as I will explain later on).

Has anyone watched the Programme “Leef jou Reis” on kykNET (“Live your Journey” in English)? If you have and are anything like me, you would have doubtlessly watched in absolute envy, as the presenter, Gerrie Pretorius, travels to literally every exotic and alluring destination in the world. The man actually gets paid to travel extensively and immerse himself into the cultures encountered. Can you just imagine the trauma of being paid to eat pickled shark in Iceland or to trawl the Djemaa el-Fna market in Marrakesh, Morocco? How pleased we should be that we are not tasked to work paid overtime and undertake an overland tour of Namibia, or at short notice sacrifice our free time to parasail above the city of Rio in Brazil. The effort it would take to write the report on your trip to Peru would of course be unbearable. Ok...Ok, so I'm being unnecessarily sarcastic and my apologies to Gerrie, but I do hope that I have emphasised the irony (and pain) of witnessing someone working in what millions would consider an ideal occupation. I just don't see huge viewer ratings should I launch my own series on timber marketing and supplier liaison. Damn! Opportunity lost.

Moving on. The Living Planet Report from the **World Wildlife Fund** (WWF), published last week, found that in half a century, human activity has decimated global wildlife populations by around 68%.



So literally, in the span of my lifetime to date (there or thereabouts...I'm grey but not old), around two thirds of the world's animal population has disappeared. The report states that immediate and dedicated ameliorative action can likely reverse this devastating trend, but, the question is: just how likely is non-sustainable gratuitous consumption by humankind going to cease? I think we all know the answer to that one! Just imagine what children born into this depleted world now, are missing out on? On the other hand, and we need an honest answer here, have we, for years of having had the privilege of accessing and experiencing global wildlife diversity, really and truly appreciated it?

Last week I coordinated a Departmental "breakout" meeting constituting the first, distance controlled, physical meeting, my staff have had in months. It was well received in that staff relished being able to "banter" with colleagues, something that a Teams meeting does not really cater for. A colleague of mine, his usual humorous and lively self, contributed well to the meeting throughout and entertained us with some interesting anecdotes. In one particular conversation, his tone became serious as he shared his concern for a Bell operator in his team who had recently suffered a stroke and had been hospitalised. My colleague went on to submit, using his operator as example, just how important it is that we all live life to the full as none of us know what lies ahead.

That evening, just a few hours after the meeting, we received a Whatsapp message that our colleague had suffered a massive myocardial infarction requiring emergency surgery, stents in two major vessels and a very long recovery period. Devastating news. The positives are however, that medical facilities are still top notch and deliver excellent care, he will as a result of this care recover fully, and the event causes us all to reflect on our own life styles and values.

Some of such reflection has to focus on the forestry practitioner and what that actually stands for. The fact that you have persisted and read this article up to this point is hopefully indicative of your interest in matters beyond the normal run of the mill (note the forestry pun) salary-slave type mind set. It could also be that you are trying to look busy in your office but I'll leave

that thought be. Practitioners, certainly of my acquaintance, are inquisitive and have a wide insight and understanding of environment and life processes. The majority of us, would for instance, inherently understand the implications of wildlife depletion, given the tenants of forestry being ecologically based. That's a good thing and we should embrace this advantage that our training and experience has provided. It stands us in good stead when dealing with the varied layers we encounter through life.

Forestry practitioners also occasionally engage in non-travel related TV series. I happened to be casting a cursory glance over the DSTV offerings recently, which skill my wife refers to as "hogging the remote" but again I leave that thought be for now. Up popped the Afrikaans series "Tydelik Terminaal" (Temporarily Terminal) telling the story of a young lady fighting cancer as a full-time student on campus and living in a digs. My remote logged onto the programme at the precise moment that the young students' grandma came to visit and was regaling the fact that her suddenly very ill husband, a well-respected, successful, well-travelled businessman, had ultimately come to realise the true value of family, life and well-being. His most precious moments and memories were of simple things such as family holidays, and children's visits and not his momentous business achievements.

So apart from the rather desultory story-line in this article, some gloomy anecdotes and reports of concerning human trends, take heart in that it is all about to conclude...

Good day. My name is Rob and I am an addict...a coffee addict! A day is simply not a day without copious amounts of good caffeine. This very article has seen the consumption of at least 3 cups during production (not Irish coffees all of you doubters...pure arabica beans). I really appreciate a good cup of coffee and having encountered all of the inputs explored in this article, it suddenly dawned on me that a coffee snob is the perfect analogy of the answer to my original question (refer para 1).



Think about it. An appreciation of a good cup of coffee leads a coffee snob to hunt down the best beans and the best means at his or her disposal to produce a prize awesome cuppa.

So it should be that all of us, with the insights bestowed upon us, appreciate more, that which we have, the simple things, our health and family, the creatures that we share the planet with and make happen the best treatment for all of these valued treasures. Just as we would not tolerate instant coffee, so we should not tolerate instant gratification, consumerism and neglect of self and others.

With such appreciation, we really don't need to envy anybody else. Others will smell our hypothetical coffee beans and be led to follow our example.

Be seen to know what counts!

York Timbers funds multidisciplinary Chair in wood structural engineering at UP

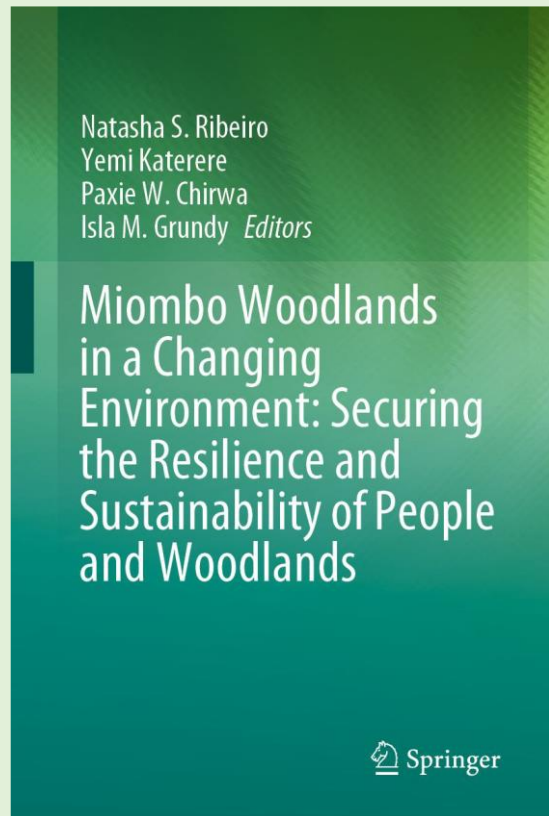
FUNDING PARTNERSHIP: Forestry company York Timbers has signed an agreement with University of Pretoria (UP) to establish a multidisciplinary research programme that is focused on the entire innovation chain, from genome-based breeding to the structural engineering of wood products, in an effort to develop a sustainable wood-based bio-economy.

"York's vision is to become the leading integrated timber processor in Southern Africa and to pioneer the application of engineered wood products as sustainable building materials in Africa," says CEO of York Timbers Piet van Zyl.

The collaboration with UP is of critical importance to ensure that York's integrated vision for mass timber construction "from genetics to product" is realised.

UP Vice-Chancellor and Principal Professor Tawana Kupe welcomed the partnership. "The Chair will contribute to academic excellence in Innovation Africa@UP by helping to create a vibrant community of students, researchers, engineers, 'technopreneurs' and local community members working together on innovations and bio-based products for the African bio-economy," he says. (Shortened from UP Media release on 13/09/2020)

New Book on Miombo Woodlands



Based on work by the Miombo Network in southern Africa, this book helps decision-makers and general readers alike improve their understanding of the socio-ecology of the Miombo woodlands across southern Africa. It also highlights the importance of and the need for further research on the unique Miombo ecology and its link with economic development.

One major challenge facing these woodlands is the influence that direct (both natural and anthropogenic) and indirect drivers of change, as well as interactions between these, have had over the centuries.

As such the book explores the socio-economic and ecological interactions that occur in these woodlands and discusses the need for further research to provide a better understanding of these interactions. Drawing on data and information from numerous studies conducted in the last 20 years, the book presents a comparative analysis of policy changes and management experiences in the countries concerned.



FAO Forestry news alert : Watch Committee on Forestry and World Forest Week live

Tune in to live webcasts of high-level dialogues from FAO's 25th Committee on Forestry (COFO 25), which will bring heads of forestry from across the globe together online, as well as events from the 7th World Forest Week (WFW), which is held back-to-back with COFO. The theme for this year is "Forests and the SDG Decade of Action: solutions for climate change, biodiversity and people".

Watch webcasts of the COFO high-level sessions and the WFW events on the [COFO 25 website](#)

Monday 12 October 2020

- Forest futures in the Asia-Pacific region
10:00–11:00 a.m. CEST
- Global status and needs for strengthening forest education – charting a path forward
11:00 a.m.–12:00 p.m. CEST
- The strategic way of integrating forestry into recovery support measures in response to the COVID-19 pandemic, Build Back Better with forests
12:00–1:00 p.m. CEST
- Catalysing a science-based restoration movement in the context of the UN Decade on Ecosystem Restoration: monitoring and action on the ground
2:30–3:30 p.m. CEST
- Capitalising on sustainable livestock management to ramp down deforestation in dryland forest regions
3:30–4:30 p.m. CEST
- One Health: concrete steps towards harnessing forestry and wildlife sectors
4:30–5:30 p.m. CEST

CEST : Universal Time (Greenwich) UTC +2 hours
Germany and 47 more CEST Brussels

Media Release - Paper Manufacturers Association of South Africa "Cleaning and greening - Paper industry hosts a Trash and Tree Day"

50 bags of trash and recyclables collected and 10 Pepperbark trees planted to mark National Clean-up and Recycling Week and Arbor Month

On Friday September 18, National Recycling Day, the paper and paper packaging industry teamed up for a "Trash and Tree Day" in Daveyton, Benoni, to mark Arbor Month and National Clean-Up & Recycling Week. The day included a litter clean-up in the surrounding veld and wetland, delivered recycling units and tree planting at John Wesley Community Centre, with some Jerusalem fun added to the mix.

In collaboration with **CreationCare** and **Etwatwa Greening Team**, representatives and members of **Paper Manufacturers Association of South Africa (PAMSA)**, **RecyclePaperZA** and **Fibre Circle**, the producer responsibility organisation for the sector, collected 32 bags of rubbish and 18 bags of recyclables in just over 60 minutes, and planted 10 Pepperbark (*Warburgia salutaris*) saplings.

Arbor Month, celebrated annually during September, calls on South Africans to plant indigenous trees as a practical and symbolic gesture of greening communal spaces. "Arbor Month is also important to the forestry and paper industry as the farming, harvesting and replanting of trees provide us with everyday wood and paper products," says **Jane Molony, executive director of PAMSA**, adding that sustainably sourced wood and paper products do not come from indigenous trees but instead from the 1.2 million hectares of commercially farmed trees around the country. "Our sector is key to fighting climate change as our farmed trees not only absorb carbon dioxide from the atmosphere but also ensure that the carbon remains locked up in wood and paper products."

Sappi Southern Africa donated 10 Pepperbark saplings to John Wesley Community Centre. The bark of the slow-growing Pepperbark tree, which contains powerful healing properties, is in demand at traditional muti markets and has been heavily harvested in the wild.



The tree is now protected by law, and classified as a threatened and endangered species. Using its tree breeding and production expertise, Sappi started a project in 2011 to propagate the trees from cuttings for distribution to rural communities and the Sappi Shaw Research Centre near Pietermaritzburg has also been working on seed propagation as well as pest control.

National Clean-Up and Recycle Week, which takes place during the third week of September, is an annual initiative, supported and endorsed by the various packaging streams and retailers.

“This year we wanted to make a tangible contribution to a local community by supporting them in cleaning up a small area around the John Wesley Community Centre in Daveyton,” says **Anele Sololo, manager of RecyclePaperZA**. “Our mascots and school presenter team also had fun with some of the children, educating them about littering and recycling.” All 100 children attending preschool at the centre also received a goodie bag from Mpact Recycling.

As part of its schools and community programme, **Mpact Recycling** provided the centre with bins and bags for the separation of white paper, brown cardboard boxes, milk/juice cartons and mixed paper. These four paper grades provide recycling mills with reusable paper fibre for the production of packaging and tissue products. “John Wesley Community Centre will now be able to generate funds for the recyclables it collects,” says **Mbali Pakati, procurement representative for Mpact Recycling**, adding that the centre joins about 860 schools and communities on its programme in Gauteng. Mpact Recycling also donated 100 goodie bags for the preschool.

Through **Nampak Liquid Cartons**, 250 units of Mojo Water and Number 1 Mageu were donated for the day’s events. **Terence van der Walt, new business development manager for Nampak Liquid Cartons**, was there: “It was great to participate in the clean-up and tree planting ceremony. Trees are the lungs of our planet. They filter the air that we breathe, as do the sustainably managed trees that we later turn into cartons.”

Paper-based cartons – used for milk, juice and even dry food – are recyclable in South Africa. “Cartons are also renewable,” says van der Walt. “The greater the demand for cartons, the more trees we plant, and the better for the environment.”

“We are grateful to Economic Recycling for the donation of gloves for our clean-up, Neopak for T-shirt donation for the centre staff and to Kimberly-Clark which presented tissue products to the centre as well as representatives of the Benoni-based Litterbugs clean-up crew,” notes Sololo.

As a belated commemoration of **National Book Week**, PAMSA is also donated locally written and published books to the centre’s reading corner. Speaking on behalf of **CreationCare, Lisa Johnstone** said, “Each one of us has a role to play in preserving nature for human well-being. As individuals we must become more conscious consumers. If we are to become custodians of nature, we must first start with ourselves and learn about what we can do.”



Source : Forestry SA , September 2020



SA could build 95,000 wooden houses a year – here’s why it should, according to a new study

- SA has enough wood to build 95,000 new houses a year, according to a new study.
- There could be 6.23 million cubic meters of log resources available for wood house components in the future.
- Only 1% of new houses in the country are wood-based – compared to more than 90% in countries such as the USA, Canada, and Australia.

South Africa has enough log resource options available to build close to 95,000 houses a year, according to researchers at Stellenbosch University (SU) who studied the potential for such a housing solution. Excluding imports and current pulp, board and other log resources, there could be 6.23 million cubic metres of log resources available for wood house components in the future, according to Philip Crafford from SU’s Department of Forest and Wood Science.

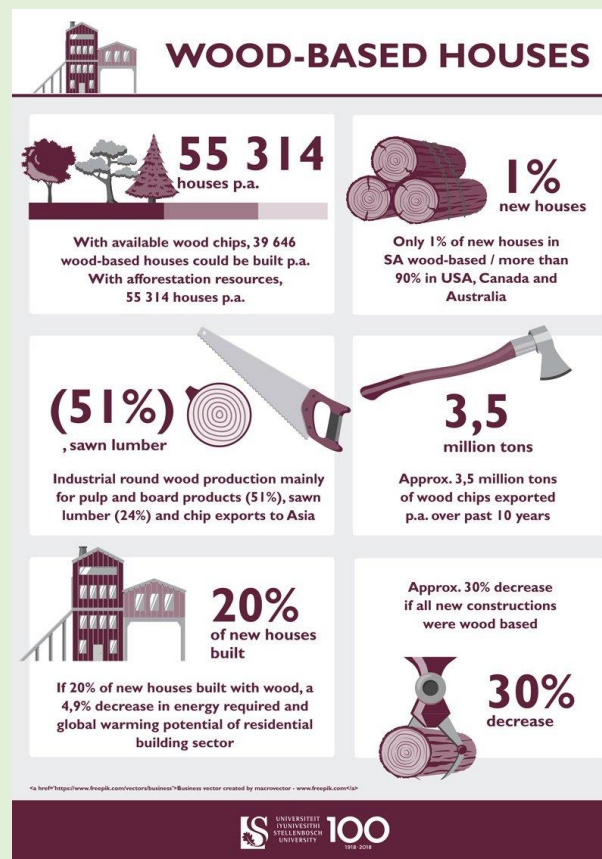
This amounts to wood materials filling 6,019 Boeing 747s, or 55,377 double-decker City Sightseeing buses.

Despite this resource availability, only 1% of new houses in the country are wood-based, compared to more than 90% in countries such as the USA, Canada, and Australia.

“Our study showed that with the use of wood resources currently exported as chips, as well as planting trees in areas that have been earmarked for afforestation, it will be possible (in the long term) to sustain a future residential building market where all houses are built with wood,” says Crafford.

Crafford and colleague Brand Wessels investigated the country’s log resources and the potential global warming impact of an increasing wood-based residential building market. The findings of their study were published in the [South African Journal of Science](#) recently.

The duo wanted to determine whether local forest resources would be able to supply the required wood for substantial growth in wood-based residential development in South Africa. They analysed the residential housing footprint in the country; available log resources for wood-based buildings; and the likely environmental impacts of such a building system.



“Due to the limited forest cover in South Africa, the perception is often that significant increases in the market share of wood-based buildings are not possible (at least from local wood resources). Our study showed that this perception is not correct.

“If we consider only current available wood chips as a resource, 39,646 wood-based houses (30,523 houses and 9,123 flats) could be built annually. With the afforestation resources, 55,314 houses (42,586 houses and 12,728 flats) could be constructed each year. That is 1,203 more than the average new buildings in the past 17 years.



"Considering both wood chips and afforestation resource potential, close to 95,000 wood-based houses (172% of current supply) could be built annually," he says.

Crafford adds that South Africa's industrial round wood (saw logs for everyday use) production is mainly used to make pulp and board products (51%), sawn lumber (24%), and chip exports for Asia.

"Over the past 10 years, we exported an average of 3.5 million tons of wood chips annually. Chip exports is the most likely available resource which could potentially be used in the building of wood-based houses."

Regarding the environmental impact, Crafford says numerous studies have shown that timber is not only renewable, but is also the best performer across most environmental impact factors when compared to alternative building material such as steel and concrete, with particularly good performance in terms of greenhouse gas emissions.

"Our basic modelling analyses shows that if 20% of new houses were to be built with wood, the amount of energy/fossil fuels required for production and the global warming potential of the residential building sector could decrease by 4,9%. If all new constructions were wood based, this could decrease by up to 30%."



Source: Business Insider SA Sep 28, 2020

UPCOMING NEWS / EVENTS

FABI International Seminar Series

Please join us for the next presentation in the FABI International Seminar Series on **Thursday 29 October 2020** at 14h00 (GMT+2).

Dr Robert Waterhouse, Assistant Professor and SIB Swiss Institute of Bioinformatics Group Leader at the Department of Ecology and Evolution, University of Lausanne, Switzerland will present a talk entitled: "Evolutionary genomics of arthropods impacting plant health".

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Monthly SU-FOR lunchtime presentation and discussion

Contact Simon Ackermann at
ackerman@sun.ac.za for more details

WOODEX 2021 NEW DATE



Congratulations !

Congratulations to Duane Roothman with his appointment as Vice President Sappi Forests .

Congratulations also to Francis Zhangazha with his appointment as GM : North Eastern Cape Forests (NECF).

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BIRTHDAYS : OCTOBER 2020			
JOUBERT J.H.L.	Oct-01	GOUS D.J.R.	Oct-13
BIGGS S.	Oct-02	VERRYN S.D.	Oct-14
JOOSTE A.	Oct-03	SASS T.	Oct-15
GWENDE N.	Oct-05	ALADE A.A.	Oct-22
PRINS A.C.	Oct-06	KäTSCH C.	Oct-23
CONRADIE J.P.	Oct-08	KAPTEIN N.C.	Oct-23
KAMFER W.	Oct-08	VAN ZYL S.J.	Oct-24
MULLER P.H.	Oct-09	BALLANTYNE D.	Oct-26
RAATH-BROWNIE L.	Oct-09	KASSIER H.W.	Oct-28
MARWICK P.C.	Oct-10	DU PREEZ B.	Oct-28
RUSK G.D.	Oct-10	NAIDOO S.	Oct-29
TSHANGISA L.I.	Oct-10	DU PLESSIS M.	Oct-30



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

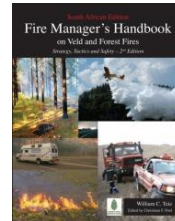
Non members: R500



Fire Manager's Handbook on Veld and Forest Fires

Price: SAIF members: R300

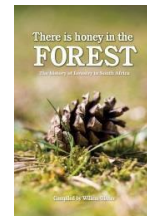
Non members: R400



There's Honey in the Forest

Price: SAIF members: R100

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