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## 2019: Year of the Periodic Table of Chemical Elements

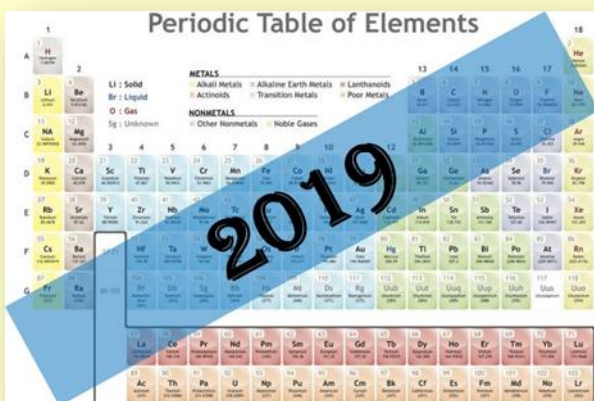
By Hannel Ham

The United Nations General Assembly declared 2019 as the year of the Periodic Table of Chemical Elements. The table was discovered in 1869 (150 years ago) by Russian Chemist Dmitri Mendeleev and forms the cornerstone of chemistry, nuclear physics and other sciences.

The periodic table symbolises a well organised, informative tabular arrangement of chemical elements by atomic number, electron configuration and recurring chemical properties. It helps to identify and derive relationships between various element properties, predict chemical properties and behaviours of newly synthesised elements. This table also symbolises the systematic arrangements and order that we find in science. Something we can all do with when planning ahead for the year.

Despite fires and severe drought, 2019 is packed with exciting events. For example:

- A partial solar eclipse (New Moon) will be visible on 6 January.
- The first full moon of 2019, 20 to 21 January, will be the first of five eclipses and a Supermoon. However, this will be the last total lunar eclipse until 26 May 2021.



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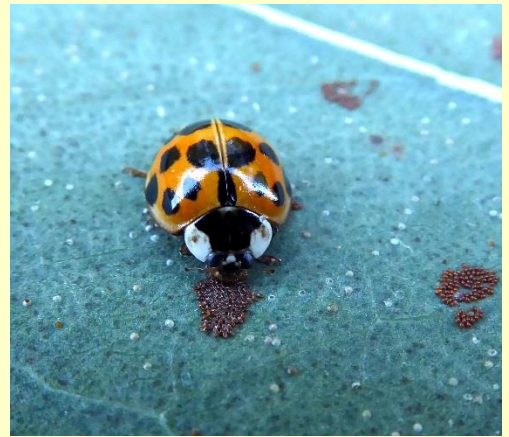
- The Cricket World Cup (30 May to 14 July) will be held in England and Wales with 10 venues in nine cities.
- The FIFA Women's World Cup is scheduled from 7 June to 7 July in France with matches in nine cities.
- A total solar eclipse will be visible from South America on 2 July when the Moon passes between Earth and the Sun.
- A partial lunar eclipse will be visible on 16 July during the full moon.
- The XVIII Pan American Games will take place in Lima, Peru, from 26 July to 11 August.
- The Rugby World Cup will be in Japan from 20 September to 2 November with matches in 12 cities.
- A transit of Mercury across the Sun will occur on 11 November. Mercury will pass directly between the Sun and Earth. The next transit of Mercury is predicted for 2032.
- An annular solar eclipse will be visible from South Asia on 26 December.
- Various general elections, parliament elections and legislation elections will be held during 2019. Even South Africans will visit the polls.

On behalf of the SAIF council I want to wish you and your family a very prosperous 2019. Thank you for your loyal support.

## SAIF 2018 photo competition photos!

The 2019 calendar has been mailed to all paid up members, so please keep an eye on your post box. The winners, with their prizes sponsored by Stihl, were announced in the December 2018 newsletter. The SAIF is already planning for the 2019 photo competition. These photos will be used for the 2020 calendar. So, get those cameras out so long, or hone your cellphone camera skills, so that you stand a chance of winning one of the awesome prizes that will be on offer. Below and to the left are a selection of some of the photos used in the calendar. To see who took the photograph, consult your SAIF 2019 calendar!

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## Specials on SAIF handbooks!

The SAIF is currently running specials on the three handbooks described below. Please contact Corine (details on front page of newsletter) to take advantage of the specials.

1. Fire Manager's Handbook on veld and Forest Fires:
  - a. Members – R300
  - b. Non-Members – R400
2. SA Forestry Handbook:
  - a. Members – R400
  - b. Non-members – R500
3. There is Honey in the Forest (History book):
  - a. Members – R100
  - b. Non-Members – R150

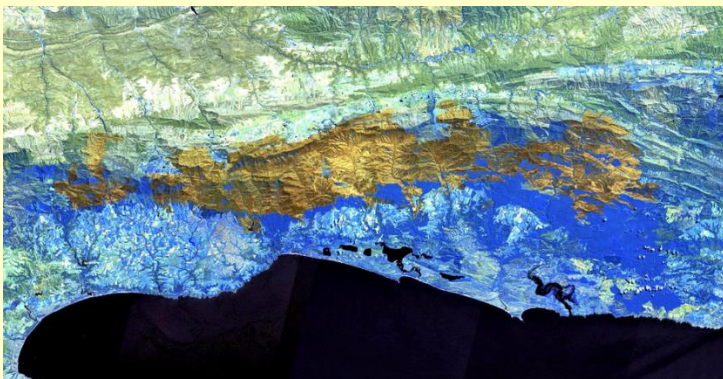


## “Land of Smoke and Fire”: Reflections on the Southern Cape and Tsitsikamma Wildfire disaster (Part 1)

Adapted from original article written by Theo Stehle which appeared in SA Forestry Magazine: December 2018

“Land off smoke and fire“ was the term used by early seafarers around the Cape called Outeniqualand and Tsitsikamma, collectively known as the Garden Route. True to this description, the mountain range in this area was ablaze for two weeks from end of October to early November 2018.

At one stage there were six separate fires burning over a distance of  $\pm$  200km between Riversdale in the west and Witelsbos in the Tsitsikamma in the east most of them caused by lightning on the 29th of October 2018. The area burnt, covered an area of approximately 100,000 ha and was recorded as the most extensive wildfire since the famous Great Fire of 1869. In its path , it burnt fynbos, indigenous forest, commercial forestry plantations , transformed areas as well as infrastructure. The fire claimed nine lives (8 in one forestry village) and destroyed a sawmill and several other structures. The burn-scar showing the extent of the Oct/Nov. 2018 Garden Route Fires with burnt areas shown in gold, is shown in the image below



### Weather conditions prior to the fire

The Garden Route experienced a prolonged period of below average rainfall which also played a major role in the June 2017 Knysna and adjacent fires. Periods of good rainfall were interspersed with very hot, dry and windy conditions and rather erratic weather patterns. A late winter with substantial snow-falls in September extended into October and was followed by a heat wave late October with temperatures as high as 40°C measured in Knysna late October and strong bergwinds experienced. The table was therefore set for a disaster to happen.

Some of the fires were started by humans and several by lightning on or around the 29th of October 2018. One of the issues which complicated matters were the fire on the 22nd of October 2018 in the Vermaaklikheid area near Heidelberg which destroyed seven houses and lead to the death of an experienced helicopter pilot

Nico Heyns and the WOF Huey helicopter which he flew. At the time that the so-called Herold fire started on 23rd of October , most of the Garden Route resources were still tied up fighting the Heidelberg fire.

### Poor Land Management

The MTO Exit Lease has been in progress since 2000 with a total of 45,000 ha commercial plantation in the Western Cape Province to be decommissioned from forestry over a period of 20 years. As a result of unresolved issues all land withdrawn from forestry to the west of the Touw River has been handed back to DAFF who can be described as “an absentee landowner” over the past 18 years. This resulted in large portions of land having become overgrown with jungles of fynbos and invasive alien vegetation. This certainly contributed directly to the intensity and uncontrollable spread of the fires experienced at Jonkersberg, Witfontein and Bergplaas. The fire which started outside Herold spread into the Outeniqua Nature Reserve across Cradock and George peaks and from there to DAFF managed Witfontein Plantation which has been mismanaged for more than a decade. Despite sincere efforts by the Incident Management (Command) Team to stop the fire with counter-fires before it entered Witfontein, the fire spread rapidly and posed a direct threat to adjacent residential areas. The fire only stopped before it entered thanks to a miraculous 180° turn in the wind direction when residents already started evacuating. Visions of a ‘second Knysna’ (2017 fires) were already evident but thankfully not a single house in the George residential areas burnt down.

### Damage to the Forestry and Forest Products Industry

Damage caused by the series of fires in October and November 2018 to State Forestry Plantations managed under Lease Agreement by MTO Forestry (Pty) Ltd{MTO}, amounted to 6,800ha Exit Plantation of which  $\pm$ 3,000 ha was standing timber as well as a further 3,700ha in the Tsitsikamma under Sustainable Lease Agreement of which 1,000ha is too young to be salvaged.

Other commercial forestry industry operations affected include the total destruction of the Geelhoutvlei Timbers Sawmill near Karatara which directly resulted in the retrenchment of 400 people employed by Geelhoutvlei. The much needed processing capacity (60,000– 70,000 m<sup>3</sup>) of Geelhoutvlei Timbers for processing of burnt timber (continued on page 5)

## Hunting for jewels in 2019

By Rob Thompson

This past December saw my daughter getting married in the small Karoo town of Prince Albert.

A perfect setting given the backdrop of the spectacular Swartberg mountain range, the close proximity of the breathtakingly scenic Swartberg Pass cutting through the range, and kilometre upon kilometre of wide open, arid Karoo plains, sustaining a surprisingly vast array of specialised and endemic plants and wildlife. Her choice of location was really pleasing to us as a family and symbolised the culmination of many years of exploring the arid regions of this wonderful country and discovering memorable jewels in the most unexpected of places.

Many of the guests attending the ceremony were city slickers and not familiar with the Karoo at all, barring their misguided perception of endless hours of boring barrenness on route to the Cape coastal areas during holiday trips. We arranged a shuttle service (read: mini-bus) for guests from the town to the guest farm situated further afield thereby saving them and their low slung vehicles and soccer-Mom 4X4's the trauma of venturing on a gravel road. Incredulous expressions of doubt were received on our request that they leave their own vehicles parked in the street until collection in the early morning hours. Translating these expressions into words one came up with a range of options all with similar theme: "Will it still be there when we get back?" "Jirre...They're mad...I spent a lot of money on this car." "Not a car guard in sight...eish! Hiding to nowhere!"

The allure of free cold refreshments and Karoo lamb shanks eventually convinced them to take the bold step to leave cars unattended and venture forth into terrain uncharted. The venue was a working sheep farm run also as a guest farm, oozing with old world charm and hospitality. The ceremony was conducted outside with a vista of the fields, ubiquitous windpumps and what is commonly referred to in the Karoo as a 'Big Sky'. The intimacy of the ceremony aside, what was particularly interesting was the reaction of many of the guests to the environment in which they now found themselves. Clearly the Karoo was delivering splendour that they had never anticipated and for many, never previously experienced.

The never ending evening with its subtle lighting and golden hue thrown across the landscape had everyone out with their cell phone cameras. It appeared as well as if 'selfies at windpumps' is a thing with everyone keenly participating in that specialised event. The reception being

held in a semi outdoors facility was the perfect setting to witness the onset of darkness and the emergence of the untainted celestial wonder of the Karoo night sky. Guests were regularly seen individually or in small groups, slipping off to stare up at the sky in silence and I certainly believe in reverence. Others slipped off no doubt for reasons beyond the scope and parameters of this newsletter but doubtlessly all memories made on that night were made permanent given the sublime environment.

A high pitched screech provided a clue that a guest may have encountered a Karoo Koringkriek (Armoured cricket) out on its nocturnal perambulation. A group forms around the creature and the conversation ensuing just cannot be made up. "Bliksem!" "That thing comes from District 9." "I hear they're poisonous and can spray you." "Anyone got a 9 mill handy?"... City slickers doing what they do best!

And then it was time for main course. For any reader who has not yet tasted Karoo lamb shank, I can tell you with authority that you have not yet lived. Do yourself the favour and plan a trip with the goal of encountering and consuming this signature South African delicacy. Abundant Karoo fynbos provides the herbaceous grazing that sustains the local livestock imparting to them a unique and simply delicious flavour. Any description does not do that flavour justice. You simply have to try it yourself. Interesting enough however there were no comments forthcoming from the guest contingent...they were all too focussed on eating.

With the party ending in the wee hours, the shuttle headed back to town where to the astonishment of the passengers they all discovered that they were still bona fide car owners and not insurance claimants. "Hey, my car's still there...and its after midnight!" "This isn't Joeys hey?" "...and I don't have to pay a car guard!"

So ended a wonderful adventure in the Karoo. I share these snippets with fellow forestry practitioners in this newsletter, particularly as we enter 2019. There are jewels to be found all over...yes... even in the cities. We just need to look for them and for that matter actually recognise some of the things we find, as being jewels. In the type of work that we do we are perhaps more fortunate than most in that jewels are likely to be found quite frequently.

Once having found them your challenge is to nurture and share them, thereby opening the eyes of others to the wonders that are there for the taking.

Have a wonderful year.

“Land of Smoke and Fire”: Reflections (Continued from pg 3).

has also been lost during the fire. Apart from their Sawmill, Geelhoutvlei as well as PG Bison and Geo Parkes also suffered damage to their plantations in the Hooggekraal, Rheenendal and Karatara area. The photo below (courtesy of B du Preez) shows the remains of the burnt down Geelhoutvlei Sawmill near Karatara.



The major concern though is the cumulative effect of the plantation damage (estimated 15,000 ha) caused by the 2017 fires combined with the 2018 fires ( $\pm 7,000$  ha) together with the conclusion of the Exit Program (no replanting of these areas) and the implications for the forest and forest products industry in the Southern Cape.

The Timber industry is clearly at the crossroads following the recent fires and it is still unclear what will happen with the  $\pm 22,000$  ha so-called Vecon Areas which were due to be replanted in terms of the government's partial Exit reversal decision taken in 2008 which was verified by the then State President Mr. Thabo Mbeki. This will be further discussed in a follow-up article.

### Climate change and what the future holds

This issue is commonly discussed and referred to by several industries and whether one agrees with the issue of climate change or would rather ascribe it to long-term cycles similar to 1 in 50 and 1 in 100 year floods, the weather patterns have been rather erratic over the past few years. The occurrence of more severe weather events is becoming more frequent and although rainfall figures do not necessarily show it, the distribution of rainfall

has changed over the last few decades with severe storms followed by prolonged dry periods compared to a few days of continuous soft soaking rains. These weather patterns would have a direct impact on groundwater, water tables and fuel moisture which partially explains why large portions of indigenous forest which unlike fynbos is not regarded as a fire climax vegetation, did burn severely during these fires.

The severe fire behaviour witnessed during veldfires over the past 2–3 years in the Western and Southern Cape is certainly not unique as similar conditions and devastating fires were experienced in places like California, Greece and Portugal often setting new records as far as size and severity of fires are concerned. The question can therefore be asked: “Do these events represent the new normal and what can be expected in future ? “

These and other issues will be further discussed in Part 2 of this article. The photo below shows the fire damage at Bergplaas with severe scorching of Indigenous Forest clearly visible (Photo by Piet van Zyl).



### Upcoming events

- 10–12 April 2019. Focus on Forestry Conference 2019. White River. CMO and Nelson Mandela University. See <http://www.cmogroup.net/cm-conferencing/>

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## January 2019 birthdays



03-Jan	BALLANTYNE J.R.	18-Jan	ERWEE J.J.
06-Jan	MORTIMER J.H.	18-Jan	LÄNGIN D.
08-Jan	KOTZE W.	19-Jan	RUTHERFOORD C.L.
08-Jan	KRUGER P.	20-Jan	ADE E,C.L.
08-Jan	ROOTHMAN D.	21-Jan	DYER S.T.
09-Jan	NORRIS C.H.	21-Jan	LANE D.
10-Jan	SWAIN T.	21-Jan	SEELE C.A.
11-Jan	BADENHORST J.E.F.	24-Jan	BURNHAMS G.W.
11-Jan	ODELL P.	25-Jan	SCRIBA J.H.
12-Jan	DOBSON D.	25-Jan	VAN VUGT L.
12-Jan	VERSFELD D.B.	25-Jan	VAN ZYL L.
13-Jan	VON BUDDENBROCK P.E.	26-Jan	MULLER R.B.
15-Jan	MALAN F.S.	30-Jan	MKWALO A.C.
16-Jan	DROOMER A.E.P.	30-Jan	TRUTER P.J.
16-Jan	HOOGHMSTRA G.	31-Jan	LIVERSAGE R.T.
17-Jan	CUNNINGHAM L.R.	31-Jan	SWART J.N.