

KRUGER2CANYON

NEWS

December 2023

The Farm House, R527, Zandspruit, Hoedspruit, Limpopo email: editor@kruger2canyon.co.za



have a wonderful festive season and a happy new year



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RENT



From the editors desk



We are finally here! Holidays, and Christmas and New Year all in one!

Firstly, an apology to Tim Baynham in last month's edition (on scorpions) for mentioning a upcoming series on 'many this poisonous' – that should have read 'many things venomous'! Bush 101 mistake!

Secondly, our thoughts and prayers also go out to all those effected by the 'tornado' in the Essex area – those injured and the farmers that have lost crops. Nature can be a vicious and powerful adversary when it wants.

The hospital

It is also important to find out what's happening with our hospital — which is what we did. The construction of the Hoedspruit Hospital is now well underway, and, despite a few setbacks, overall progress has been steady. The Bulk Earthworks started on 7 June 2023 and building works on 14 August 2023. There are currently 18 management staff and 157 laborers on site.

Inclement weather conditions have impacted on progress with 13 rain days between 27 September and 21 November. There were also 13 days of excessive heat between 4 October and 23 November with a high of 46 degrees recorded on 21 October.

Key appointments have now been made for electrical installation, structural steel, plumbing, mini substations and roof sheeting. Domestic subcontractors were appointed for formwork, sundry metalworks, steel door frames and timber doors. Appointments are still pending for medical gas, air-conditioning, aluminium doors and windows, and mechanical.

Despite some delays and challenges, the construction of the Hoedspruit Hospital is progressing very well and still on track for hand-over by 31 July 2024. Vigilant management, strategic recovery plans, and ongoing communication and liaison with subcontractors have been crucial and will continue to ensure project progress and success.

Ambulance Initiative

A CPF initiative has been actioned following on an incident (suspected heart attack) of a resident in Hoedspruit needing to be transported urgently to Nelspruit by ambulance and no ambulance being available. Discussions will be taking place on having an ambulance depot being established in Hoedspruit. This would conveniently fall in with the new hospital being opened, and

ensure that the town has enough ambulances to cope with potential demand. We look forward to following up on this proactive initiative by the CPF.

Justice

Good news on the conservation front — three poachers were sentenced in the Skukuza Regional Court on 6 December to an effective six to eight years for rhino poaching related criminal activities. They were arrested in 2017 in the Kruger Park driving a hired vehicle that upon inspection contained a high calibre hunting rifle, ammunition, and backpacks of food. A fourth suspect was sentenced back in August 2023. Happy to see the wheels of justice turning, albeit slowly.

Hoedspruit – a provincial winner!

On a happy and proud note – Hoedspruit emerged as the provincial winner for the best small town in Limpopo to visit in a Daily Maverick 'survey'. Hoedspruit was noted for its community spirit, safari, activities, and plain natural beauty. Well done to the 'Hoed'!

So, as we get that end-of-year spirit up and running, we at the Kruger2Canyon News ask that you all be vigilant and safe over this time, and we look forward to 2024 and what the year brings.

Happy Christmas and happy New Year to all!



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Birds eye view of the new hospital construction site (left) and the interior of one of the buildings (above)

Images supplied



Trivia questions

- 1. What fashion did Gen Ambrose Burnside start in the American Civil War?
- 2. In what village do Tom Sawyer and Huckleberry Finn live?
- 3. What opera's story is about a female cigar factory worker?
- 4. 'E' is the international car registration plate for which country?
- 5. USA has most roads, what country has second most?
- 6. In the Chinese calendar what year follows monkey?
- 7. What river flows through/borders nine countries and four capitals?
- 8. What does the word 'desert' (from latin desertus) translate as?9. In August of 1861, The Times carried the world's first what?
- 10. What is a kakapo?
- 11. Part of the human body can expand 20 times its resting size?
- 12. In the 1920s Dr Ida Rolf developed 'rolfing' as what alternative therapy?
- 13. Which dinosaurs name translates as speedy predator?
- 14. The price of 1kg went from USD63 to USD260 in 1976 when sale of what became illegal?

- 15. The island of Yap has the world's largest what?
- 16. Which tennis player was sued by his fan club?
- 17. What is a chemically castrated cock called?
- 18. Nessus's poisoned blood killed Hercules what was Nessus?
- 19. Eva Shain was the first woman to do what?
- 20. Ben Franklin 'suggested' it Britain tried it in 1916 what was it?
- 21. In which country is Mount Aspiring National Park?
- 22. Herbert Spencer coined which phrase, wrongly attributed to Darwin?
- 23. What country's days include Fire Day, Water Day and Wood Day?
- 24. What city has the longest metro system?
- 25. Yoga (the meditation) is a Sanskrit word meaning what?
- 26. What was invented 1903 patented 1906 G C Beilder?
- 27. Which Sci-Fi author invented the idea of the communication satellite?
- 28. What country consumes the most coal each year?
- 29. What was Hebe the goddess of?
- 30. What would an anemometer measure? Answers on page 12





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CAMPING TRAILER RENTALS

Contact Pam: 083 3062434 www.trailpac.co.za LEAD STORY December 2023 Kruger2Canyon News

Wildlife economies have power to extend Africa's biodiversity conservation and help curb climate change



According to the authors, conventional protected areas are unlikely to conserve the land area necessary to curb the extinction of plants and animals, and secure the ecosystem services. Photos: Unsplash / Nadine Venter | Janine Joles | EPA / Nic Bothma

Francis Vorhies, Hayley Clements and Wiseman Ndlovu

Sustainable use of wild meat value chains contributes to carbon sequestration and local climate regulation. Wildlife economies have more diverse revenue streams than conventional agriculture. Boosting wild meat consumption will help rewilding and restoring landscapes.

Conventional protected areas are unlikely to conserve the land area necessary to curb the extinction of plants and animals and secure the ecosystem services on which millions of people across Africa depend. Different nature-friendly wildlife enterprises are one way in which this footprint can be extended to achieve conservation outcomes and mitigate climate impact.

One of the objectives at COP28 was how to implement the 30×30 target to tackle climate change, which represents the commitment of governments to conserve, protect, and restore at least 30% of the planet's land and ocean by 2030.

The Africa chapter of the latest report of the Intergovernmental Panel on Climate Change highlights the significance of ecosystem services to African people and the risks presented by climate change. For example, based on a fossil-fuel development scenario, 1.2 billion African people are predicted to be negatively affected by water pollution due to reduced water quality regulation by ecosystems; 27 million by reduced coastal risk mitigation by ecosystems and 1.5 billion by lost crop production due to reduced wild pollinators. The number of people negatively affected by diminished ecosystem services reduces to 0.4 billion, 22 million and 0.7 billion respectively under a sustainable development scenario.

Conserving Africa's biodiversity and the ecosystem services it provides should therefore be central to climate change responses, given the high dependence of people on these services.

Research shows that there will be reduced species representation in African protected areas due to climate-induced range shifts, with range shifts impeded by increasing land transformation and fencing. Research further predicts that conserving 30% of sub-Saharan Africa's land area could reduce aggregate extinction risk of plants and vertebrates across the continent by up to 68.6%. Conventional protected areas are unlikely to meet this 30% goal, given resource constraints of African governments and the importance of access to land and its resources for sustainable livelihoods.

Wildlife economies

Africa needs to increase the extent of conserved ecosystems to mitigate biodiversity loss under climate change and needs complementary conservation strategies to mitigate the effects of climate change on biodiversity. Wildlife economies present one such strategy — increasing the extent of conserved ecosystems and their connectivity, while also contributing to livelihoods and food security through sustainable wildlife use (hunting, harvesting, meat) and tourism.

Ecosystem-Based Adaptation interventions comprise a third of all nationally determined contributions in Africa. Such interventions can promote both climate change mitigation and adaptation simultaneously.

Wildlife economies are one example of such an intervention, since they:

- have been shown to be more viable than livestock in low rainfall areas (which span much of Africa's open ecosystems), particularly under cli-
- mate change; andcan increase soil carbon sequestration through rewilding.

African Wildlife Economy Institute (AWEI) research also shows that wildlife economies have more diverse revenue streams than conventional agriculture which builds their resilience to disturbance and change.



Giraffe populations have declined by 40% in the last 30 years, and there are now fewer than 70,000 mature individuals left in the wild. Photo: Simon Marks / Bloomberg via Getty Images

Policy changes in South Africa will accelerate the prospects of success for such interventions. A newly gazetted game meat strategy paper is set to transform and formalise the game meat industry, enabling big retail outlets to put more wildlife meat on shelves. At the moment only about 10% of game meat is formally marketed through retail outlets.

The strategy paper says it aims "to create a formalised game meat industry and achieve economies of scale necessary for commercial ventures based on game meat production, harvesting, distribution and marketing".

Restoring landscapes

The AWEI (African Wildlife Economy Institute) at Stellenbosch University is promoting wildlife economies to restore/rewild and conserve African landscapes. This includes developing wild meat value chains, liberalising intra-African trade in wild meat, and providing decision support tools for developing viable wildlife enterprises. Further, there are opportunities to align biodiversity conservation, climate responses, and livelihoods in developing Africa's 'blue economy' including ocean-based climate change mitigation.

AWEI research supports the argument that commercial interests and scaling of wild meat consumption present a unique opportunity for rewilding and restoring landscapes. Thus, sustainable use of wild meat translates to the protection and expansion of wildlife habitats with triple effects on biodiversity (e.g., reintroduction of insects, vegetation, well-managed landscapes in care of animal habitats, etc.).

This supports the decision on sustainable wildlife management adopted at COP14, and supports using voluntary guidance for a sustainable wild meat sector. It also seeks to promote the sustainability of supply at the source, managing the demand along the entire value chain, and creating the enabling conditions for legal, sustainable management of terrestrial wild meat in tropical and sub-

tropical habitats.

Developing a sustainable use of wild meat value chains across the continent is a game changer as it contributes to not only land-scape restoration but also helps mitigate climate impact through carbon sequestration, local climate regulation and improved water management.

In this regard, AWEI's approach to sustainable use as an area-based conservation measure offers a pathway to implementing landscape-based climate responses in support of both UN Framework Convention on Climate Change and Convention on Biological Diversity objectives.

This includes the recently launched Global Biodiversity Framework and, notably, its target to: "Minimise the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimising negative and fostering positive impacts of climate action on biodiversity."

In line with COP28's core theme, of "investing in climate solutions by committing and investments in nature-positive projects, policies and practices" AWEI research opens doors for identifying investment options that support successful scaling of different nature friendly wildlife enterprises to achieve conservation outcomes and mitigate climate impact.

Dr Francis Vorhies is the Director and Co-Founder of AWEI.

Dr Hayley Clements is Senior Researcher at Stellenbosch University and University of Helsinki, and a Research Chair at AWEI.

Dr Wiseman Ndlovu is a postdoctoral research fellow at AWEI at Stellenbosch University.

This article was previously published in the Daily Maverick – Our Burning Planet.



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The lack of mathematical proficiency in our society today-a counter-cyclical twist in this struggle offers hope

An ingenious mathematical game based on dominoes has been created and developed here in Hoedspruit by Thias Taute. This game will surely help bridge that gap for individuals, taking them from borderline mathematical illiteracy to mathematical proficiency - sorely needed in a country where almost 50% of learners are failing mathematics in Grade 12. Kruger-2Canyon News reports, and is the proud media sponsor of this initiative.

Achievement in mathematics in South Africa has been of massive concern for the last 25 years. Various articles discuss this matter, and multiple international assessments place South Africa amongst the worst-performing countries in the world. Our own National Senior Certificate results indicate a system failing to educate the learners successfully in the basics of mathematics, with a significant fallout of around 50% between Grades 1 and 12. A minimal number of learners achieve a competitive pass in mathematics at the end of their school career. Sadly, of the 10% of all matriculants who take mathematics, even with the significant fallout and a below-average pass rate of 30%, 50% of all the learners do not pass mathematics in Grade 12!

Experiences in education and training as a science and mathematics teacher, headmaster and adult trainer, gave Taute an insight into the disempowering nature of struggling with numbers. This extended from learners who could not count and do basic arithmetic, which leads to a lack of confidence and motivation to learn, to very limited career opportunities after school, to people who could not and cannot prevent their exploitation in a shop or business deal because of an inability to make basic calculations. Many parents who want the best for their children cannot assist them because they do not have basic number skills. This is a daily experience for many, and it is what inspired and continues to inspire Taute to find a solution to deal with this lack of mathematical proficiency in our country! The DG Murray Trust website's (https://







Domino	The game	Answer
• • • • • •	dotta	10 and 5
	adda	15
	mina	5
• •	multa	50
• •	diva	0.5
	perca	50%
	fracta	1/2

The basics of numiknow™ games are the numbers presented by the dots on a domino These numbers can be used in basic mathematical operations (with fun names), to mentally calculate an answer.

dgmt.co.za/) description of solutions for these complex and persisting problems is thought-provoking:

"Most South Africans are stuck in an inequality trap, with wealth concentrated in the hands of a few. Most are stuck in intergenerational loops of exclusion with few chances to escape. Breaking this cycle requires a fundamental change in life trajectories. Think of a Möbius strip – just one twist in the circle allows you to trace a completely different pattern.Instead of being stuck inside a loop, you emerge on the outside. In the same way, escaping the inequality trap requires a fundamental twist to set South Africa on a new path. These fundamental changes are called counter-cyclical twists, and they create an escape route out of the inequality trap."

numiknow™ is trying to be one of the 'counter-cyclical twists' for mathematical proficiency. The whole concept is based on dominoes, as an interactive and motivating compendium of games that enables anyone struggling with numbers to develop mathematical proficiency enjoyably.

The Hoedspruit Hub (HH) and Kruger to Canyons Biosphere Region (K2CBR) got the opportunity to participate, under the umbrella of the Greater Stellenbosch Development Trust, in a project funded by The Social Employment Fund that is part of the Presidential Employment Stimulus. The aim of this fund is to support organisations that create work serving the common good in the community.

Work packages comprised numiknow™ clubs, environmental clubs, environmental monitoring, and supporting new and existing food gardens. 330 participants were employed in the project, working in 47 teams in 12 areas between Acornhoek and Sekororo.

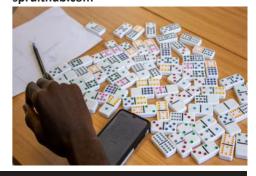
To assess the progress in mathematical proficiency in the numiknow™ clubs, competitions between the participants and learners have been initiated. These will take place at different venues during January, March, and June of 2024.

HH and K2CBR will organise the competitions, the first competition of which will take place at the HH on 15 January 2024. Lowveld Academy and German S. Chiloane Secondary School will host the schools' competitions in March. Area teams will compete in numerous games that will be played.

Spar in Hoedspruit and Acornhoek will provide prize money and printed competition material. Blydevallei Boerdery, Landman Group, and BBI Packers will provide in-season produce as prizes. PostNet will provide limited free and discounted lamination opportunities to material that will be distributed to schools.

Be sure to keep up to date over the next 6 months with the progress of this inspirational and vital project, in further issues of the Kruger2Canyon News.

To contact Thias Taute about numiknow™ you can do so through the Hoedspruit Hub: 079 502 4727 or on email thias@hoedspruithub.com



Veggie Diva's scrumptious veggie burgers



I have made these veggie burgers for many years. At many a burger braai these veggie patties have been hit, even with staunch meat-eaters. Once you find your groove with them you can add different ingredients, chickpeas work well as a replacement to the black beans. You can also add peppers, sweat potatoes and even cheese. Enjoy creating you own signature burgers. This recipe makes 8 - 10 burger patties

- 1 x small butternut grated
- 3 4 courgettes grated
- 1 x tin black beans 1/3 lightly mashed.
- 1 x garlic clove crushed
- 2 x tsp garam masala
- 1 x tsp smoked paprika

1/3 cup chickpea flour Handful chopped parsley

Salt and black pepper

Olive oil for frying Hamburger rolls

Toppings, eg: mayonnaise, thinly sliced onions, cheese, sliced tomatoes, avocados, chilli, etc. Combine all the ingredients. Keep turning the mixture to ensure the ingredients are well mixed. The moisture from the courgettes will start to combine with the chickpea flour and this will bind the patties together.

Allow to rest for 15 minutes. Prepare your rolls and favourite burger toppings.

Form patties using your hands, compress the mixture fairly tightly, and shape to a flat patty about 1 ½ cm thick.

Gently fry the burgers both sides on a medium heat. Don't cook them to quickly as the veg needs to cook right through.

Once golden brown, pop onto your roll and add your toppings. Cooked patties keep really well in the fridge for a few days.

CENTURY 21 Wildlife - Hoedspruit

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CENTURY 21

Wildlife



N'TSIRI, GREATER KRUGER, R 5 500 000 Beds 3 | Bath 2 | Floor size: 120 m² BIG 5

50 % Share - This is your perfect bush hide-away! N'tsiri Nature Reserve is a private use, 2 500 hectare Big Five reserve. Here wildlife roam freely across unfenced borders with Kruger National Park. Conduct your own game drives any time, day or night, in an open game viewer.

Yvette Thompson - 083 655 7176 Ref: 2174061



MAFUNYANE, KARONGWE R 12 000 000 Bedrooms 4 | Bathrooms 4 | Traverse: 8,000 ha

This property is stunning and has a wow factor that will take your breath away! Very exclusive, modern bush home, overlooking a seasonal river bed, located in a Big 5 reserve with 8,000 ha traverse. Sold furnished & including game viewer.

Rob Severin - 083 469 3820 Ref: 2107650



RAPTOR'S VIEW WILDLIFE R 5 300 000 Beds 3 | Baths 3.5 | Floor: 396 m² **ESTATE**

Architect-designed home boasting unique character not typically found in Raptors View. Notable features include a new thatch roof, fresh paint, updated light fixtures, and a rentable cottage complete with a bedroom, kitchenette, and bathroom. VAT inclusive, no transfer duty applicable. Michelle Severin - 083 469 3821



NDLOVUMZI

Bedrooms 8 | Bathrooms 8 | Floor size: 480 m²

Set on 21 hectares and overlooking the Olifants River, this property offers four separate residential dwellings, the main unit has two downstairs bedrooms and three on the upper landing. There are three additional chalets, each of these overlooking the Olifants River

Jason Jones - 083 267 4794



INGWELALA. BIG 5 GREATER KRUGER

R 3 300 000 Traverse over 3.000 ha

50 % Share - This classic rondavel unit sleeps 8. It has 2 bedrooms, 2 bathrooms and the enclosed wrap-around veranda accommodates another 4 single beds. The unit is situated on the banks of the seasonal Nhlaralumi river. The open patio, firepit & braai area looks toward the riverbed.

Ref: 2187783 Yvette Thompson - 083 655 7176



NDLOVUMZI

R 4 458 000 Bedrooms 4 | Bathrooms 4 | Floor size: 300 m²

This tranquil home's is situated overlooking the Olifants River and is surrounded by large riverine trees and rocky outcrops. The open plan living, dining and newly fitted kitchen are all under high vaulted ceilings that make this home light and bright and there is also a separate scullery.

Jason Jones - 083 267 4794



BLYDE WILDLIFE ESTATE R 4 324 000 Bedrooms 3 | Bathrooms 3 | Floor size: 360 m

This home is privately situated and overlooks the wilderness area. The layout includes open plan kitchen, living and dining room as well as a separate scullery and a separate laundry. The living area and bedrooms all lead out to the large, covered patio with pool and elevated views.

Ref: 2143428 Jason Jones - 083 267 4794



KHAYA NDLOVU GAME RESERVE, BIG 4

R 3 250 000 Stand size: 1 ha

This beautiful river site is the ideal blank canvas for you to design and build your dream bush home. The stand is set between large riverine trees on the edge of the seasonal Sandspruit river, in the exclusive Khaya Ndlovu, a low density residential reserve with only 35 stands on 1,307 ha

Yvette Thompson - 083 655 7176 Ref: 2154781



MODITLO WILDLIFE ESTATE, R 4 750 000 Beds 3 | Baths 3.5 | Floor size: 325 m²

This modern house boasts luxury and comfort, with top-of-the-line finishes. Exceptional indoor and outdoor entertaining areas. The outdoor space features a covered patio with built-in braai, a pool and a low maintenance garden, perfect for relaxation and enjoying the outdoor lifestyle.

Yvette Thompson - 083 655 7176



ZANDSPRUIT VALLEY R 1980 000 Bedrooms 2 | Bathroom 1 | Floor size: 211 m²

This brand-new property is light and bright with beautiful features and a lot of extras. The open plan living area comprises lounge and kitchen. The area is light and the kitchen is a comfortable size with additional cupboards, island, oven with gas stove top; and quartz white counter tops.

Michelle Severin - 083 469 3821 Ref: 2204346



SELF-CATERING GUEST R 5 690 000 HOUSE, HOEDSPRUIT Beds 7 | Baths 7

The owner's home has a kitchen, family room and private braai area. 6 Guest bedrooms are located around a central pool area and surrounded by an established garden. A communal lapa provides braai and kitchen facilities for the guests. The sale includes all fittings & furniture for guest house.

Colleen Berrange - 083 468 2338



RAPTOR'S VIEW WILDLIFE R 3 750 000 **ESTATE** Beds 6 | Baths 4 | Floor size: 375 m²

This large property comprises the original 3bedroom home plus a newer, more modern extension. It is well located, deep in the estate in a private and quiet location. The property is completed by an additional outside room (study). patio, covered stoep, carport and storeroom.

Michelle Severin - 083 469 3821 Ref: 2195898



COMMERCIAL LODGE R 11 000 000 Beds 8 | Baths 8 | Floor: 980 m2 | Land size: 21 ha

This lodge consists of a main owner's house, central lodge area and 5 luxury treetop chalets. Sold as a going concern; this lodge has bounced back after Covid and has great potential. There are future bookings and well-trained staff. Movable items and furniture included, as well as a bakkie.

Ref- 2160187 Rob Severin - 083 469 3820



KARONGWE - BIG 5 R 7 495 000 Bedrooms 4 | Bathrooms 4 | Traverse: 8,000 ha

Be one of 14 private owners within Karongwe Nature Reserve, which offers pristine game viewing with 4 seasonal river systems. The home is situated on a dry riverbed and comes fully furnished. A Harvey tile roof for lower maintenance costs. Low reserve levies.

Rob Severin - 083 469 3820 Ref: 2063307



RAPTOR'S VIEW WILDLIFE Beds 4 | Baths 3 | Floor size: 427 m²

Large family home ideally located within the estate. The modern open plan living area leads out to a covered entertainment area with patio, pool & boma from where you can enjoy the mountain view. There is also a 2-bedroom cottage which is currently rented out for R11,000 per month.

Ref- 2176826 Michelle Severin - 083 469 3821



MAHLATHINI RESERVE, R 4 500 000 PHALABORWA Beds 3 | Baths 3 | Floor: 479 m²

This stunning home on a full title 21 ha stand is located adjacent to the Kruger National Park and is surrounded by beautiful bushveld, various plains game, eland, ostriches and the occasional elephants. Ideal to be used as a holiday home or for permanent living.

Colleen Berrange - 083 468 2338

A WORLDWIDE LEADER IN REAL ESTATE

December 2023 Kruger2Canyon News NATURE & Al

The olive lesser-thicktail scorpion (Uroplectes olivaceus)



The olive lesser-thicktail scorpion

Tim Baynham Wildlife Safety Solutions

In this week's venomous creature feature we are sticking with the scorpions. Being the summer months, and after getting some recent rain the scorpions have been active. I have been receiving almost daily requests for identifications, as well as get-

ting regular reports of people being stung, so be sure to read to the end of this article for some useful tips on how to reduce your risk of being stung.

In this article we will have a closer look at the olive lesser-thicktail scorpion. A species that it seems is often mistaken for

the highly venomous Transvaal thicktail scorpion due to its colouration and relatively thick tail. They are also very similar in appearance to the golden-green, lesser thicktail scorpion (*Uroplectes flavoviridis*) and these two species can be very difficult to distinguish apart from each other.

Olive lesser-thicktail scorpions are small scorpions that average about 5cm in length with the tail extended. The body colouration varies from black to bluish black. The legs and pincers are banded with light yellow to orange bands. The tips of the pincers and the legs joints are usually yellow to orange in colour.

This species occurs in the far north-eastern part of South Africa, throughout the Lowveld, extending into south-eastern Zimbabwe and into southern Mozambique. They are not that discerning when it comes to choosing a shelter and may be found under any manner of available surface debris such as rocks, leaf litter, loose bark and building materials. They are known to find their way into shoes, clothing, and bedding. Consequently, they are responsible for a fair number of envenomations each year. Fortunately, although they have a painful sting, it is not considered medically significant and stings are treated symptomatically.

Interestingly

Scorpions are very interesting creatures. Most southern African scorpion species have eight eyes - two median eyes and two groups of three lateral eyes located at the front corners of the carapace. Scorpions do not have lungs like mammals. Instead, they have four pairs of book lungs, so named because they resemble the pages in a book. During courtship behaviour males may manoeuvre the female 25m or more. After mating the male departs or is sometimes eaten by the female. Gestation periods vary from just a few months to up

to as much as 18 months in some species! The young stay with the female up until their first moult. She carries them around on her back and can be very defensive of her young.

Reducing your risk of being stung

Always use a torch when walking around at night and wear closed shoes. Shake out shoes before putting them on, particularly if they have been left outside for any length of time. Always be conscious of where you are placing your hands. Whether it is grabbing some wood off the wood pile for your Friday afternoon braai, or moving those storage boxes in the garage, wearing gloves when performing these kinds of tasks will offer an additional layer of protection. Remember to shake out any items of clothing, towels, bags or any other kind of materials that may have been left lying on the ground. Keep doors and screen doors closed particularly at night to prevent scorpions from entering your home. There are often gaps under doors and it is very beneficial to fit aluminium door seals (draft stoppers) with the rubber strip to prevent scorpions and snakes from entering under the door. We live in an area where many homes and lodges have outdoor entertainment areas. It is advisable to always check patio furniture thoroughly before use.

For more information on venomous animals, awareness training and talks as well as a professional 24hrs problem snake rescue service, contact the author at Wildlife Safety Solutions: 073 934 6156; info@wildlifesafetysolutions.co.za; www. wildlifesafetysolutions.co.za.

The invisible threat: How global warming stealthily alters our daily lives

Image supplied

Al perspective 'correspondent'

In the relentless dance between humans and nature, global warming has emerged as an ominous partner, reshaping the contours of our everyday existence. While its impact may not always be immediately visible, the tendrils of climate change subtly weave into the fabric of our lives, altering landscapes, economies, and the very air we breathe.

One of the most tangible manifestations of global warming is the shifting weather patterns that disrupt our daily routines. Extreme heatwaves, once rare occurrences, are becoming more commonplace, testing the limits of our infrastructure, and pushing energy demands to unprecedented levels. For many, air conditioning is no longer a luxury but a survival necessity. The agricultural sector, too, faces the brunt as changing temperatures disrupt traditional growing seasons, affecting the availability and cost of the food on our tables.

Rising sea levels, fuelled by the melting polar ice caps, threaten coastal communities worldwide. Inhabitants of low-lying regions are confronted with the reality of relocation, as their homes are gradually engulfed by encroaching waters. Displacement not only fractures communities but also imposes economic burdens as governments grapple with the costs of resettle-

 $ment\ and\ rebuilding\ infrastructure.$

Global warming isn't confined to the outskirts of our cities or distant landscapes; it seeps into our urban spaces. Urban heat islands, characterized by significantly higher temperatures in densely populated areas, intensify the impact of heatwaves. Pavements, buildings, and concrete surfaces absorb and radiate heat, turning our once-cool neighbourhoods into veritable hotspots. The consequences are felt acutely by vulnerable populations, especially the elderly and those with pre-existing health conditions, as heat-related illnesses surge.

Beyond the physical realm, global warming plays a covert role in altering our economies. Industries reliant on stable climate conditions, such as agriculture, fisheries, and tourism, face unprecedented challenges. Unpredictable weather events disrupt supply chains, leading to shortages and price volatility. The loss of biodiversity, driven in part by climate change, imperils ecosystems, diminishing the resources we rely on for medicines, food, and livelihoods.

However, amidst the challenges, there is a glimmer of hope. The growing awareness of global warming has spurred a collective call to action. Governments, businesses, and individuals are increasingly embracing sustainable practices and renewable energy sources. From electric vehicles to eco-

friendly initiatives, the global community is beginning to recognize the urgency of mitigating the impacts of climate change.

In the face of this invisible threat, it is imperative that we confront the reality of global warming and act collectively to

safeguard our planet. Our daily lives, intricately connected to the delicate balance of the environment, depend on our ability to adapt, innovate, and forge a sustainable path forward.

Credit: ChatGPT, chat.openai.com



NATURE December 2023 Kruger2Canyon News

The Night Adders



Snouted night adder (above and above right)

Luke Kemp African Snakebite Institute

There are two species of night adders in southern Africa, the common or rhombic night adder (*Causus rhombeatus*) and the snouted night adder (*Causus defilippii*).

The common or rhombic night adder is widespread in the grasslands around Mpumalanga and Gauteng, extending into KwaZulu-Natal and along the coast about as far west as Swellendam in the Western Cape. Around Hoedspruit, this species is more restricted to the cooler and forested escarpment of the Mpumalanga Drakensberg and may be found above Kampersrus, Bushbuckridge and Hazeyview to White River. It is the larger of the two night adder species, averaging around 40 - 60cm but may reach a length of around a meter.

In the hotter lowveld areas, the dominant species is the smaller snouted night adder (*Causus defilippii*). This species averages around 20 - 30cm with a maximum length of just over 40cm. The snouted night adder has a characteristic upturned snout that gives it its common name.

Both species are brown to grey in colour with a series of dark blotches down the back and a single "V" marking on the back of the head, which is broader in the snouted night adder. Despite the common name, night adders are usually more active during the day but may be seen active around dusk, especially after hot days.

Night adders are different from typical

adders, like the puff adder, in that they lay eggs instead of giving birth to live young. Anywhere from 3 - 28 small eggs are laid in early summer, usually under a log or rock. The eggs take between 70 - 90 days to hatch depending on temperature — the warmer the temperature, the shorter the development time. The hatchlings measure just over 10cm. Night adders feed predominantly on toads and other frogs, using the strong venom to rapidly immobilize the frog .

Both species are venomous, although not deadly to humans. The venom causes pain and swelling that usually subsides after a few days. The larger common night adder has a greater venom yield and the bites are usually more painful. Bites to small children should be treated in a clinic or hospital.

Bites to dogs may be serious and a handful of deaths have been recorded. Dogs bitten by a night adder should be taken to a vet as soon as possible. Night adders may be common around houses, where they may hide under piles of firewood or garden debris. These snakes may be quite irritable and are quick to bite if accidentally trod on or approached too closely. If you encounter an unwelcomed night adder in your garden or house, you can find a local snake remover on the free ASI SNAKES app the link to which is supplied below.

Check out the website on www.africansnakebiteinstitute.com – get your FREE App on the link http://bit.ly/snakebiteapp

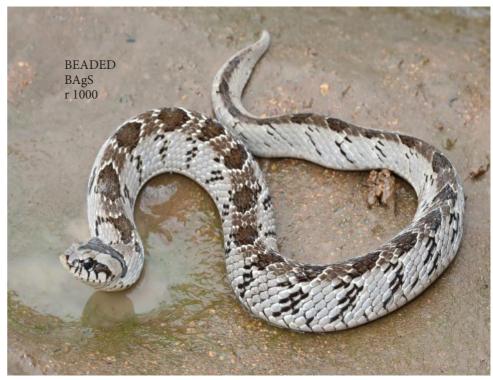


Image: Johan Marais



Common night adder (above and below)

Image :Johan Marais





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December 2023 Kruger2Canyon News NATURE

The enigmatic carrot tree - Steganotaenia araliacea – unravelling the intriguing facts







Steganotaenia araliacea, the Carrot Tree (above left), in full bloom (above) and the flowers that attract many insects and birds Images: Random Harvest Nursery

Warning: brace yourselves for this beauty!

A fairly rare deciduous tree, the carrot tree is indigenous, and is relatively widespread in tropical Africa and is found in Mali, Cameroon and other regions of west Africa, Ethiopia, Somalia, and Eritrea in east Africa and in a variety of locations in southern Africa. This is the only South African species of the genus, as well as the only varietal occurring here.

The name is a misnomer as the tree has nothing to do with carrots! The common name, carrot tree, refers to the strong carrot smell released when any part of the tree, but more particularly the leaves or twigs, are crushed.

It is a small, savannah tree (2m to 6m), variably deciduous, and found on granite and dolerite outcrops, or in very well-drained soils. It has a lovely waxy sheen to its greygreen, peeling, papery bark. The pale green leaves with sharply toothed margins have a hair-like point. The inconspicuous small, tightly bunched, dainty yellow-green flow-

ers, in rounded, compound clusters at the ends of the twigs, appear from August to October, followed by the papery seeds. The wood is soft, pale brown with a pale heartwood and brittle, not highly thought of in timber terms. The tree trunk is reported to have snake deterring activity. Twigs are used in dental care as toothbrushes.

Medicinal usage

This is where it gets very interesting, as this amazing tree is a **multipurpose medicinal plant** and has been widely used in folklore.

An infusion of the plant is strongly emetic (causes vomiting). Various parts of the plant are used to treat pneumonia, asthma, arthritis, chronic ulcer, sore throat, fever, hypotension, wound healing, as a diuretic agent, and other diseases of microbial origin! An essential oil is obtained from the leaves which is used for various purposes.

Starting at the bottom, the roots are used in treating snake bites. Together with the bark, they are used to cure sore throat, and the bark is chewed for fever. A root decoction (boiled liquid extract) is used

to treat several conditions including menstrual problems, malaria, bilharzia, swellings caused by allergies, heart palpitations and gonorrhoea. The whole root as well as the root bark is used in the management of opportunistic infections due to acquired immunodeficiency syndrome (AIDS) and treatment of theileriosis (a bovine parasite) in some communities. Furthermore, the root bark is used for functional psychosis, painful chest conditions, as well as a treatment for anasarca (swelling of the body due to fluid retention).

The stem bark contains many lignans that display activity in a manner similar to colchicine on eleven human tumour cell lines. A decoction, prepared by boiling the bark for one hour, is added to milk and administered orally to adults as a remedy for stomach-ache and dysentery.

The scented leaves are used as vermifuge (expelling parasitic worms), as ophthalmic lotion, and as an anticonvulsant. A leaf decoction can be administered for the treatment of diarrhoea and is also used in the

management of diabetes mellitus in several communities. The decoction obtained from the combination of the leaves and stem bark is used to treat sickle cell anaemia. The leaves and roots are used together for treatment of epilepsy, and leaves are rubbed on wounds as a general disinfectant. Saponins isolated from the leaves have shown antileukemic activity. The odorous leaves are sometimes used for scenting garments.

The seed oil is used for severe diarrhoea (dysentery), indigestion, and intestinal gas.

Various parts of the plant have also been used in the treatment of urinary tract problems including kidney stones, bladder problems, excess uric acid in the urine, and for gout.

Elephants have been known to eat the leaves and bark.

The little-known carrot tree stands as a captivating enigma, beckoning exploration and appreciation. One must stand back and marvel at the wonders of nature, the carrot tree being one of many.

Why do bats not fall when hanging?

themselves so they can, therefore, even sleep without the fear of falling. Normally in animals (there are a few exceptions) the tendons of voluntarily or consciously used, under tension, to close or open a joint, eg: a claw or talon. In bats, however, the tendon connections for the clause on the toes are in voluntary, being activated by the body weight when hanging upside down. Gravity, therefore, does all the work, the body relaxes, and the claws close - and stay closed, so that even if the bat died while hanging, it would stay there until bumped off by another bat or until it rotted off. To fly, the bat needs consciously to 'raise itself' to overcome gravitational tension. It then releases its grip, enabling it to drop and fly. I have often seen bats swaying in the breeze while attached to boots or foliage, some of them not even waking. Bats that use dark, cave like roosts (mostly insect eaters) have small

Bats have special mechanisms in the legs that actually allow them to grab and hold on by relaxing. An effort is needed to release themselves so they can, therefore, even sleep without the fear of falling. Normally in animals (there are a few exceptions) the command sharp claws to grip little indentations in the roof surface. This ability to hang upside down without concentration enables females to tend their young (which cling to the body, covered by the wing) without worrying about falling off.

The legs of bats are too weak to hold their body weight because they have become reduced to save weight as an adaption to flying. Most birds have hollow bones, but have minimal reduction (in most species) of the legs as they need them for perching and walking about in search of food. Bats have followed a different route altogether. Rather than having feathers (which are modified scales that hint at birds' reptilian ancestors), they have developed extensive, but light, membranous wings, have kept the solid bones, but have reduced on the one thing that was not of prime importancetheir legs! 'Cause most bats of feeders of aerial insects that they catch on the wing, they can afford not to have strong legs, and so have adapted their wings (forelimbs) to

have claws (hooks). Because birds have occupied most of the niches for flying, Mets compete by hunting at night (when most birds are in active) and use their foot claws to hang rather than perch. The legs in insect eating varieties are, therefore, rudimentary and not capable of holding the animal's weight if attempting to stand (cumbersome shuffling being the only movement of these limbs). Fruit-eating bats still need some locomotive ability of the legs to aid in clambering around for fruit - but they are nowhere near as agile as birds.

When giving birth, the female pulls herself into more of a horizontal position by means of grabbing the substrate (cave roof or tree) with the claws on the thumb and index finger (in fruit bats) and only the thumb claw (in insect bats). With the heads thought lower than the tail, she gives birth and as the baby slowly falls, it is captured safely by a catch-net of soft skin wing-membranes - principally the large membrane between the 5th finger ('pinkie') and the hind leg, and



assisted by those between the other fingers as well. These membranes, as part of the wing, are usually wrapped around the body at rest. The female now wraps the baby, and protects and holds it close to her body where the baby clings to her fur and pectoral nipples by means of the well-developed foot and wing claws and small hooks on the end of the milk teeth. The female will protect and hold the baby in this manner for a number of weeks until it is weaned. She may carry it around with her while foraging the baby effectively clinging to her without assistance, or it is left in a nursery roost with other babies.

Excerpts from 'Beat about the Bush – Mammals and Birds' by Trevor Carnaby, Published by Jacana Media, Second Edition reprint 2018.





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Christmas Lights





Images: Celestial Events

Ben Coley under the lights (above) and the southern lights (above right)

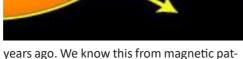
Christmas has always been synonymous with celebration and fanciful decorations such as tinsel and fairy lights. We are used to living rooms and public areas being lit up by these twinkling displays, but this December, the Sun delivered a very rare gift to Earth. A gift that did more than just bring light and joy to a single family, or small community. In early December a stream of supercharged particles erupted form the Sun and slammed into our atmosphere giving us a Christmas light show that literally lit up the skies for most of the globe!

The aurora, also known as the northern and southern lights depending on its locale, is one of nature's most beautiful and aweinspiring sights. People travel thousands of kilometres for the chance to witness and photograph this mysterious, spectacular display of light dancing across the skies. Green ribbons seem to waltz through the atmosphere as if conducted by some great unseen force and, depending on the location and conditions, other colours such as pinks, reds and blues are sometimes invited to join this cosmic shimmering ballet. Similar to the solar eclipse a few months ago, to witness the aurora is a once in a lifetime, and often life-changing experience.

This vibrant cacophony of colour owes its existence to violent geomagnetic storms within the Sun that shoot out streams of highly charged particles across the solar system. These particles crash into Earth's protective bubble, its electro-magnetic field, and are funnelled towards the poles where they interact with the gases in the atmosphere and produce the mesmerising ethereal glimmers that light up the dark-

Since they emanate from the poles, auroras are normally restricted to locations such as Greenland, Iceland, Canada and Scandinavia in the north, and Antarctica, New Zealand, and the southern tip of South America, in the south. However, like all things in nature, the Sun also goes through cycles at around 11-year intervals, with peaks and troughs in its activity levels. The end of 2023 has marked the beginning of the solar maximum, which has brought with it a large increase in the Sun's energy being released and increasing the amount of 'space weather' that we are experiencing. The aurora seen in early December was so strong that it was captured on cameras as far south as Nevada in the USA!

But what causes this cycle? As strange as it may sound, the Sun's magnetic poles flip 180° every 11 years. Yes, that means that if you had a compass on the Sun, the north pole would become the south pole and south pole will become the north pole. Even more strangely, the poles on Earth do the same, albeit on a much longer time scale. On average, this has happened once every 300 000 years in Earth's history, although the last occurrence was 720 000



terns in ancient volcanic rocks.

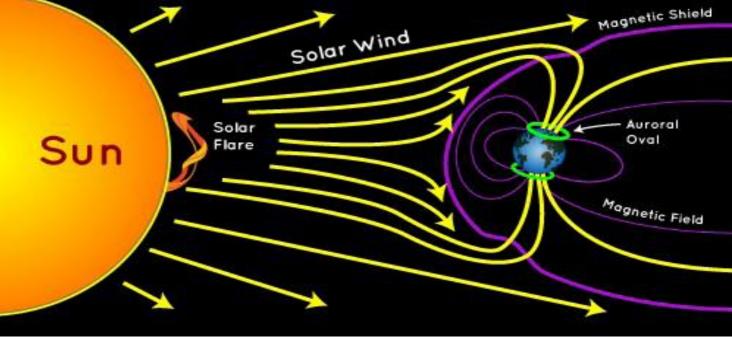
Those of you that monitor such oddities may know that the north pole is currently moving much faster than in previously recorded history, covering an average distance of 48 kms per year since 2020. This recent acceleration has caused some scientists to wonder whether the next flip on Earth has begun.

When the Sun's magnetic field lines perform this flip, they begin to twist and cause cooler areas on the surface known as sunspots. Monitoring sunspot numbers, frequency and location is one of the ways that allow astronomers to track the solar cycle. Sometimes these entangled magnetic fields suddenly release their energy, a bit like a spring uncoiling. This massive burst of electro-magnetic force is known as a coronal mass ejection, or CME, and it is these escaping particles, along with other surface phenomena like solar flares, that arrive at Earth and interact with our atmosphere to produce the aurorae.

These particles do not only interact with our oxygen, however. Sometimes their effect can be much more serious. The arriving geomagnetic energy can affect power grids, telecommunication networks, orbiting satellites and even expose astronauts to dangerous doses of radiation. In 1859 a huge CME slammed into Earth causing auroral displays in equatorial regions such as Cuba and the Bahamas. Known as the Carrington event, it also caused a worldwide telegraph system failure, causing some operators to receive electric shocks and generated sparks that set papers ablaze.

In 1989 a similar CME plunged the entire province of Quebec, Canada, into an electrical blackout that lasted 12 hours.

Despite the rather apocalyptic possibilities, the aurora remains one of the most sought-



Aurora formation (above) and the northern lights (below)

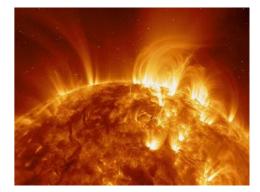
Images: Wikipedia



after natural wonders of the world. There are few things that can rival its magical appearance and one cannot help but watch dumbstruck at its beauty. For anyone hoping to tick off this bucket list experience, it is best to head north, since there are more easily accessible land masses closer to the north pole than to the south. This will allow you to be 'under' the lights and to witness the fanciful dancing display that they are so famous for, as opposed to only seeing them on the horizon, which is the case for the southern lights - unless you fancy a trip to

Solar activity

Image supplied



Spotlight – Megan Smith from The Great Outdoors

December 2023

Spotlight

Megan was fortunate enough to be born into a family that was 'bush mad'. Parents Mike and Glen Heramb ensured that the experience for their children was not the run-of-the-mill Kruger Park holiday every year. Instead, they would pack up their trusted Landrover and head out into the deepest parts of Botswana and Zimbabwe, days from all civilization, and expose their children to the 'real' African experience. Her parents were determined to get her and brother Dale, to see and experience the untouched Africa - for which both are eternally grateful.

Megan fell in love with these wonderful bush experiences, and from an early age it was evident that she wanted to be a nature guide. In 2006 she launched forth, and through The Bush Academy she achieved her first qualification. She did her work placement in the Manyaleti and then moved on to Tinga in the Kruger National Park.

It was there that she met her husband, Tony, and after a few years they were offered a management position in the Thuli block in Botswana. There they spent a few years whilst also exploring opportunities in the Okavango Delta. Although management was a new adventure for Megan, her heart lay in guiding. And then the couples' lives were made whole, with the discovery that Megan was expecting a daughter, Morgan.

For the first year of Morgan's life, the couple lived in a tent, miles away from anyone, but the need for some civilization bore heavily on them. It was a unique mix though, wanting some civilization as well as the bush - and that's

where Hoedspruit came to mind. So, the couple packed their bags and together with Morgan moved to Hoedspruit.

No sooner had they arrived, and the guiding bug had again inextricably bitten Megan. This time was a game changer and she began self-studying through FGASA achieving her professional field guide qualification. But as amazing as the qualification was, there was still an arrow in her quiver that was missing -

Her good friend Wayne Tebrake from Lowveld Trails then introduced her to trails and she was hooked! That 'untouched' bush experience that she had had as a child, came flooding back to her and from that point she was determined to spend the rest of her guiding career on foot. She was fortunate enough to be trained by 'titans' of the industry, Lowveld Trails, and Bruce Lawson. Together they pushed her onto the 'lead' qualification and now she has the 'special knowledge skills - dangerous game' (SKSDG) qualification firmly in her sights. Her determination to push on to that qualification is palpable.

As a freelance guide, Megan now has the privilege to walk on many different properties, offering day walks as well as multiday trails to various lodges. This young woman has progressed with determination and passion and is undoubtedly engrossed in what she loves and does. She is a humble, knowledgeable, focused asset to the guiding industry and has been nominated to be a member of WISE - Women In Safari Excellence.

Megan has the world at her feet and she is clearly walking every passionate step on the way.



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Weather report / forecast 10. **Nocturnal New** Zealand ground

dwelling parrot 11. The stomach

Deep massage Velociraptor 13.

14. Ivory Coins (stone money) up to 4

meters in diameter 16. **Jimmy Connors**

Capon A centaur 18.

19. Judge a heavy weight champi onship boxing match

Daylight saving time 21. **New Zealand**

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23. Japan (Tuesday, Wed Thursday)

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