



KRUGER2CANYON

NEWS

December 2022

The Farm House, R527, Zandspruit, Hoedspruit, Limpopo Tel 078 979 6486 email: editor@kruger2canyon.co.za

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From the editors desk...



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Well can you all believe this – the end of the year is nigh! Happy new year for 2023! Who would have thought that, like a thief in the night, 2023 would creep up on us, and is now upon us! Where did 2022 go?

So much has gone down this year that to list the happenings would require a double page spread – suffice to say that it is now passed, and we look forward to an exciting, happy 2023 ahead of us.

To all our readers, thank you for giving us of your time to read our publication. We hope and trust that you enjoy the content. To

our advertisers, without you and your loyal support, we would not be on the streets on the last Friday of every month – thank you. To our contributors – thank you for contributing and allowing us to publish for gratis. Without you we would not have the quality of content that we have – thank you. To the editorial ‘board’ – thank you for all your input and guidance. I believe that the Kruger2Canyon News is now on another level in terms of newspaper publications in the Lowveld. To my back-office staff – thank you for all your input and hard work in continuing to raise the quality bar of our publication. And then to all those who offer verbal support on an ever-increasing basis – that is what makes this job such fun and rewarding.

This month the Picky View – our food critic – will not be submitting a column as a holiday came upon him/

her/them sooner than expected, and it’s a little difficult to do it from an Indian Ocean Island. Enjoy it now and prepare for a series of contributions in 2023.

Talking of food, our Veggie Diva spoils us in this edition with an across-the-board bunch of recipes that will be enjoyed by many in town and beyond. You have to try it!

Spotlight was also hampered, and not covered, because the subject ran off and got married! We’ll have to catch up with him and the good news next month.

I am also pleased to boast about the fact that two businesses in particular (you know who you are), benefited immensely from advertising in the publication. No names, no pack drill – but since starting advertising these businesses have grown from strength to strength and are now well on their way to becoming very seriously established in

the Hoedspruit community, and all in a relatively short space of time – well done!

The health of our country remains an ever-increasing concern, conservation is struggling on so many levels, and as the article in this publication alludes to, we have to get up and get active! I hope that tourism continues to grow, this will benefit our town hugely. I hope that projects in and around Hoedspruit are considered carefully before actioning, to ensure that we are doing the right thing for the town and not just the right thing politically (and I don’t want to get involved in that)! I believe we should drive to clean up the town next year, try and get all our folk to pull together in the same direction (this clearly is a challenge), and ensure that ‘progress’ does not strip our wonderful town of its character. There is lots of doom and gloom around, but let’s remember where

we live – the paradise that we are so privileged to be part of, and try and make sure that we live life to the full.

What does next year bring for this publication? Well, Kruger2Canyon News has recently embarked into the digital arena, including social media, with a vengeance. It is already bearing fruit and our readership expands every day. This is an exciting field that will continue to be developed over the next half year, to try and get us to a level where we could conceivably compete with many bigger publications in this space. This is exciting. We will continue to publish a newspaper, that without doubt, is the newspaper of choice, and we will strive to keep it relevant, thought provoking, and educational – and lets all learn as we continue on this journey.

So, to everyone that reads this, their loved ones, and



Mark Bishop Editor



families – here’s to a safe, happy, and fun filled festive season and new year. Let’s be optimistic about 2023, put that out into the universe and let it do its job, in making 2023 a year to remember. Cheers to you all.

Letters to the Editor

Dear Ed

I am impressed by the new look of the K2C News which speaks of a new vision for the paper. It is also functioning now as a greater investigation tool to inform the community of difficult issues with editorial input which is of a high standard.

I also really appreciate the quality of language and grammar! I have just decided, after over half a decade of tutoring and teaching mainly English, that it’s time to actually retire and pass the baton to a younger generation. Nothing irritates me more than bad spelling and grammar in a newspaper!

Yours faithfully
Sandra de Roubaix

Ed: Dear Sandra

Thank you so much for your kind words.

It is so often a thankless ‘job,’ but with ‘pearls’ that somehow come in from time to time, one has to believe that it is all worth it!

Thank you again.

Hi Mark

I refer to the article by Don Pinnock in the November 2022 edition.

Back in the early 1990s I was one of the founders of Phinda and Conservation Corporation Africa (now called & Beyond). We had a plan to re-establish all the endemic species at Phinda and our research indicated that cheetah were likely en-

demic to Phinda. Full disclosure - I am a board member of The Metapopulation Initiative referenced below and in the named article.

Phinda applied to the Natal Parks Board (NPB) for permits and in summary we were told that the NPB had tried many times from the 1960s to reintroduce cheetah into the various Zululand Reserves without any successes. The actual data is 142 cheetah released between 1965 and 1981 without any successes. NPB were happy for Phinda to try again but warned that we would likely fail to establish a breeding population. We proceeded with a plan to reintroduce cheetah but with a new approach that was recommended by Les Carlisle, the Phinda GM.

Of course, we had many detractors and nay sayers - scientists, NGOs and interested observers who predicted dire consequences for the cheetah and failed outcomes. The reasons advanced for the negativity included the climate in Zululand was too different, the bush was way too thick, the reintroduction of lions (that were to follow the cheetah) and many of the potential prey species too large (nyala) etc.. Les’s plan was to use a pre-release boma, to hold the cheetah for up to 60 days, to enable them to ‘acclimatise’. Today, I think it is more about enabling, any territorial species, to settle into their new area by overwriting their sense of where home may be. Why I draw this conclusion, is that we also did boma releases, at

great expense, with non-territorial species like elephant. Now days elephant are hot released from the trucks and they settle immediately into their new home without being released via a boma.

The initial re-introduction involved 9 cheetah from Namibia and it was clear immediately post release that they were settled. Phinda was fortunate to have Dr Luke Hunter (today one of the most respected carnivore biologists globally) on site to monitor our predator re-introductions, in real time, as part of his doctoral research work. Luke monitored these cheetah closely and confirmed that they were settled and hunting successfully immediately. So what has been the result some 30 years later?

Phinda has sent 74 surplus cheetah (not including those destined for India) to other parks and reserves all over Southern Africa and the boma release approach is now standard for all territorial predator reintroductions globally.

The Metapopulation Initiative led by Vincent van der Merwe are, sensibly, helping India succeed in this important conservation project. Yes conservation project - for the nay sayers quoted in this article. Highlighting the possible negatives and being too fearful to succeed is the antithesis of The Metapopulation Initiative’s vision. There will be learnings and there are risks. The learnings will advance our collective knowledge and the risks are being and will continue to be mitigated.

Would Asian cheetah be better candidates - of course. However, given the dire state of the only surviving population of Asian cheetah in Iran, removals would be ethically prohibitive at this stage. As for contrasting this with Asian lions - why is that even relevant? - we are dealing with cheetah. Of course, it is also desirable to spread Asian lions to most of their former home range but then the same is true for cheetah. The two species have co-existed across their distribution range for millennia. The genetic diversity of the global cheetah population is well documented as being very narrow, consequently the genetic arguments, while valid, are less significant for cheetah.

Globally, there is a general emphasis on rewilding associated with the UN announcement of the 2020s as the decade on ecosystem restoration. Inspired by this political focus, the proposed Cheetah reintroduction into India could play an ambassadorial role in marketing conservation and translocation efforts.

I really hope that Minister Creecy and the SA government positively respond to support this significant conservation effort. Good news often doesn’t ‘sell’ for conservation!

Well done for a vastly improved local newspaper.

Regards
Kevin Leo-Smith

Ed: Hi Kevin,

Thank you for the kind

words – much appreciated.

Wonderful to hear from you and reading your very interesting response to the Don Pinnock article. I totally agree with you. There will be lessons learned and there are risks. You are also quite correct in saying that the good news often doesn’t sell for conservation – but it is important that we get it out there.

Thanks again.

Disclaimer:

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Trivia questions

1. The Last Supper was painted by which artist?
2. Which classic novel opens with the line “Call Me Ishmael”?
3. How many years did it take Michelangelo to paint the Sistine Chapel?
4. Which musical was the longest running show on Broadway?
5. The largest active volcano in the world is located where?
6. Which country’s flag is a yellow stripe on the bottom and a light blue stripe on the top?
7. Is the Equator a line of latitude or of longitude?
8. Istanbul used to be called what?
9. What is the year of the first recorded flight?
10. Which civilization was older: the Maya or the Aztecs?
11. HTTP stands for what?
12. Helianthus is the scientific name for which summer flower?
13. The Orca is also known as what?
14. Which famous mathematician is credited with discovering gravity?
15. La Niña is a cooling event in the central and eastern tropical Pacific. The opposite phenomenon, aka a heating of these areas, is known as what?
16. Ornithology is the study of what?
17. What is the highest possible hand in poker?
18. Arnold Palmer was what kind of athlete?
19. A triathlon consists of which three sports?
20. Vintners and sommeliers work with what beverage?
21. Who won the 2022 FIFA World Cup?
22. What is the southernmost tip of Africa?
23. What are the square dimensions of a hectare?
24. What is the highest peak in South Africa?

5 essentials to pack for a 4x4 trip in Kruger

Lauren Dold
On-the-move correspondent

The Mafunyane 4x4 Eco-Trail is a four-day, three-night guided adventure trail along the north-western section of Kruger National Park, between Phalaborwa gate and Punda Maria.

The trail covers a distance of approximately 290km, with all participants driving their own 4x4 vehicles, including all provisions for the four-day trip: camping gear, own water, firewood and food. A knowledgeable and professional SANParks guide leads the trail, providing all the route information and bush intel along the way.

We departed Phalaborwa gate on a Thursday afternoon (the trail typically runs Thursday to Sunday) in the capable hands of SANParks guide Vanessa Strijdom. With 26 years of experience as a Kruger guide, it was a pleasure to be led by Vanessa.

The road conditions after unseasonably late rain varied from reasonably good to sections with steep, badly eroded inclines, crossing of streams and rivers and slippery muddy sections. All vehicles handle this differently, and my short-wheel base Suzuki Jimny did well, while some of the bigger, higher clearance vehicles battled through the steep dongas.

Each of the overnight campsites has a fireplace, enviro-friendly toilets and space for a shower to be strung up, with water heated over the fire.

Below is a list of things to pack, some of which I did, some of which I didn't (and realised why I should have).

Fuel

From reading the itinerary, I knew we were due to cover 290km, and figured bringing extra fuel would be an inconvenience. I totally underestimated how much driving in low range affects fuel consumption, and I didn't take into account the fact that there would be a chance we would have to take some major detours. Rivers in flood and impassable sections of road meant we had to take the long way around on some days, and as the odometer racked up those extra kilometres and my fuel diminished, I wished that I had packed some extra fuel. That said, I have a

relatively small petrol tank at 40l, so bigger cars with reserve tanks should be fine. In general though, it's good 4x4 practice to have extra fuel on hand. Thankfully, there is an opportunity to refuel on the third day at Punda Maria and I made it just in time!

Groundsheet

I forgot to pack a groundsheet and it was the item I wished for the most, after fuel. As is the case on any multi-day 4x4 trip, you pack up and move every day. This means a lot of packing and unpacking the car, and there is nothing worse than having to unpack items in your boot onto wet sand.

Tow rope/ winch

Have a tow rope and a back-up tow rope in case, as happened to us, one of the ropes snapped. We were saved by the fact that the Ford Ranger in the group was fitted with a winch, and we were able to extract vehicles from tricky situations that way. On this point, it's advisable to have all standard 4x4 gear, including a compressor and tyre repair kit.

Wet wipes

After a long day of dusty driving, a wet wipe goes a long way in cleaning up the car interior, and yourself. Putting up and taking down a tent twice a day can be grubby business and with no taps available it's the easiest way to clean things. Driving with the windows open, everything got coated in a fine layer of dust, including radios, sunglasses, the steering wheel and gear levers, but a quick once over with a wet wipe in the morning gave me a fresh start every morning.

Portable gas cooker

It's true, there's nothing like cooking over an open flame but when you're pinched for time, a gas cooker can be a life saver. Mine came in handy for quick morning coffee, and heating up water to wash with when waiting for a fire to start, would have taken too long.

Added to this, I would pack a car fridge or cooler box filled with dry ice to keep things cool. Even though this trip runs throughout the winter months, ice doesn't stand much of a chance in a car for two days (on day three, there is opportunity to restock at Punda Maria rest camp.)

Top packing tips

Pack things tightly, or strap them down if possible. I mistakenly tried to prioritise access, and while I could reach everything I needed, everything bounced around in the back on the bumpy 4x4 track.

Try to pack things that you'll need together. For example, keep your coffee, gas cooker, coffee press and mug in one box as opposed to splitting it between a food box and a cooking equipment box. It saves you the hassle of having to locate and unpack multiple items in search of only a few small things.

This article originally appeared on getaway.co.za: 04.07.2022

One of the 4x4 vehicles tackling the slippery muddy section of the trail (right).

Image supplied



Peaceful ambience of one of the campsites along the route (below) Image supplied



General packing list

- Kruger map (This won't help for directions, as Kruger's 4x4 routes are not on the map, but it is helpful for information on the region's vegetation and mammals)
- Binoculars
- Tree/bird/ID books
- Tyre weld/ puncture repair kit
- Tyre pressure gauge and compressor
- Wet wipes (for body and car!)
- Container/ bucket to wash dishes in
- Something to pack a wet tent into, even a plastic bin bag works
- Rope
- Groundsheet
- Car fridge
- Folding/camp chair
- Hat, sunglasses, sun cream
- Lug boxes, labelled (coffee stuff together)
- Gas cooker and kettle
- Firewood/ charcoal/ lighters
- Quick-dry towel
- Headlamp/light



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Veggie Diva's Christmas day treat for everyone



Veggie Diva

It's Christmas week!!! I've been chatting to a number of people to get some idea of what South Africans will be serving on Christmas Day.

There are those who still love the traditional Christmas spread of turkey, gammon and all the sides. Many people have moved away from the traditional meal and it seems that in true South African style anything and everything has become Christmas fare.

Here are few of my favourite Christmas recipes. An appetiser to be served with a glass of bubbles. The most delicious version of a brussels sprout side dish and a layered vegetable ring that is perfect for vegetarians or as a side dish.

PROSCIUTTO ROLLS

- Prosciutto ham
- Buffalo mozzarella
- Nectarines thinly sliced
- Fresh basil
- Tooth picks

Tear off a tablespoon size of mozzarella cheese and combine with a slice of nectarine, wrap one slice of ham around the cheese and nectarine. Use a toothpick to secure it all together and garnish with a basil leaf. You are aiming for small bite size rolls, so if your ham comes in big pieces cut them down to size.

BRUSSEL SPROUTS IN ASIAN DRESSING

- 500g Brussel sprouts
- 2 tbs fish sauce
- 3 tbs soya sauce
- 1 x chilli chopped
- 2 tsp brown sugar
- 50ml olive oil
- 1 x clove garlic crushed
- 1 x chilli seeded and finely chopped
- 1 x handful chopped coriander

Heat your oven to 180°C. Wash and cut the sprouts in half-length ways. Place the sprouts on a baking tray and toss in a good slosh of olive oil. Bake for 15 – 20 min until tender and slightly browned, take care to not overcook to mushy. Make your dressing by combining all the ingredients, except the coriander, in a jar and giving it a good shake until the sugar has dissolved. Once the sprouts are cooked, pour the dressing over and toss well. Place back in the oven for two minutes. Garnish with coriander and serve.



VEGETABLE PHYLLO RING

- 1 x medium butternut
- 1 x tsp ground cardamon
- 1 x tsp nutmeg
- 4 x cups baby spinach
- 200g ricotta cheese
- 1 x red onion thinly sliced
- 1 x garlic clove crushed
- 10 x sheets Phyllo pastry
- 100g pine nuts lightly toasted
- Parsley
- Butter
- Olive oil
- Ring tin

Heat the oven to 180°C. Peel and chop the butternut, toss in a little olive oil, add the cardamon and nutmeg while tossing, and then bake in the oven until tender. Gently fry the onion in a little olive oil for a couple of minutes until translucent, add the crushed garlic and fry for a minute. Place the spinach in the pan and toss until wilted. Remove the pan from the heat and add the ricotta cheese. Season with salt and pepper. Gently squash the cooked butternut. Paint the inside of the ring tin with melted butter. Layer five to six sheets of phyllo pastry into the tin, painting each layer with a little melted butter. Divide the vegetables and pine nuts into two portions. Add a layer of butternut, then a sprinkle a layer of pine nuts, and then add a layer of spinach and ricotta. Repeat with the other half of the veg. Close up the ring with a few layers of buttered Phyllo. Bake at 180°C for approximately 20 minutes until the pastry is a golden colour. Turn the ring onto a platter. If your pastry needs a little more crisping, place back in a hot oven for a couple of minutes. Garnish with chopped parsley and serve.

Have fun in making all this, and here's to good times with loved ones. Cheers!



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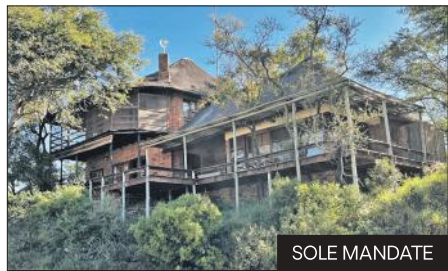
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NDLOPFU, UMBABAT R 11 500 000
Bedrooms 4 | Bathrooms 3.5 | Floor size: 240 m²

The house is privately situated on the banks of the seasonal 'Tsiri river. Ndlopfu is a share block in the heart of a Big 5 Greater Kruger, with only 32 member sites on 2,500 ha of pristine bushveld in the sought-after Umbabat Private Nature Reserve.

Yvette Thompson - 083 655 7176 Ref: 2032793



GREATER MAKALALI R 20 000 000
Bedrooms 5 | Bathrooms 5 | Farm size: 640 ha

This farm within Greater Makalali Nature Reserve, which has the Big 5 with 20,000 ha of traverse. Approvals in place for 10 commercial beds. There is a main 2-bedroom home and 3 guest chalets. Ideal for syndication, families, or convert to boutique commercial lodge.

Jason Jones - 083 267 4794 Ref: 1459112



HOEDSPRUIT WILDLIFE ESTATE R 3 900 000
Bedroom 4 | Bathroom 4 | Floor: 200m²

There is an open plan lounge, dining area and kitchen, as well as a guest bathroom and outside shower. Covered patio looks out towards splash pool, braai area, fenced garden and viewing deck. Home is sold furnished. VAT applicable on price.

Rob Severin - 083 469 3820 Ref: 2060556



OLIFANTS RIVER PROPERTY R 4 500 000
Bedrooms 4 | Bathrooms 4 | 50% share

By purchasing this 50% share in Parsons Nature Reserve you will have access to 2080 ha of prime Big 5 game viewing in Greater Kruger. This quaint bush home also has a lapa, pool and lush garden. The sale includes the use of a game view vehicle.

Mike Dodds - 082 906 7004 Ref: 2048251



ZANDSPRUIT BUSH & AERO ESTATE R17 000 000
Bedroom 4 | Bathroom 3.5 | Floor: 515m²

Sold fully furnished, decorated and equipped. Price includes a double hangar-stand with plans drawn up. Features include a separate library, TV room, gym, double garage, 2 carports, staff quarter and store-room, just naming a few.

Yvette Thompson - 083 655 7176 Ref: 2050871



KARONGWE - BIG 5 R 9 250 000
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. Harvey tile roof for lower maintenance.

Rob Severin - 083 469 3820 Ref: 2063307



HOEDSPRUIT WILDLIFE ESTATE R 1 550 000
Stand size: 4,900 m²

Vacant stand available on the ever-popular Hoedspruit Wildlife Estate. With the estate almost fully developed, vacant sites don't come onto the market often. Don't miss this opportunity to secure your stand now.

Yvette Thompson - 083 655 7176 Ref: 2078050



NDLOPFU PRIVATE NATURE RESERVE R 7 600 000
Site: 10,000 m² | Reserve: 2,500 ha

This vacant site in Big 5, Greater Kruger allows you to build your own exclusive bushveld getaway with traverse over the reserve and a neighbouring farm. Membership is limited to ensure the exclusivity of the Ndlopfu Share Block.

Yvette Thompson - 083 655 7176 Ref: 2072996



GRIETJIE, GREATER KRUGER R 8 800 000
Big 5 | Floor size: 400 m² | Stand size: 21.4 ha

This property offers elevated views of the surrounding bushveld, with peace and quiet only the bushveld can provide. This beautifully maintained property offers 3 dwellings - a 3-bedroom main home, a 2-bedroom cottage and a rondavel.

Yvette Thompson - 083 655 7176 Ref: 2050020



NDLOVUMZI R 3 750 000
Bedrooms 4 | Bathrooms 3 | Floor size: 380 m²

This 21-ha Olifants river property has a 2 bedroom main home and a separate 2-bedroom cottage, all located under large indigenous riverine trees. The outdoor entertainment area has captivating views of the garden, pool & river.

Jason Jones - 083 267 4794 Ref: 1459005



MAFUNYANE, KARONGWE R 15 000 000
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: 1443333



NDLOPFU - Greater Kruger R 13 000 000
Bedrooms 4 | Bathroom 3 | Floor size: 350 m²

This large home is situated in the exclusive Ndlopfu Private Nature Reserve. The home is privately located overlooking the 'Tsiri river. Sold fully furnished and including a game viewer. Solar power backup and recently redone thatch.

Mike Dodds - 082 906 7004 Ref: 2063033



LISSATABA R 3 500 000
Bedrooms 3 | Bathrooms 3 | Floor size: 220 m²

Stunning Olifants river views! This newer home has been well constructed, is in good condition and is perched on the hillside overlooking the river. There is an open plan kitchen, dining room & lounge, leading out to a patio with gorgeous views.

Rob Severin - 083 469 3820 Ref: 1458608



LISSATABA R 2 200 000
Bedrooms 3 | Bathroom 2 | Floor size: 180 m²

The buildings, from natural stone and thatch, are neatly located and built into the bush hiding them away. The main living area has a lounge and kitchen which leads out to a thatch patio with spectacular views of the Drakensberg Mountains.

Rob Severin - 083 469 3820 Ref: 1408817



SILONQUE, PHALABORWA R2 850 000
Bedrooms 2 | Bathrooms 2 | Floor size: 160 m²

Easy to maintain bush home located on a 21 ha farm portion within a conservancy and 3 kms from the Kruger Park fence. It's located 7 km from the town of Phalaborwa and within a conservancy with a boomed security gate & a large variety of game.

Mike Dodds - 082 906 7004 Ref: 1317289



N'TSIRI NATURE RESERVE R 6 000 000
Bedrooms 4 | Bathrooms 2.5 | Traverse: 2651 ha

N'tsiri Nature Reserve is an exclusive, private use, Big 5 reserve where wildlife roam freely across the unfenced borders with the Kruger National Park, Klaserie & Timbavati Private Nature Reserves. Membership is limited to 65 homes.

Yvette Thompson - 083 655 7176 Ref: 1450349

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How long can hippo's stay under water?

As hippos cannot breathe underwater, they can only stay under for about 5 minutes on a single breath when awake and active.

They are air breathing mammals with lungs, and do not possess any mechanisms - gills or otherwise - that obtain oxygen from water. Buoyancy effectively reduces their body weight in water, there by lessening the work rate of the heart and lungs. As a result, their pulse rates drop by two thirds (from 60 to 20 beats per minute) and breathing from 7 to 10 breaths per minute to 1 breath every five minutes when submerged. Similarly, this slow metabolism expends far less energy, and therefore requires far less fuel for operation. Consequently, the hippo can subsist on about a third of the food required by other terrestrial animals of similar size, such as white rhino and young elephant. This would explain how they satisfy their dietary needs in a relatively short time at night when good forage is freely available. When sleeping underwater,

hippo can conceivably stay submerged for even longer periods as the metabolism slows - possibly up to 8 minutes or more at optimum temperature.

Can they sleep underwater?

Sleep - yes! Feed - no! Babies can, however, suckle underwater. Hippos will submerge during the day to rest and sleep after being active all night, even if the water is too deep to keep the nostrils exposed. However, they can only hold their breath for a few minutes, and then subconsciously, while still asleep, will surface to get air before submerging again.

I have observed sleeping hippo's remaining submerged for well over 5 minutes, probably as a result of the metabolism slowing. A reliable sign of a sleeping hippo is when only the nostrils break the surface before the hippo submerges again, whereas when awake they usually have most of the head breaking the sur-

face revealing ears and eyes too. Hippos, although able to swallow both liquids and solids underwater, cannot open their mouths to feed as too much water is ingested interfering chewing. Should they find suitable vegetation at the bottom, they will pull it loose and consume it at the surface.

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

*Purchase for a discount of 30% at <https://jacana.co.za/product/beat-about-the-bush-mammals/> Coupon code **BATB30** is valid until 31 January 2023*

Hippos swimming underwater (top right) Image: Araleboy-Canva

Bold adult hippo (right) Image: THP Creative-Canva



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The Black Mamba - feared and revered

Johan Marais
African Snakebite Institute

The Black Mamba is, without doubt, the most feared venomous snake in the world. It has a reputation of being extremely aggressive, quick to attack and supposedly can kill a man within seconds.

In Zulu culture there is a mamba called Ndlondlo. It has a feather on its head, moves so fast through bush that it makes a whistling sound, and it will often hide in bush while crying like a baby, and if you enter the bush to investigate the cries, it will attack. At other times it supposedly crows like a rooster.

The speed of the Black Mamba is also exaggerated, and there are many stories of mambas chasing vehicles or moving alongside a vehicle travelling at 60 km/h or more or lifting 80% of its body off the ground and even striking at the roof of a Landrover.

Monster mambas are often sighted, some supposedly measuring between 5-6m in length. In southern Namibia farmers have told me about the mountain mamba – a massive snake that is seldom seen. When it reaches a jackal fence with holes roughly 20x15cm, it cannot fit through the fence and has to go over it.

As for its aggression, there are endless stories of mambas attacking unprovoked. The famous Afrikaans author Eugene Marais wrote many stories about the Black Mamba. Some exceeding 6m in length, and one that struck a woman so hard in the back of her neck that it sounded like a bolt of lightning. He clearly had a vivid imagination fueled

by his morphine addiction. Then there was the Black Mamba that hung from a tree and killed six cattle as they passed beneath it.

The truth is that the Black Mamba is extremely venomous and has a potent fast-acting neurotoxic venom. Following a serious bite, victims soon have pins and needles in their lips, a metallic taste in the mouth, the eyes become droopy, and the pupils dilate, and as the victim weakens, breathing is affected. In serious untreated cases victims may die within 1-7 hours, or even well within one hour. Deaths within half an hour, though not common, have been recorded. A large Black Mamba has around 300mg of venom, and needs about 15mg to kill an adult. It is potentially the quickest snakebite death in the world.

The average adult Black Mamba measures around 2,4-2,8m in length. There are historical records of 4,5m individuals, but the longest Black Mamba accurately measured in the past 30 years was 3,8m in length. Needless to say, there is no shortage of unsubstantiated records of much larger mambas.

The maximum speed of any snake accurately measured is around 13 km/h. This would also apply to the Black Mamba. Compared to the average speed of a marathon runner (18 km/h) it is not near as fast as people claim. Snakes have no vocal chords and can hiss, but they cannot make crying sounds or emulate a rooster crowing.

Despite claims, the Black Mamba is by no means an aggressive snake, and we have snakebite statistics

to support this. Around a dozen Black Mamba bites are recorded every year in South Africa, with around 5-6 fatal bites. In the greater Durban area, more than 100 Black Mambas are removed from houses and suburban gardens annually by snake removers Nick Evans and Byron Zimmerman, yet bites from mambas in Durban are virtually unheard of. If you try to kill a Black Mamba or accidentally corner it in a confined space, and it cannot easily escape, the snake will lift its head off the ground, often while forming a narrow hood and gaping at the same time, exposing the black inner lining of the mouth, and it will strike readily, often biting more than once. But if you are 5m or more away from any Black mamba, you are perfectly safe.

Historically it was claimed that a bite from a Black Mamba is fatal, but in recent years we see many cases where bite victims survive. Should someone be bitten by a Black Mamba it is vitally important to get the victim to the nearest hospital with a trauma unit, as the patient may have to be ventilated. Polyvalent antivenom, if given early enough, and in sufficient quantities, is effective against the venom of the Black Mamba.

Johan Marais is one of Africa's leading herpetologists and is CEO of the African Snakebite Institute. He is a best-selling author, a compulsive photographer, and a travel addict. Check out the website on www.africansnakebiteinstitute.com – get your free App on the link <http://bit.ly/snakebiteapp>



Juvenile Black Mamba from Hoedspruit, Limpopo. Hatchlings measure around 50 cm in length (top).

The Black Mamba is light to dark grey or an olive brown colour (above). A Black Mamba gaping and ready to strike (below)

Images: Johan Marais



Granite - a beautiful foundation



Granite with large crystals (above) and granite hills below.
Images: John Roff



John Roff
Nature and Geology Guide

Join me on a journey into the very distant past, when our planet was about a quarter of the age it is today.

We are deep below the surface, in the rock mix of volcanoes, mountains and sediments that have been pushed together as the first continent takes shape. We are kilometres below the surface, yet slowly ascending from way below us are huge masses of liquid rock, kilometres wide and deep. This boiling liquid rock is made up of several minerals, mainly quartz, feldspar and mica. They are all liquid. Slowly, like a vast blob of oil coming up through water, the mass makes its way closer to the surface, eventually slowing and cooling, kilometres below ground.

The cooling takes literally millions of years, giving time for large crystals of quartz, feldspar and mica, evenly dispersed in the mix, to grow and solidify into granite rock.

This huge mass, along with many other such masses, has effectively welded together the rock it travelled through, forming a stable continental crust.

Over the vast lengths of time since its formation, the whole continental mass has been uplifted several times, and the surface above the welded mass eroded away, exposing what we call the basement rock – the 'foundation'. Under the Lowveld, and indeed below Southern Africa as a whole, most of our ancient foundation is granite.

World-wide, granite is one of the best known rock types. At its most basic, it is made of three minerals -

quartz, feldspar and mica. It's very hard and resistant to weathering, making it ideal for countertops, gravestones and long-lasting architecture. You may well have some in your home. When you next see a piece of granite, have a look for the three main minerals - clear quartz, creamy/pink feldspar and dark mica.

Granite spotting in the Lowveld.

Pretoriuskop in the Kruger National Park is a great place to see a granite landscape, and you'll see massive rounded domes of granite there. Closer to Hoedspruit, the 'koppies' on the way to Phalaborwa are beautiful more weathered granite landscapes. If you want to touch raw granite, there's a great example on the R526 between Mica and Leopard's Rock.

Further afield, the Matobo Hills in Zimbabwe is one of the most extensive granite landscapes in the world, and well worth a visit.

For some people, granite almost has a gravity about it. The huge pieces of ancient rock feel safe to stand on, they invite exploration; they offer endless beauty in the living communities growing on them, and the way light catches them at different times of day.

John has a continuous curiosity and an abiding passion for sharing the stories of South Africa's remarkable biodiversity, rocks and landscapes. Based in KZN, he offers geological learning adventures throughout South Africa. Check out www.johnroff.co.za.

African conservation is at a crossroads, requiring



Hard work, clear thinking, and tough choices more than 380 African and global scholars who attended the recent 11th annual Oppenheimer Research Conference
Image_Supplied

Fred Kockott, Maxcine Kater and Rio Button for Roving Reporters

Down with the doom. Time to crack on with conservation.

Conservation in Africa is at a crossroads. A false step risks mass extinctions and economic ruin. It's time for hard work, clear thinking, and tough choices. There's little wilderness left, and climate change may be nearing a point where it will be too late to stave off mass extinctions. Yet, we continue to consume natural resources quicker than the Earth can heal itself.

Time is running out, but Dr Duncan MacFayden, co-organiser of the recent Oppenheimer research Conference, believes there is hope. So too, does, world-renowned Wits University paleoanthropologist, Lee Berger.

Berger was, in many ways the odd man out at this year's event, attended mainly by conservation researchers, NGO's and environmentalists. Berger's business is old bones – finding them and unlocking their ancient secrets; most of the more than 380 other delegates are immersed in the here-and-now worlds of biodiversity, landscape ecology and wildlife economies.

Drawing on his discoveries at the Cradle of Humankind in Gauteng, Berger sought to inspire and energise, tell-

ing how his own discipline had gone from being "devastated by scepticism" to making "transformational discoveries" in recent years.

It was a message not lost on his audience, who have their work cut out in halting biodiversity loss, climate change, and conserving wildlife. At the same time, Africa urgently needs economic growth and development – a complete facelift of sorts. How to do this in a way that conserves nature rather than erodes it, was the key question arising.

Mitigating climate change ranked high on the agenda too, as did the dire consequences of dependency on coal to generate electricity.

Another big area of concern that emerged at this year's conference was the way African voices on climate change and conservation tend to be drowned out by what some refer to as "scientific imperialism". In the first panel session, 'Conservation: Who owns the conservation?' outspoken Radio 702 host and Carte Blanche presenter Bongani Bingwa, pointed out that less than 1% of top climate research authors are based in Africa and that less than 1% of African media coverage was about climate change. He warned that the muted voice of African researchers would lead to imposed conservation models that disregard African environmental knowledge.

Nolwazi Mbongwa, a

practising Sangoma and research assistant at the South African National Biodiversity Institute, put it more bluntly: "Conservation is not a colonist concept. It always existed in Africa," she said.

Mbongwa and Wits University professor Sally Archibald derided the phenomenon that sees cash-flush overseas researchers fly into developing countries, grab data, and hurry home to analyse and publish without really involving locals, referred to as so-called "helicopter research".

This "helicopter science" betrayed "a shocking lack of understanding of ecological processes" in Africa, said Archibald, referring to her own work as a fire ecologist. And in Africa itself, said Mbongwa, most traditional healers had a deeper appreciation for nature than what could be learned from books, but

were largely ignored when it came to decision-making in the conservation sector.

This was also touched on by Minister Barbara Creecy, the Minister of Forestry, Fisheries and the Environment. In her keynote address, Creecy said more research was needed into the role and value of indigenous and traditional knowledge in promoting biodiversity conservation in Africa. She said the Oppenheimer conference could not have been more opportune.

"This audience understands more than others, the crisis confronting our natural world and indeed the future of humanity as we know it. Climate change, biodiversity loss and pollution, threaten the environment on which we depend and weaken our economic and social systems," said Creecy.

Conference patron, Nicky

Oppenheimer, stressed that the southern African conservation sector was uniquely positioned to tackle unpleasant, real-world problems that were often ignored by big environmental NGOs.

"In the Western world conservation is all too often somewhat of fiction ... a Disney vision of the real world," said Oppenheimer. "Some very unpleasant things happen in the world and in the conservation areas where we operate. You have to be able to face up to those and make that part of your research and deliberations."

But, he added, it was also important to know that humankind could not bend nature to its will. "After all, the real world has been out there longer than any of us ... Because it has been there so long, it has been successful, and we need to learn from that," said Oppenheimer.

In his opening address, conservationist, corruption-buster, and government turnaround specialist, Mavuso Msimang, referred to predictions that a 4°C increase in global temperatures (relative to pre-industrial levels) could cause about a 12% decrease in the African continent's overall GDP – "a decline we simply cannot afford."

"But we can stop this trend and safeguard our economy if we embrace nature-based solutions," said Msimang.

He cited a 2020 World Economic Forum report, stating that a transition to a nature-positive economy could generate \$10.1 trillion in business value every year and provide about 400 million new jobs! "If Africa chooses to unlock the power of nature by expanding and improving management of protected areas, it will create unparalleled business value for the continent," said Msimang.

The other panel session streamed live from the conference, was titled: "Post-growth or green-growth – alternative development pathways for Africa". It grappled with whether continuous economic growth would lead to sustainable solutions, or whether such solutions can only be found by changing the way the global economy works.

Ramasar, a sustainability science researcher at the Lund University Centre for Sustainable Studies in Sweden agreed that there was a need to change "economic organisation" as a whole, but stressed that growth should not itself be the primary objective.

"We actually need to think about what is it to have a good life? What is it to have a fulfilled life? It's not always about hi-tech. It's not about solutions that are going to allow us to consume more," she said. "It's about solutions that allow us to consume enough."

Cont. on page 9.



Bongani Bingwa

Image supplied

fresh approaches in a new age of exploration

Cont. from page 8.

While such discussions gave delegates plenty to ponder, a number of top scientific presentations got down to the nitty gritty of conservation conundrums and the fresh insights gleaned from the latest research.

In his presentation on managing elephant populations, University of Kwazulu-Natal Zoology Professor Rob Slotow, said reserve managers often agonised over whether a particular park had too many or too few elephants. Instead, he said, they should be looking at whether natural ecosystems in protected areas were functioning properly to support biodiversity, and sufficiently diverse and robust to bounce back from major disturbances such as storms, drought, heat-waves, and diseases.

Evolutionary biologist, Professor Tim Clutton-Brock,

gave a fascinating account of his studies on the impact of global warming on two very different animals: deer and meerkats. In a nutshell: while deer do well, it's misery for meerkats. Clutton-Brock hopes that the wealth of data he has collected will have predictive value, providing lessons on mitigating the effects of climate change and biodiversity loss.

Another presenter, Professor Graham Kerley, Director of the Centre for African Conservation Ecology at the Nelson Mandela University, observed that there were nearly 240 000 protected areas globally, yet we have a growing number of endangered species. His presentation, The Protected Area Paradox and Refugee Species Concept, also cautioned against conserving species in the wrong places with inadequate space, "all in efforts to tick a box that we

have conserved areas."

Tech savvy solutions to find new funding flows for conservation came under the spotlight in a presentation from the executive director of the Kenya Wildlife Trust, Dr Irene Amoke, entitled Changing the conversation around conservation.

Professor & SARChI Research Chair in Ecosystem Health and Biodiversity at UKZN, Professor Colleen Downs, won the prize for the best conference presentation. It looked at the importance of "green cities" serving as lungs to maintain biodiversity, and how various species such as the crowned eagle, vervet monkeys and chameleons were adapting to urban environments.

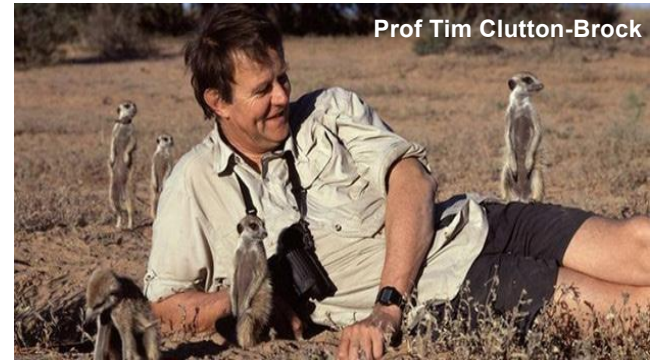
In a recorded Zoom chat interview with Roving Reporters after the conference, MacFayden said while there was a touch of gloom and doom about the conference,

the overriding "take home" message was that there was a lot that can be done to build wildlife economies into a much-needed cornerstone of prosperity in Africa.

And he heaped praise on young, emerging African scientists who featured prominently at the conference, helping shape debates.

Among them were UCT PhD candidate and ornithologist, Merlyn Nkomo, who reminded delegates that it was not that long ago that national parks were fortresses, put up to "protect" nature from the black communities that had lived in harmony with it for centuries.

Nkomo has, since 2020, been very vocal about what she terms the 'Achilles heel of conservation' – detailing the challenges faced and the fact that people of colour are not sufficiently recognised in the conservation of nature and wildlife.



Prof Tim Clutton-Brock

MacFayden said Nkomo's presentation had also brought into sharp focus the challenges she had personally faced as a black woman in the conservation sector.

This had, said MacFayden, highlighted the need to turn the page on that past and bring fresh voices into the conservation sector – in much the same way that palaeoanthropologist Lee Berger had recently brought in young African fossil finders into "the greatest age of exploration".

www.rovingreporters.co.za

Roving Reporters coverage of the Oppenheimer Research Conference was commissioned by Jive Media which helps young environmental scientists produce multi-media content. Fred Kockott is the Director of Roving Reporters. Maxcine Kater is a marine biologist interning at the Department of Forestry Fisheries and the Environment. Rio Button is a conservation biologist and Western Cape ambassador for WESSA's Young Reporters for the Environment.



Hard work, clear thinking, and tough choices more than 380 African and global scholars who attended the recent 11th annual Oppenheimer Research Conference
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Time to add to your birding 'life list' – here's how

Mike Meidlinger

As we aspire towards yet another fast approaching festive season, much needed rest and relaxation is surely on the cards for many of us. For others, this time constitutes one of the busiest periods of the year, but also one of the most energetic and joy-filled. Warm and humid summer days by the pool, bring back childhood memories of lamb on the spit, thunderstorms in the afternoon, and a wealth of greenery, ecological prosperity, and vibrant energy all abound.

With local migrants, as well as residents, having mostly completed their breeding, or still being busy and in full swing - perhaps with a second brood if they were successful earlier in the season, birding is once again at maximum capacity. There are also a handful of migrants like Amur Falcon and Southern Carmine Bee-eater still to appear. Once these have arrived, there will be a complete full house of expected species for us here in the north east of the country.

As far as birding in the region goes, there are a number of aspects to assimilate in a wider context, in order to understand some of the parameters that birders work within. The first is to consider what is in fact, our region. Southern Africa refers to all regions south of the Kunene and Zambezi Rivers, as well as within 200 nautical miles (about 370 kilometres) from shore into both the South Atlantic and Indian Oceans. According to the field guides, most birders in the country are largely focused on their Southern African lists.

Despite both South Africa and Mozambique having more area to their respective areas than the region dictates, with the limitations of the geographical boundaries, we essentially separate the essential from non-essential areas of these two countries. In the former there are the islands like Tristan, Gough, Inaccessible and Marion, Mozambique however has more landmass above the imaginary line of birding as there is below.

For many international visitors, the most important birds that are on their "hit list" are endemics. Endemics, as mentioned, are those species that occur in South or Southern Africa, but nowhere else. Although several are truly special, many of these are actually common throughout the country, and thus offer little or no appeal to local, home-grown enthusiasts. Species like Cape White-eye, Southern Boubou, Cape Robin-Chat and Cape Starling offer little to birders whose list exceeds a

level of 100 to 150 species, and who regularly are out birding.

Whether in the garden or at local spots, there are only so much that widespread species do to capture those who see them on a day-in and day-out basis, despite setting travellers pulses racing. As mentioned before, keeping a list is both a vital and exhilarating part of birding as a whole. For many people, listing within their native region means that birds remain familiar, and yet there are some that require a certain level of adventure in order to clasp eyes on.

For many who pour over bird books in their spare time, there are always those few that draw emotion beyond the rest. Species like Narina Trogon, Pink-throated Twinspot, Wandering Albatross, Bat Hawk, Gorgeous Bush Shrike and Blue Swallow are a few, which from the very first glance, have a high place on many a 'most wanted' list. Whether keeping a year list or simply a record of all the birds seen so far, or, in birding nomenclature, one's life list, the keeping of lists helps to push one's birding ever forwards.

What has become clear over the past several years of regional, in other words, Southern African listing, has been the appearance of concentric rings of what the region has to offer upcoming and energetic birders. For both those new to the hobby, as well as those who are wishing to explore more or even perhaps see a lifetime target or two, there is an easy way to carve up the region into short but intrepid adventures in search of the country's avian treasures. The magic number, revered by birders throughout the area, is 800. To reach 800 species within the confines of Southern Africa represents no small feat, to reach this number, takes commitment and dedication but offers many jewels in the crown of those who reach this local milestone.

So, knowing how incredible the birding is within the region, and, with a wide variety of species throughout the realm, how does one begin to eat the proverbial elephant ahead? In other words, how does one go about the planning process of increasing one's experience and lists? This, as well as getting into places where some of their greatest targets can be met and enjoyed with as little difficulty as possible. Luckily, when it comes to birding, much of the trail has been blazed by those before, and during the last half a century that modern day birding has existed. Thus today, there are reliable sites and places for almost all species found in the field guide, apart from vagrants obvi-

ously, which are once-off records and random by nature. In many cases, simply by travelling to the right places and by knowing what to look for, or who to connect with, there are great chances to see all but a handful of protected species.

One major benefit of travelling for the purpose of birding, is being able to immerse oneself within a host of amazing places, both wilderness or within the bounds of what seem like concrete jungles. This is especially true when thinking on a local scale, and each region with its amazingly diverse biological terrains and assets. This means that there is hardly a place in South Africa that doesn't constitute an incredible starting point.

Within one's immediate area, in birding terms this usually refers to a roughly 100km radius around a city or municipality. Most consistent citizens could log between 250 and 300 species with some regular targeted birding. This applies to Johannesburg, Durban and Cape Town, alongside regions such as Nelspruit, Polokwane and even Hoedspruit. Simply by exploring known birding spots and areas of varying habitat within an hour or two's drive from home, active birding can yield a wealth of new and exciting species only dreamed of while flicking through a copy of Roberts, Newman's or Sasol.

From a Kruger to Canyons biosphere perspective, there are several hubs that intertwine within the region surrounding Hoedspruit. Perhaps the most obvious of these is the Greater Kruger, both public and private. This national park with its pristine savannah, harbours a number of endangered species like Hooded and White-headed Vulture, Secretarybird and Steppe Eagle. Localised specialties like Brown-headed Parrot, Retz's Helmetshrike, Stierlings Wren-Warbler, Olive Tree Warbler, and much, much more, mean that day lists in summer can easily reach over 200 species for those alert to calls and sounds. Another hotspot in the area is the sourveld alongside the rocky gorges of the biosphere reserve, as well as Moholoholo, mentioned in our last article. These areas are great for transitional species and offer a link to the montane grasslands above. These grasslands that surround Graskop and beyond, become more and more significant and pristine as one heads to the plateau of the Vorlervallei Nature Reserve outside Dullstroom.

Even more alien, the afro-tropical forests of Magoebaskloof, with its excellent local community guides, are a mecca for birders herald-

ing from all over the country. Yet for those in this area of the lowveld, here they are, sitting almost as a dormant neighbour at the footstep of Hoedspruit. These specialist guides are both professional and capable of providing specials such as Cape Parrot, Black-fronted Bush Shrike and Bat Hawk to those keen on even just a morning's birding in this, a totally new environment.

The ability for those hoping to increase their lists, even for those travelling through the area for the holiday season, is prime. A few active days of birding in various regional spots, each being stress free day trip destinations, can easily rocket a basic list to the realms of 350 to 400, or even higher. This is especially true if visitors are coming from Gauteng or the Cape. If experiencing a new habitat, the potential for a rapid accumulation of new and exciting birds is surprisingly possible in a short space of time.

Local guides are incredibly valuable. Even in regions like the big cities of Cape Town and Gauteng, there are a number of excellent guides who charge a fair rate, and who offer excellent chances of seeing very difficult or secretive birds. This daily guiding rate for any bird guide throughout the country, is best offset by travelling small groups. It is important to do some homework in order to enjoy the birds when seen, knowing what to look and listen for, adds huge value when able to see specials for the first time, maximizing the hours dedicated to, and spent out birding.

In general once having attained the realm of 400 or so, then it is time to stretch one's legs to one or other of the South African quadrants. These quadrants are The Cape Region, Gauteng, which is surprisingly excellent for birding, Kwa-Zulu Natal and The Lowveld. In terms of list numbers, if one has extensively birded in two of these regions, they can roughly expect lists of up to 450 to 500 species. By filling in the next gaps, the remaining untapped regions of new birds, often results in climbing up to 650 or just higher, all still within the nation of South Africa alone.

What is great about this, is that while travelling for birding, it also means travelling through places of great appeal and lustre for many patriotic patriots. The experience of great vistas and expanses such as the Karoo, Namaqualand, Zululand, coast to coast, and even wildlife havens amidst the sprawl of humanity, offer an independent and in-depth view of what South Africa has to offer. Birding offers a focal point from which to experience the country itself in



African Pitta - One of the regions most drooled over birds, requiring a visit to the Zambezi Valley of Zimbabwe
Image: eBird



Narina Trogon - an inhabitants of the nearby Magoebaskloof forests best seen in early to mid summer
Image: Tony Howell

all of its magnificent beauty and variety. Yes, the list is important and a driving factor, but the benefits are far more than the birds themselves.

Having said this, to reach the realms of 700 and 800, those who can travel yet further have the best opportunity to do so. Whether by design, for the purpose of birding, or for those who get the opportunity to visit areas within Southern Africa for work, family or pleasure, simply being in areas of Namibia, Zimbabwe, Mozambique or Botswana, offer a wealth of new species. Passive travel is bound to offer a number of new birds, but for those who are now hooked, the best way to get the best out of each destination is to focus on birding. This can be by self-driving with mates to well-known sites, or by joining dedicated tours led by specialists who have their craft to a tee.

From 650 to 800 is a slow climb of three to four major, two week or more, dedicated trips. Pilgrimages to the likes of the Panhandle of the Okavango Delta, the Zambezi Delta of Mozambique, the eastern highlands of Zimbabwe and the north-western tip of the Namib Damaraland, are all areas requiring an adventurous spirit, and have the allure not just to birders, but intrepid travellers of any kind.

There will always be birds missed and reasons to come back and visit favoured places, but the joy of capturing ever difficult new birds in such a variety of settings, is truly a goal on its own.

The road to 800 offers a legitimate and arduous challenge for any avid birder, one that can take years to achieve, and can be the focal point of many trips, as well as time spent with friends and family ahead. Support of local guides offers great chances to get glimpses of birds that each individual holds as special. The best way to begin is to explore one's area, from there, perhaps taking advantage of travel when there is a chance, for a sneaky day out birding with a specialist. From there, taking chances to see what is possible with the opportunities and planned trips birders have, can continuously offer a wealth of cherished memories.

No matter whether your list sits at 300, 100 or even if starting at zero with the onset of this new year, this festive season, get out to some local hotspots not yet visited, especially those that have local guides, and try to add a bird or two, or even a secret life-long target of yours, to your ever-growing life list.

Christmas Crackers !

Ben Coley

With Christmas fast approaching, we thought we would look at some festive objects in the night sky.

There are not a great deal of official, Christmas-related constellations, but historians suggest that the famous Star of Bethlehem, that guided the three wise men the Jesus's birthplace, could have been a conjunction (two objects appearing close together in the sky) of two planets or perhaps a comet.

Around the time of Jesus's birth, there was a conjunction of Jupiter and Saturn in Aries, and Halley's comet was visible in the sky around 11 BC. Whilst neither of the dates align perfectly to history, these remain the most likely culprits.

Regardless, there are a few Christmas-themed deep sky objects that are visible this time of year, all of which can easily be seen with a pair of binoculars or small telescope:

The Christmas Tree Cluster (NGC 2264), MONOCEROS

Residing over 2500 light years away, this group of young stars forms the characteristic, triangular shape of a Christmas tree - although it appears upside down from southern latitudes. Situated in the faint

constellation of Monoceros, the Unicorn (sandwiched between Orion and his two hunting dogs), the cluster contains around 600 young, recently formed stars, many of which can be seen through binoculars. At the apex of the tree, lies a dark patch of dust and gas known as the Cone Nebula.

Praesepe, the Manger (M44), CANCER

Cancer is a faint constellation, but contains one of the brightest and most magnificent open clusters in the sky. M44 is more commonly known as the Beehive Cluster, but its Roman name, Praesepe, comes from the word 'manger'. Like the Christmas Tree cluster, the manger is a community of young stars, only around half a million years old, embarking on their stellar journey. The object is easily visible with the naked eye and a pair of binoculars will resolve many of its 1000 or so members.

Blue Snowball Nebula (NGC 7662), ANDROMEDA

Planetary nebulas are the remnants of dying, small stars. As they expire, they release their atmosphere into space in a gentle 'puff' rather than an explosion. Left at the centre is a white dwarf, the core of the now deceased star. The Blue

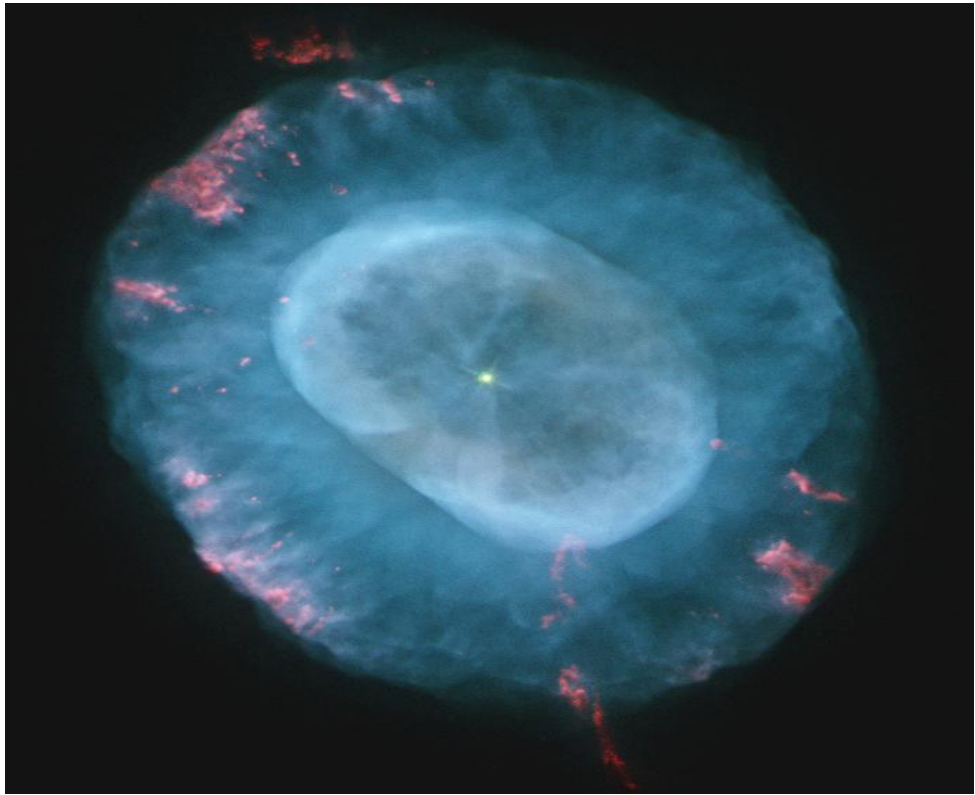
Snowball is a part of the Andromeda constellation and can be found west of the Andromeda galaxy, below the body of neighbouring Pegasus. Although small, a backyard telescope will reveal a central star surrounded by a slight haze, but larger instruments will pick up some blue colouration.

See Celestial Events SA advert for contact details

Blue snowball (right) Image: Nasa

Christmas Tree cluster (below) Image: ESO

M44 (below) Image: Wikipedia



Viscum rotundifolium - The red-berry mistletoe

Brett Heasman
Guiding Naturally

Well ladies and gents, this the season to be jolly and your chances of catching a snog from your future other half is around the corner, so don't miss your chance to manoeuvre your future love under this mysterious magical plant this festive season. It's known for being the symbol of love, fertility and romance.

This well-known family for its Christmas decorations, has many superstition when it comes to the magical spirit of Christmas. With this magical festive season around the corner, I hope this is not your only chance of catching your dream partner; for those that are already in a relationship this may not work, so I myself have already made other provisions. I have been going to gym, I took cooking lessons, and have even made the effort to invite the in-laws over - so hopefully that will work in my favour.

But back to this plant. It is also believed to drive both evil spirits and witches away (so perhaps the in

laws won't be there), it also brings health and luck to the people of the house and was often called the 'all-heal' plant. So place those bets, and make sure you play the lotto and hope that the bank manager doesn't call in the ninety two day financial month of January.

This incredible plant has a problematic start to life. It has an astonishing way of making a success of itself in the early stages of life as a parasitic plant, attaining its first nutrients from its host. It often establishes itself in the canopies and in the crowns of trees, as it leaches the plant of its nutrients and water, via a rootlike structure that grows into or around its host. This is known as a haustoria. It then gains the ability to produce chlorophyll endowed leaves and as a result can then photosynthesise by itself.

Before I go on, its important to note that there are many different species of mistletoe in South Africa. They originate from the family Viscaceae, a family is under scrutiny in the botanical world. Recent data actually place this particular family within the

Santalacea, This a very cool new discovery could bring the total number of species in the genus in the flora of southern Africa region to 20, 10 of which occur in Mpumalanga.

Interestingly, mistletoe numbers in any area are correlated with the average nitrogen levels in the woody plants that host them. The overall nutrient status of a biome influences the mistletoe species richness in any particular area, and the most common host are the Acacia, followed by Combretum, Maytenus and Rhus families.

Usually the mistletoe has fleshy leaves that are dark or pale green and variable in shape, but usually elliptic in appearance. The bright red sticky berries is where the genus 'Viscum' originates from, and 'rotundifolium', meaning 'round leaf' refers to the shape of the leaves, but various shapes do occur.

The sticky seeds contain a single seed known as a drupe. This has a magical and very fascinating way of dispersal. The berries are collected by birds - they stick to the beaks of birds

who are attracted to the fruit. The birds then wipe their beaks on a branch to try dislodge the sticky berries, and without knowing, they are starting the new foundation on a new host. Those berries that have been consumed will eventually pass through the digestive tract of the bird, and often stick to the branch onto which

they deposited, and they too will start their hemiparasitic life on the branch of the tree.

The amazing juice of our local red-berry mistletoe can apparently only be used to remove warts, but the more common local use is to prepare birdlime from the sticky berries, in the construction of traps to catch birds.

If you are lucky you might just get that well-rounded turkey for the table, and I do hope you all have a fantastic, safe, festive season and a Happy New Year. Enjoy the time off.

The red berry mistletoe is a hemiparasite.

Image : Fayne Connelly iSpotnature



Caterpillar Rearing Group progress and achievements

Ian Sharp

We have in past articles, discussed the Caterpillar Rearing Group (CRG), which has now been in existence for over 10 years. Over this period there have been significant milestones reached, and the contributions to science quite significant. Up-to-date information is not presently available as the project leader, Dr H Staude, is in the process of finalizing a new guide to the moths of southern Africa - the first, since the publication of Pinhey's 'Moths of Southern Africa' in 1975.

To give an idea of the amount of data recorded and referenced by the CRG between 2012 and 2016, there were 1778 rearings for 962 Lepidoptera species, between 2016 and 2019 there were 2370 rearings for 953 Lepidoptera species, and between 2019 and 2022 there were 2552 rearings. There was also an additional 458 rearings for 424

species of Papilionoidea (Afrotropical Lepidoptera). This superfamily, Papilionoidea, contains all the butterflies except for the moth-like Hedyloidea.

What we now know about the southern Africa Lepidoptera host associations, is that there have been some 13164 rearings, representing 3473 Lepidoptera species. Host plant species utilized by the different species reared total 3076.

According to the latest available data, in my own project we have had 1956 successful rearings. Not all these were in the Hoedspruit area, but a large majority were collected there. The number of calculated species is over 735, with several specimens yet to be identified even to genus level within certain Families!

Two new species (see below) were reared after being found on Tshukudu Game Reserve and on York farm.



Ectropina sp.



Leucocercops sp.



Ptychopseutis sharporum



Teleiopsis sharporum

The larval host plants for these new species above are *Ozoroa obovata* (broad-leaved resin tree) and *Caparis tomentosa* (woolly caper bush) respectively.

The leaf-miner moths (see below) soon to be published as new species, are of the genera *Ectropina* and *Leucocercops* but are, however, still awaiting the final allocation of the species names.

The larval host plants for the two species are *Spirostachys africana* (tamboti - Casketts farm) and *Parinari curatellifolia* (mobola plum or cork tree - Glen Lyden farm) respectively.

These are but a few examples of new species discovered through the efforts of the CRG contributors. Many specimens have also been forwarded to the Smithsonian Institution, in Washington DC, for barcoding to

The new species (left) *Ptychopseutis sharporum* (Tshukudu Game Reserve) and *Teleiopsis sharporum* (York farm)

Image: Supplied

have the specimens identified.

A clear winged moth discovered by Allison, found in a succulent plant from the Northern Cape, was submitted to a specialist on this group of moths, in Germany. It was determined to be a previously unknown species and led to the whole Sesiidae Family (clear winged moths) having to be revised. This species is now also in the process of being described as part of the Family revision.

The leaf-miner moths (left) soon to be published as new species of the genera *Ectropina* and *Leucocercops*

Image: Supplied

There have probably been many other new discoveries of moth species from the work done by contributors to the CRG. I have highlighted a few that have some local attachment, and there will probably be more to follow in the days to come.

Considering the overwhelming dominant biomass of invertebrates in nature, more particularly

in the warm climate of the Lowveld, many more undiscovered species may be out there. Work done in the Kruger National Park has indicated that invertebrate biomass in the tree canopies of the woody layer alone, is in the region of 2400 kg/ha!

In the Lowveld our eyes are generally so focused on the larger wildlife species that we miss most of what is around us. Look a bit more closely at a bush or flower as you pass by in your daily occupations – who knows what amazing creatures you may find.

Trivia answers

1. Leonardo Da Vinci
2. Moby Dick
3. Four
4. The Phantom of the Opera
5. Hawaii
6. Ukraine
7. Latitude
8. Constantinople
9. 1903
10. Maya
11. Hypertext Transfer Protocol
12. Sunflower
13. Killer whale
14. Isaac Newton
15. El Niño
16. Birds
17. Royal Flush
18. Golfer
19. Running, cycling, swimming
20. Wine
21. Argentina
22. Cape Agulhas
23. 100mx100m
24. Mafadi, a peak on the border of South Africa and Lesotho, at a height of 3,446m

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The Elephant Conspiracy – Fiction drawn from hair-raising environmental horrors



Jamie Venter

Lord Peter Hain’s ‘The Elephant Conspiracy’ may be fiction but many of its scenes mimic real-life poaching realities and monstrous criminal acts.

Chilling, horrifying, shocking and based on the realities of wildlife poaching. The Elephant Conspiracy brings an element of truth to fiction, and lays out the connection between corruption, crime and conservation.

This is according to Assistant Editor Marianne Thamm, host of Daily Maverick’s ‘The Elephant Conspiracy’ webinar, with author Peter Hain on Thursday 8 December 2022.

In this sequel to his 2020 novel, The Rhino Conspiracy, Hain explains that he worked with wildlife experts to craft a novel that describes with grizzly detail what happens as elephants are poached and traded illicitly.

“It’s not packed with facts that people find hard to absorb, but you’ve picked them up as you go along,” says Hain, adding that the realities of what has happened and what is happening cannot be ignored.

Truth of the matter

“In 1800, there were 25 million elephants on the African continent. A cen-

tury later, at the beginning of 1900, there were two million,” explains Hain.

This rapid decrease from 25 million to two million elephants in one century was predominantly driven by trophy hunting in the era. But, currently the numbers are down to 400,000 – and still dropping, as a hundreds more are killed daily, explains Hain.

“The projection is that by 2040, they will be extinct,” says Hain, “These are real wildlife realities that we are having to grapple with.”

Hain says that’s the point of his book, to get people not to think of politics and wildlife as separate but connected.

“Our very future as humankind is dependent on our ecosystem and biodiversity and these precious animals that we’re killing off,” says Hain. “It’s all connected.”

Ivory links

The book discusses the links between politics, organised crime and wildlife that are seen today. “The problem is there’s a legalised trade in wildlife and then there’s the illegal criminal underworld linked to political corruption, and they blur into each other,” says Hain.

Elephants are poached

across Africa for their tusks, which contain ivory, explains Hain. The ivory is seen as a status symbol, or ground down into powder and used as an aphrodisiac in areas of Asia, he adds.

Hain says rich elites believe in its properties and potency as an aphrodisiac, despite scientific proof that this is not the case, and instead it “sells like gold dust”. “This is big business. It’s a big crime.”

Brutal poaching of elephants and ripping out of their tusks is a big source of income for criminals as low as local poachers, to big city gangsters and “right through to international criminal syndicates” according to Hain.

This reason, maximising profit, is why horrifying methods of killing elephants may be adopted. One of the worst might be cyanide poisoning of entire herds, as described in the book, based on research and consultation with wildlife experts.

“The cyanide enables [poachers] to pull the tusks out without having to hack them out,” says Hain. “It’s pretty awful.”

Fight back

For Hain, readers should learn from the book but also feel empowered to fight back.

“It’s not a bleak read,” says Thamm. The charac-

ters Hain created “understand they need to fight back and do fight back, as we’ve actually seen them in South Africa”.

“Wildlife is central to Africa’s heritage, to its culture, and I tried to convey that,” says Hain.

“This is not an issue for white tourists, wildlife funds, wildlife parks, or safari holidays, this is about us. This is about who we are, as Africans, and where we come from.”

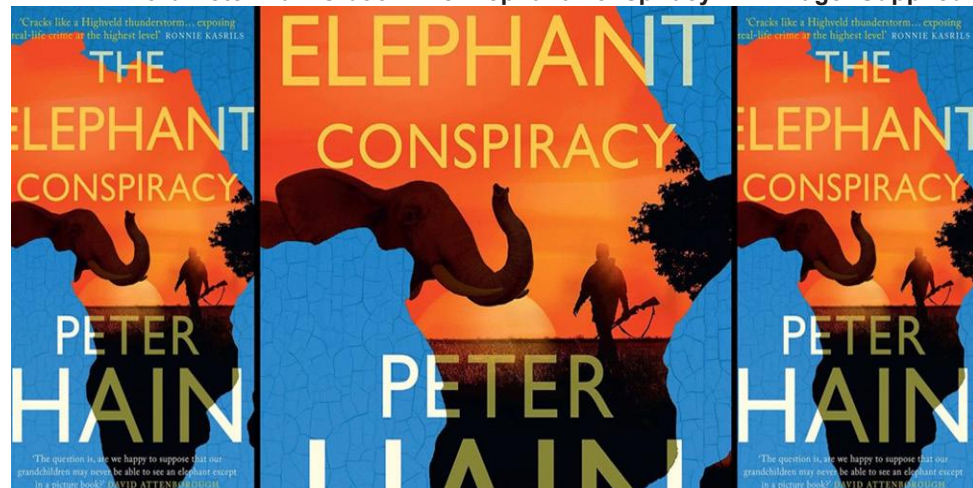
This article was previously published by the Daily Maverick. Watch the webinar ‘The Elephant Conspiracy’ on YouTube



A family herd of elephants in search of a waterhole (top)
Image: Patrick Gallet-Canva

Mother and youngster (middle)
Image : Donvanstaden-Canva

Lord Peter Hain’s book The Elephant Conspiracy Image: Supplied



International Young Environmentalist of the year



Dealing with the breathing end (above).

Photo: Rifumo Mathebula

Rifumo Mathebula (left), Wild Shots Outreach programme leader and winner of an international Young Environmentalist of the Year Award.

Photo: Mike Kendrick

Don Pinnock

A chance meeting with a wildlife photography teacher and Kruger Park animals, set Rifumo Mathebula on a path he never dreamed possible.

In a poor rural community bordering the Kruger National Park, Rifumo Mathebula did what youngsters his age were expected to do: he herded the family goats. Wandering as they grazed day after day, time slipped away and schooling took a back seat. By the time he first sat in a classroom at Frank Maghinyana High, Rifumo was nine.

At the age of 19, and still at school, he attended a Wild Shots Outreach (WSO) programme run by educational specialist

Mike Kendrick. This involved learning to use a camera and entering the Kruger Park — something he had never done before — to photograph wild animals.

It was like flipping a light switch and he needed more. That passion, within six years, would earn him an international title of Young Environmentalist of the Year and a local Mail & Guardian Greening the Future Award.

Desperate to share what he experienced in the park, Rifumo took the first steps in what would become his future: he persuaded Kendrick to run the course at his high school.

Recognising his passion for teaching and wanting to help other young people in his community,

Kendrick began inviting him on photo assignments — including elephant collaring, rhino conservation operations and documenting the World Youth Wildlife Summit.

“Although I grew up on the border of Kruger Park,” Rifumo remembers, “I had never been into a game reserve until I did a game drive with Wild Shots Outreach. Seeing wildlife for the first time changed my life. I knew I wanted to inspire and encourage other young people to connect with nature.”

“Most young people in my community have never been into a game reserve. I want to connect them with our natural heritage — we’re the future of Africa’s conservation.”

When Rifumo matriculated, he became Wild Shots

Outreach programme leader, taking more and more responsibility, helping to build WSO’s reach and impact. In 2020 he was promoted to Programme Director and now leads WSO courses, organising all the logistics and teaching in the local Tsonga language.

“The biggest barriers to young people connecting with nature,” he says, “are poverty and lack of resources and aspiration.”

These are shortcomings which Wild Shots Outreach was created to overcome. It was founded by Kendrick in 2015 and prioritises government high school students and unemployed youngsters living adjacent to Africa’s national parks.

Using a camera as the entry point, it provides

a focus introduction to the natural world. It also helps young people from these communities to accessing training, further studies, and employment through a bursary fund.

Kendrick says when he relocated from Cape Town to Hoedspruit in 2015, he was dismayed to discover that most local youngsters had never seen or engaged with their natural heritage. Being a photographer, he realised the medium provided a powerful tool for them to capture their memories, tell their own stories and really “see” nature.

“Through Wild Shots Outreach, we’re changing the narrative,” he says. “Flipping the script, making wildlife photography and conservation more inclusive and diverse.”

Leader

Rifumo has become a key leader in this process. To date, he has delivered 60 programmes to 495 students. He manages and mentors four teaching assistants — all former students and previously unemployed. He also coaches young people in the WSO’s bursary programme.

The judges in the Young Environmentalist of the Year Award, presented by the London-based Chartered Institute of Water and Environmental Management, said they were “incredibly impressed by Rifumo’s drive, commitment and passion for promoting awareness of sustainability through his community work and photography, always working to inspire others.”

“It is clear Rifumo has committed his career and personal life to the cause, and has empowered others to make a difference too. His work is exceptional, and is clearly going from strength to strength, leaving a positive and long-lasting environmental legacy.”

In the same month, he won the Mail and Guardian Greening the Future Award in the Protecting Habitats category.

Judges were impressed by his striving to be a positive role model for young people — particularly those from impoverished communities — inspiring them to connect with nature.

This article was previously published in the Daily Maverick.

Hoping it all goes okay (left)

Photo: Rifumo Mathebula



Rotary online Auction Fundraiser

Lovelle Henderson

Some 13 months ago, Rotary Hoedspruit decided to venture into online auctioning, as a fundraiser for their next exciting community project.

The team corresponded with various members of the Hoedspruit community to source lots for auction. Before long they were stunned by the generosity in donating a diverse selection of items to put up for auction.

The selection of items was vast and included amongst others, a one-night stay at Safari Moon, exquisite glass vases from KUKU, a selection of paintings (still to be auctioned), an early morning nature walk with Professor Wayne Twine, dinner for two at Khaya Ndlovu Manor House, and a game drive and dinner at the luxurious Kings Camp.

The Rotary club had no knowledge of how to run an online auction, but Rotarian Sabine Gemmal did some research and set them on

their way. They soon felt quite enthusiastic as the online platform got sorted, and certainly when the auction donations started to arrive, logged, and monitored by club Secretary Monika Golightly, there was the sudden realization that this was certainly possible, and that the momentum was picking up.

The auction date was set, and Rhian Twine designed and prepared a suitable online prospectus, describing and pricing all the wonderful items which were to be auctioned. The million-dollar question was how much could be raised by the auction.

A big task was to ensure that the event was advertised and that everyone in the address books knew about the auction.

D-day dawned and the "operations room" was set up on Rhian's dining room table. Active bidding commenced immediately helping the team to "up" the final prices of items.

Of course, all the money raised has been allocated

to a good Rotary cause. The excitement grew and there was much banter in the operations room amongst the auctioneers - Rotarians Wilana Manderson, Rhian Twine and David Bertram, whose cool head and expert time keeping was great moral support. When the going got tough, double scoops of delicious ice cream was served!

After an exhilarating 5 hours of great fun and auctioneering, the final tally up was done and everyone was ecstatic, as the numbers far exceeded expectations.

Wilana Manderson our Rotary President commented that "It was a night to remember, and I can stop biting my nails now".

It was so successful that Fourways Main Reef Rotary Club sent a WhatsApp message saying that "Your auction was very well run, very entertaining and a great experience" - and they want Hoedspruit Rotary to teach them how to run their own online auction!

As soon as the funds are placed in Rotary's bank ac-

count, the lots will be released or vouchers explaining the winning bids will be sent to each participant.

Now you'll all have to wait for the next exciting event - the auction for all the lovely paintings.



Rotary President Wilana Manderson and Rotarians, David Bertram and Rhian Twine running the auction

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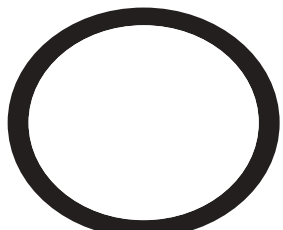
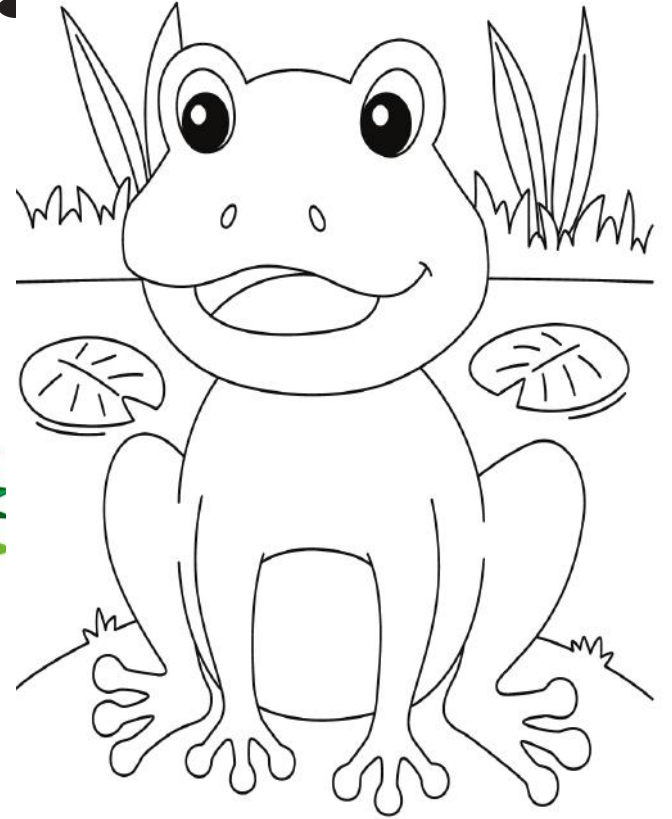


The life cycle of a frog...

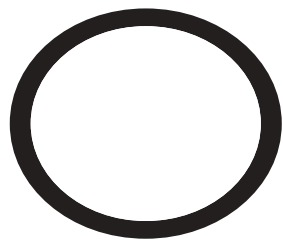
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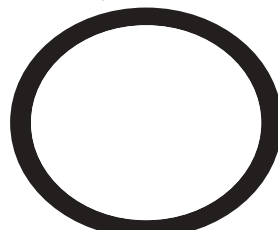
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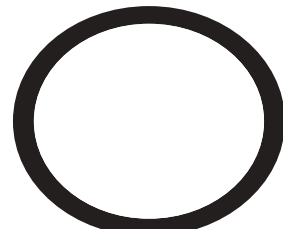
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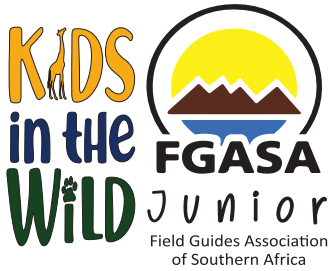
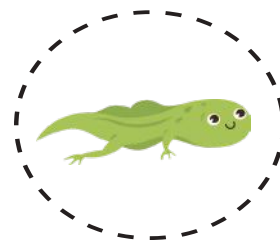
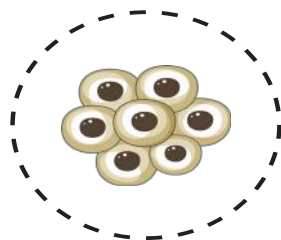
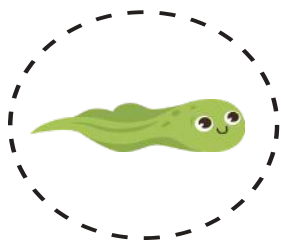


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