



November 2021 News

Hello Olifants community!

We hope you are all well. Summer is in full swing on the reserve, with the greenery increasing on a daily basis. November has arrived very quickly and we are all already planning for the festive season, with only 45 days to Christmas! We have not had as much rain in October as last year (Oct 2020 was an exception) but we expect an excellent rainy season this year nonetheless.

Enjoy the November Newsletter.

THE GAME DRIVE

October produced some excellent game viewing with a wealth of predator sightings. We have had large numbers of elephants on ORGR for September and October but these numbers have dispersed a little with the arrival of the rains. The Mopani woodlands attract these bulk feeders with their fresh new shoots. Migratory birds have started to return with most migrants accounted for; and although the Woodlands Kingfishers have been reported, they are not yet calling regularly. A Painted Snipe has been seen at Nkonkoni on several occasions and at Big Dam. We have had two elephant carcasses on Olifants caused by the train. This produced some excellent vulture viewing including Cape and Lappet-faced varieties. The two cheetahs have been on the property twice in October but the wild dogs have been mostly absent although three were spotted across from Unit 30 in the first week of November. Impalas are on the brink of giving birth with reports of the first lambs coming through from the Lowveld area.



Creature Feature: Eagles of Africa

Africa's iconic terrestrial predators – the three big cats, the African painted wolf, and the spotted hyena – are all wondrously proficient predators that fit neatly into place in their ecosystems. Tourists flock in their droves to admire the unique hunting styles that include coordinated killing, stealth and ambush, high-speed chases and remarkable displays of stamina. In the skies above these dramatic scenes, the avian apex predators soar. Sharp-eyed and fierce, African eagles bring unexpected death from above.

BIRDS OF PREY – THE ACCIPITRIDAE

When distinguishing between African eagles and other birds of prey, most guides (and likely most safari guests) are taught that the “true eagles” have feathers that extend to the foot. While this would certainly simplify matters, the exact definition of what constitutes an eagle is simultaneously broad and somewhat vague. It is a definition usually based on size and a rough description of “power”. Fish eagles, bateleurs, and snake-eagles lack the feathered legs of “booted” eagles, but ornithologists still consider them eagles. The term ‘eagle’ encompasses several different genera of large birds, some of which are not particularly closely related but all of which belong to the Accipitridae family. This is an enormous family with over 230 species of raptor, including eagles, kites, hawks, buzzards and Old-World vultures. At present, eagles can be informally divided into four subfamily groups: Aquilinae – “booted” eagles; Circaetinae – snake eagles; Harpininae – harpy eagles; Haliaeetinae – sea and fish eagles

“TWO EYES WITH WINGS”

The description of “two eyes with wings” was coined by Rochon-Duvigneaud about the pigeon but is no less applicable to eagles. They are sight-hunters, capable of spotting potential prey from several kilometres away. Most bird species have exceptional visual acuity, but eagles are probably at the top of the list. The reason behind this is two-fold: the physical structures of the eye and the brain's ability to process visual information. These physiological adaptations confer eyesight that experts estimate to be between four to eight times sharper than humans.

Like other raptor species, the eyes of eagles are approximately 1.4 times larger than birds of equivalent size and weight. The eyes are so large that there is little room for muscles to move the eyeball, which is the case in most birds. In addition, a sclerotic ring of bone holds the eagle's eye in place, and thus eagles need to turn their heads to view anything outside the peripheral range. Though the eyes are forward-facing, eagles can use both monocular and binocular vision, meaning that they can see straight ahead and to the side simultaneously. This is made possible by two foveae (humans only have one) in each eye – focal points consisting of clusters of specialised cells known as photoreceptors. On average, the retina of an eagle has roughly twelve times the number of cone cells as a human – photoreceptors that are associated with clear colour vision at high resolutions. They are also able to see ultraviolet light, which helps them detect urine trails on the ground.

Muscles in the eye itself can contract rapidly to change the shape of the lens, allowing the bird to focus on prey while diving. Their brains are able to resolve moving stimuli far faster than mammals, and they process that information exceptionally quickly. This is how birds of prey can navigate a forest hunt at speeds that would simply be a blur to the average human. A bony projection above the eye, known as the supraorbital ridge, is responsible for the typical raptorial scowl. Absent in owls, this ridge is believed to provide support and protection to the eye socket, as well as shading the eye while the eagle is in flight. The spin-off is that eagles give the distinct impression that they are deeply annoyed by everything and everyone in their vicinity.



FORMIDABLE WEAPONRY

Eagles generally use razor-sharp talons backed by the considerable momentum of their bulk to dispatch prey. Hurling out of the sky at speeds of over 100km/h, they collide with their unsuspecting quarry, often breaking the neck and spinal column instantly or penetrating the skull with a curved talon. The four-toed feet of eagles are specifically designed for this purpose, powered by strong muscles and covered in a thick, protective coating of scaly skin. The talon is solid bone, the distal phalanx (final joints) of the foot enclosed by the protective layer of keratin similar to fingernails. Three talons are forward-facing, while the fourth points backwards and secures a solid grip on struggling prey. This hallux claw is the first digit and is sometimes referred to as the “kill claw” because it may be used to spear prey or grip tightly enough to cause asphyxiation. Naturally, there are variations in its size depending on the habitat and hunting style of the African eagle species concerned. For example, crowned eagles (*Stephanoaetus coronatus*) are believed to have the largest hallux claw of any eagle. This may relate to the restrictions of the forest habitats they prefer. There are also anecdotal accounts of a martial eagle breaking a man's arm with its talons. (This account is chronicled in old hunting records and, as such, should probably be treated with the same scepticism given to fishermen recounting catch size.) The talons of eagles will be used during territorial battles, where two opposing eagles clasp their talons together and cartwheel through the sky, pulling out of the freefall at the last moment. This cartwheeling display was once believed to be courtship behaviour, but recent research suggests it is more likely related to competition.

LEADING LADIES AND DOTING FATHERS

Like most birds of prey, African eagles exhibit considerable sexual dimorphism, which is relatively standard in the avian world. However, unusually in the animal kingdom, the females are heavier and stronger than their male counterparts. No one is entirely certain as to why exactly. Still, several theories have inspired what one scientific paper refers to as a “passionate debate” that goes back centuries. Explanations include reduced food competition between the sexes (seldom born out by research and failing to explain why the male is not bigger) and the female being able to protect her nestlings from the male's predatory instincts. More recent theories lean more towards the fact that the female does most of the active guarding of the nest and young. As such, a heavier, stronger female has been evolutionarily selected. However, no one theory has received universal acceptance, and every approach has exceptions. African eagles are monogamous, and most species are known to form lasting pair bonds, where the males share much of the parental load. Even migratory species will reunite after a long journey to breed, though a missing or delayed mate will be summarily replaced. Mating pairs build the messy nest of twigs, formally referred to as an eyrie, and regularly reuse the same nest site (known as strong “nest site fidelity”). While the female incubates the eggs and guards the nestlings, the males will see that they are kept well-fed.

THE INEVITABLE DESCENT

Unfortunately for African eagles, humans present a far more significant threat to their survival than they do to ours. In recent decades, most eagle populations have suffered at our hands in one way or another. The dramatic fall in vulture numbers has been relatively well-documented in recent years, but conservationists are also raising the alarm for many other birds of prey, including eagles. The distressing decline has been particularly pronounced in West Africa but is widespread throughout the continent and has affected most of the larger raptors. The reasons behind this drop are likely diverse and can be linked to habitat loss, power lines and poisoning. Large eagles, particularly martial eagles, are also targeted by farmers who blame them for killing their livestock. As a result, a 2020 Red List update saw the bateleur, martial eagle, and secretary bird raised to the higher threat level of ‘Endangered’. Persecution at human hands is exacerbated by the fact that the larger, territorial eagle species naturally occur at low densities. Their reproduction rates are slow, and a breeding pair may only raise one chick every two years. It will then take a young eagle between six and eight years to reach sexual maturity. This makes it extremely difficult for African eagle populations to bounce back once their numbers begin to fall.



CONCLUSION

It is little wonder that African eagles are associated with powerful symbolism in religion, mythology and even heraldry. They are silent and deadly killers, devoted parents, and fierce combatants.

Conservation

BNR Annual Game Count Survey

The objective of this Survey is to present an as fair as possible indication of the total game numbers on Balule Nature Reserve. We require this useful information for numerous management functions performed across the protected area. The collection of data is obtained from the following functions undertaken on BNR this year:

- Predator census
- Rotary aerial census
- Fixed-wing photography count
- Avifaunal survey – Olifants river



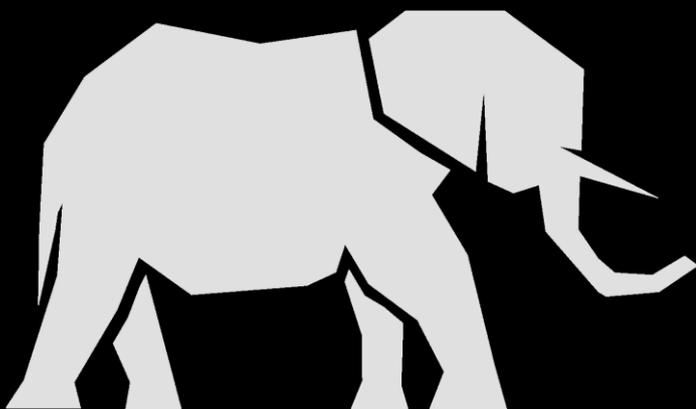
This report consolidates the data from these various surveys into one holistic picture for Balule Nature Reserve.

I have highlighted the elephant population statistics below as a point of concern. The decline of general game such as bushbuck, nyala, wildebeest, zebra, kudu, warthog and waterbuck are also concerning and are linked to very high predator numbers on the BNR landscape.

Klaserie and Timbavati have consistently estimated/counted their lion populations at approximately 50 animals (9 lions/10000ha) which is more or less equivalent to the densities found in the Kruger National Park (10-12 lions/10000 ha). At that stocking rate, they should have somewhere in the region of 60-72 lions. Balule has almost double the stocking rate at 124 (20 lions/1000ha).

Elephant population

The elephant population utilising Balule has increased by 86% in four years - an average increase of just under 22% per year. Currently, elephants account for 77% of the total biomass in BNR and 89% of the mega herbivore biomass. This is clearly not sustainable and will potentially affect the biodiversity on BNR significantly. As mentioned earlier Balule has 2-3 as many elephants as recommended under the current biomass levels.



The density North of the Olifants river increased from 7,4 animals per 1000Ha to 19,7 animals / 1000Ha. Besides the riverine areas, the majority of the veld is Olifants rugged veld which does not have high-quality grazing quality. Increased browsing intensity will add to the already extensive tree damage in these areas.

This will affect other species that compete for the same resources. Increasing elephant numbers can lead to a positive increase in the number of browsers and mixed feeders as they facilitate their access to previously unreachable browse and stimulate the coppicing of vegetation further increasing the browse availability. However, a tipping point can be reached beyond which the increasing population will negatively affect the browsers. Together with the high predator numbers, this continuous increase in elephants could be a factor in the overall decline and stabilisation of our other species (browsers & riverine).

BNR 2021 Game Count figures

Specie	Rotary aerial Census	Predator Census	Monitoring inputs	Total 2020	Consolidated Total 2021	% Change	% Diff 2018	Notes
African Wildcat	0	2		4	2	-50%		
Baboon troops	21			23	21	-9%		
Black Rhino	21		27	25	27	8%		1
Blue Wildebeest	46			107	46	-57%		2
Buffalo	376			266	376	41%		
Bushbuck	15			41	15	-63%		
Crocodile	30			29	30	3%		5
Duiker	16			30	16	-47%	-83%	
Elephant	1053			883	1053	19%		
Giraffe	272			249	272	9%		
Ground Hornbill	6			6	6	0%		
Hippo	140			131	140	7%		
Honey Badger	0	2		5	2	-60%		3
Hyena	2	96		91	96	5%		
Impala	7354			8326	7354	-12%	-37%	2
Jackal BB	1	16		18	16	-11%		
Kudu	386			490	386	-21%	-44%	2
Klipspringer	0		6	12	6	-50%		
Leopard	3	76		57	76	33%		4
Lion	17	124		137	124	-9%		
Monkey troops	10			8	10	25%		
Nyala	22			28	22	-21%		
Raptor nest	44			27	44			
Rhino	41			40	41	3%		
Sable	2			11	2	-82%		
Sharpe's Grysbuck	0		40	34	40	18%		
Steenbuck	19			22	19	-14%		
Vulture nest	31			11	31			
Warthog	104			124	104	-16%	-63%	2
Waterbuck	157			255	157	-38%	-54%	2
Wild dog	0	22		21	22	5%		
Zebra	201			271	201	-26%		

Last column added to show decline since 2018 for certain species

Balule census report – September 2021



Fire on Olifants

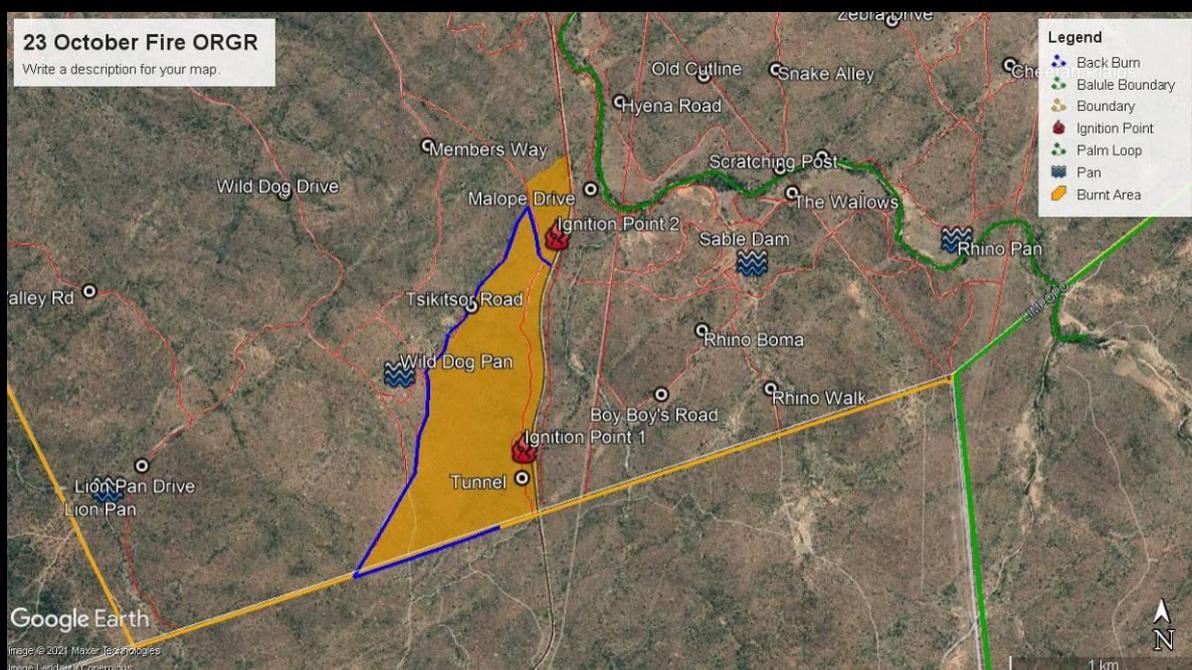
Around midday on the 23rd of October, our staff reported a small fire close to Neils Link along the railway line. We managed to extinguish this one fairly quickly and discovered another small one close to Warthog pan in between the railway line and the road. The second fire was also quickly put out using our water bowzers and fire beaters. We very quickly learned that there was a larger fire burning at Wild Dog Pan and responded with the full team and all the equipment available.

It turns out that one of the trains heading to Phalaborwa had a wheel malfunction which sporadically sent sparks into the bush. The first ignition point was close to the Southern Cutline, the second close to Sable Crossing, the 3rd at Warthog Pan and the 4th at Neils Link. (see below map) Luckily, the 3rd and 4th fires were also small and easy to contain. The first and second fires combined into a single blaze burning between the railway line and Warthog Pan. We reported the fire on the Balule group and had an excellent rapid response for assistance. Regions that assisted us to contain were ONGR, MRNR, York, Parsons and OWGR.

The wind direction during the fires was in a south-westerly direction burning towards the York Cutline. The fire jumped the cutline and burnt 5ha of York. We knew that the wind would pick up dramatically and change direction in the early hours of the next morning and made a call to light a back-burn (Blue Line on Map) to prevent any further spread of the fire. This proved to be an excellent choice as the following morning's wind would have rendered the fire uncontainable, without the back-burn. We extinguished the burning line on the northern burnside in the block which then created its own firebreak, preventing the fire from spreading northwards towards the airstrip.

We made a call-out to those on the reserve to assist and we had a great response with members arriving armed with their fire beaters to help with the backburn and monitoring the fire to ensure it did not jump a road. By 17:00 we had contained the burn and completed the back-burn. We monitored the block all night and had to extinguish several small flareups throughout the evening. At 03h30 the winds picked up and changed direction as predicted and we were prepared to prevent any further spread from flying embers. A total of 100 ha was burnt in ORGR.

Overall the operation was successful with enough assistance, staff and equipment to safely contain the fire. This burn will be an excellent test burn to monitor and will assist us in putting together our burning schedule for next year.



Predator Kill Records

BNR is starting to record the prey species that larger carnivores are taking down which is an important study to keep track of certain prey species such as waterbuck for example, which have experienced a population decline recently on Balule. This study can assist the ecological team to identify the reason for the shrinkage and if it is predator-related or another ecological effect. I would like to ask that you all report to me (on WhatsApp) any kills you may see made by hyena, lion, leopard, wild dog and cheetah. You can send predator species, prey species and a pin-drop to me on 082 9206826. Many thanks in advance.



REACHING OUT

As always, there has been a fantastic response to the call-out for various items required by Sigagule and Maseke and we have been able to provide loads of new clothing and shoes for young boys and girls. We also received asthma pumps, hand sanitizers, rainwear, crutches and paediatric health books for the clinic.



We have managed to collect an impressive selection of books for schools in the area which are battling to put together libraries. Thank you so much to all those who have taken time to support these causes.

The Gift of Joy!

We will be holding a Christmas party for offspring of ORGR staff on 23rd December and would be grateful for contributions to make this a special occasion. Gifts (with age and gender written on an attached label), sweets, crisps and cold drinks would also be most

welcome.

Please WhatsApp Susan Harwood on 0832282546 for info and updates on the list and for any information regarding donations.

As always, heartfelt thanks to all those who have donated so generously to the Balule Outreach Trust and to our dynamic APU team.

Should you wish to make a contribution and receive a tax relief certificate, herewith banking details. Together we can – and will – make a huge difference!

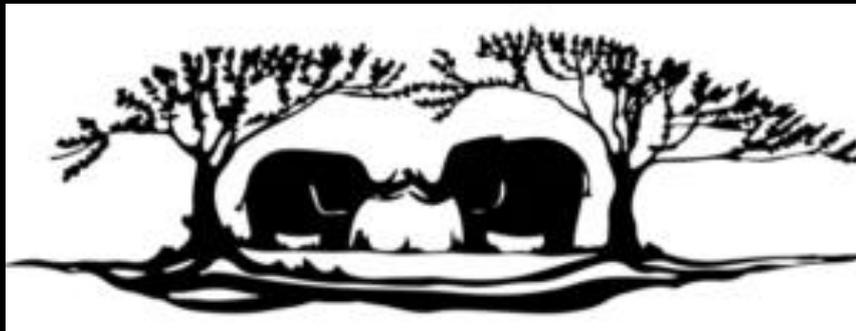


First National Bank (FNB), Bryanston, South Africa

Account number: 6233 678 7877 Clearing Code: 250-017

Swift number: FIRNZAJJXXX

Please reference EFT payments with your name/unit number



MEMBERS UPDATE

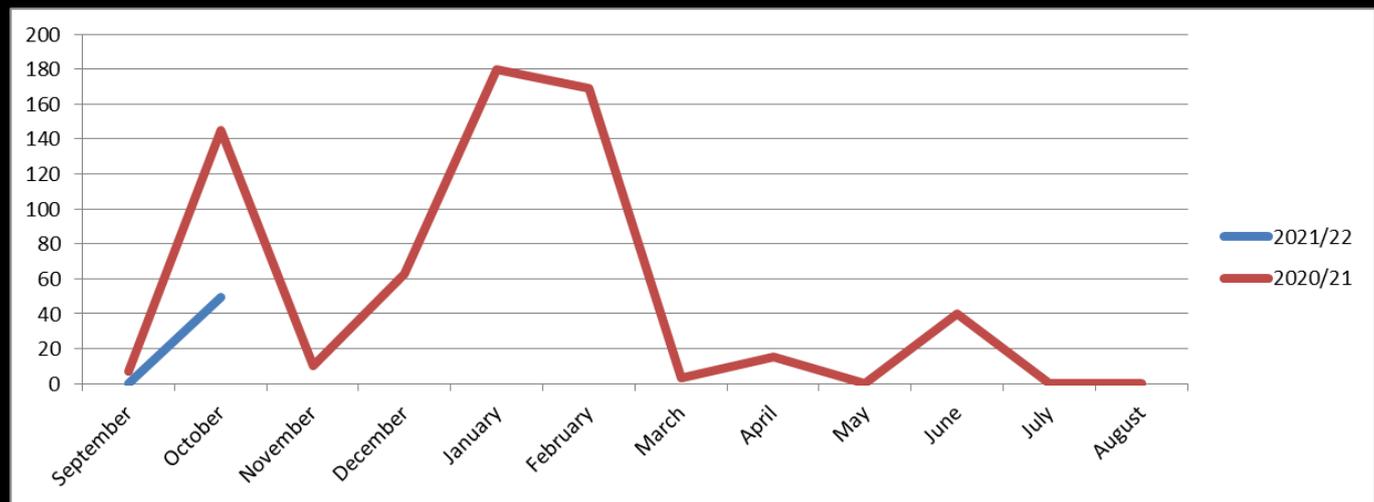


THE WEATHER REPORT

The El Niño–Southern Oscillation (ENSO) is currently in a weak La Niña state and the forecasts indicate that it will most likely remain so during early-summer. As we move towards the mid-summer season, ENSO starts playing an important role in our summer rainfall. As such, the increased likelihood of a weak La Niña during early-and mid-summer is expected to be favourable for above-normal rainfall in that period.

The multi-model rainfall forecast indicates mostly above-normal rainfall for the most parts of the country throughout the early-summer (NDJ) through to the late-summer (JFM) season. Mostly above-normal minimum temperatures are expected across the country throughout the summer seasons except for the central parts during early-summer where below-normal is expected. Mostly below-normal maximum temperatures are expected over the country throughout summer apart from the far south-western parts where above-normal maximum temperatures are predicted.

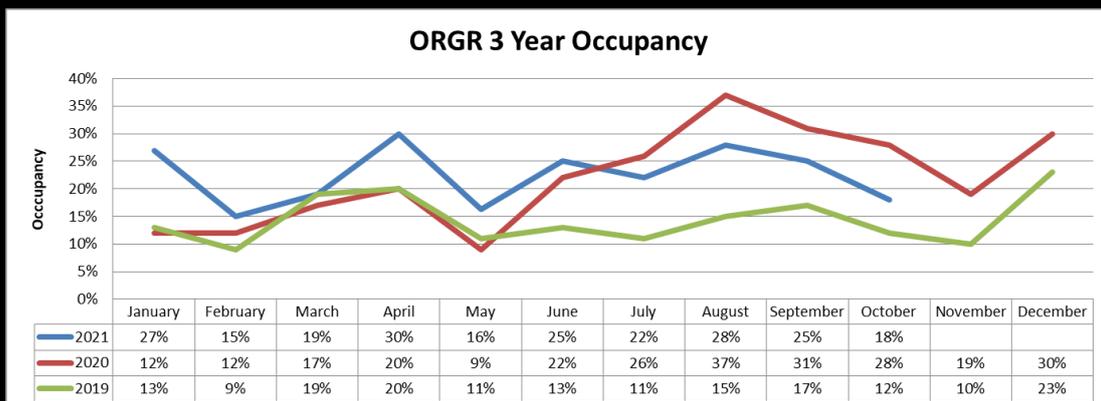
October received 49,5mm of rain compared to 145mm last year where the rainy season started very early with big rains. Our season total so far is at 78,9mm including the first week of November.



Rainfall 2020/2021 compared to the previous season

OCCUPANCY

October saw 18% of the units occupied on average during the month with 25 units in peak time and a low of 14 units in residence. Occupancies are still high but not as busy as the 2020 lockdown rush. The average occupancy for the last 12 months is 23%. We are expecting November to be a little quieter before the festive season kicks in during December.



November Night Sky In a nutshell...

Moon

04/11 23h14 New Moon
11/11 14h45 First Quarter
19/11 10h57 Full Moon
27/11 14h27 Last Quarter

Moon – Earth Relations

Perigee: 358 844 km on the 06/11 at 00h17
Apogee: 406 279 km on the 21/11 at 04h12

Planet Visibility

Venus is located in Sagittarius and is visible after sunset

Mars is not visible this month

Jupiter is located in Capricornus and is visible in the evening sky

Saturn is located in Capricornus and is visible in the evening sky

Meteor Showers

Several meteor showers are visible in November: the Orionids, the Southern and Northern Taurids, the Leonids and the alpha Monocerotids. The Orionids, which peaked in October, are active until the 7th of November. The Northern and Southern Taurids are active from the 1st of October until the 25th of November, with peak rates on the 12th (N) and 5th (S) November respectively. The Leonids are active from the 12th to the 21st of November, peaking on the 17th of November. The alpha Monocerotids are active from the 15th to the 25th of November, peaking on the 21st.

Some easy to identify bright stars

Rigel: blue supergiant in Orion
Betelgeuse: red supergiant in Orion
Procyon: yellowish white star in Canis Minor
Sirius: brightest star in the night sky, located in Canis Major
Antares: red supergiant in Scorpius
Arcturus: red giant in Boötes
Spica: brightest bluish-white star in Virgo
Canopus: yellowish-white star in Carina
Altair: a white star, brightest in Aquila
Regulus: blue-white star and the brightest star in Leo
The Pointers: Alpha and Beta Centauri



Infrastructure Updates



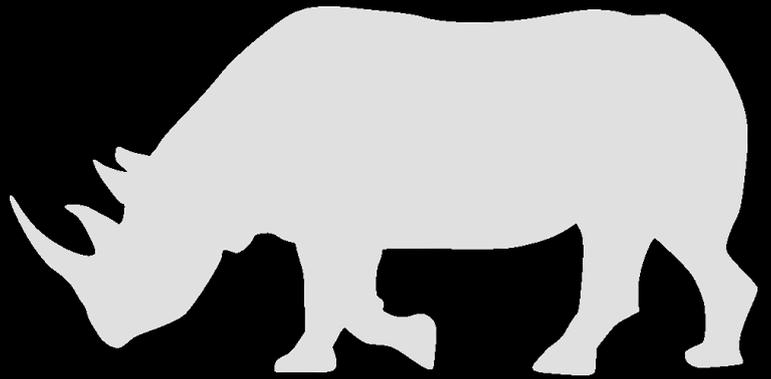
The conversion of the old ablutions to accommodation at the bottom compound is complete and there has been extensive work on the roof structures of staff accommodation to prevent leaking. The latte fence around the bottom compound has also been cleaned up and repaired from elephant damage over the last couple of months.

The Clubhouse deck over the river has been sanded and revarnished and we have cleared up all the remaining large logs under the Causeway to allow the river to flow freely with the upcoming rises in water level which the rainy season brings.

CAMPFIRE TALES – Callan and the three black rhino

By Callan Hartman

On the 6th of October 2021, I headed out for my usual morning patrol. At around 07:00 I came across fresh tracks of three black rhinos on the Entry/Exit road just before the turnoff to Marula Drive. The tracks were heading in a westerly direction towards Wild Dog Drive. I decided to follow up on foot. Due to the rain that had fallen the night prior, the tracks were quite easy to follow at first but with the terrain getting increasingly rockier, the tracking became very difficult and the pace slowed. I had now been on the tracks for about 45 minutes and still no luck. With the temperatures rising, I was about to call it quits and make my way back to the vehicle when suddenly I heard a noise to my left. I immediately turned and looked in the direction of the noise, but before I could make out what it was, two (mother and calf) black rhinos emerged from the Raising bushes!



They started running...not directly at me, but just to the left, about 10-15 meters away.



I quickly took cover behind a fallen Knob-Thorn and stood my ground. Suddenly the cow changed direction and was coming straight for me! I remained behind fallen tree as cover, but she quickly showed me that this was no such cover by crashing straight through it. At this point, I knew it was now time to run! With her in hot pursuit, I was running for my life and at the same time, was looking for trees to climb or something more solid to hide behind. To my horror, there were no trees in sight, just Raising bushes, but I did get a visual of a large termite mound about 20m away.

I managed to get to the mound in time, and placed myself right behind it, facing the oncoming rhinos! I could see that she was not letting up and that the "shield" was not going to stop her, so I took off again at high speed. She subsequently smashed through the termite mound (Photo on the left) and kept coming at me.

Now I really felt like I was running for my life! I knew that my only hope would be to find a tree to climb...when suddenly I ran smack bang into a black rhino bull. I mean... could this situation get any worse?! With nothing to lose I just kept running at the bull and screaming at the top of my lungs, which thankfully did the trick - and he promptly turned around and ran away!

With the cow and calf still on my tail, my focus switched back to finding a tree - and to my relief a small cork wood presented itself in front of me. I quickly got my ass up to the top of it! The cow and calf got to the base and huffed, puffed and stomped around a bit before finally running off into the bush.

Never in my life have I been so relieved to see the arse end of a rhino! Even though all three had moved off at this point, I was very reluctant, or terrified, should I say, to come down.

I stayed up in the tree for about another 20 minutes, just to ensure that they had left the area and it was safe to come down. Once back on terra firma, I made the very nerve-wracking walk back to my vehicle. Thankfully I got there safely - and that marked the end of one of the scariest encounters I've had in the bush to date!

Final Word

To end off this Month's Newsletter I share a short verse by Eshe Benson.

Africa

*they call her
the dark continent
though the sun shines
brightest on her
blue rain pours on her
every day
making nonsense
of her sun's toil*

Well, that's all for now, folks! Catch you for a sundowner at Sunset Plains soon!

Warm regards

Nick, the management team & staff

