

ISSUE 1

WELGEVONDEN

# TAILS

THE LATEST RESERVE UPDATES

PLACID PACHYDERMS

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Welgevonden collars two  
new elephant cows

A ROARING SUCCESS

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A novel approach to lion  
management

SAVE THE DATE

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Keep up to date with our  
2018 Environmental  
Calendar

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Family!

## WE'D LOVE TO HEAR FROM YOU!

If you have any inquiries, comments, suggestions, or would simply like to submit a letter relating to your experience at Welgevonden, feel free to contact us here:

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## Two Elephant Cows Get a Collar Upgrade

The Jennings family sponsor two new elephant collars



## Running on the "Wild Side"

Welgevonden team smashes the Marakele Marathon- and for a good cause too!



## Re-thinking Lion Management

Two female lions received unilateral hysterectomies in an attempt to reduce their rate of reproduction



## A New Approach to Anti-Rhino Poaching

All you need to know about Welgevonden's Wildlife Protection Project



# FROM THE EDITOR



If you are reading this, it would mean that the first ever issue of “Welgevonden Tails” has officially been published- a thought I personally find to be both daunting and exhilarating.

The introduction of this publication has been somewhat spontaneous and what was initially a trained ethnobotanist fiddling around with a free online publishing program, has turned into a tangible item for you to read and (hopefully) enjoy.

I was initially employed at Welgevonden Game Reserve as a Project Coordinator for a very exciting research project that will hopefully put a dent in the number of rhino poached per annum (see page 14). My position exposed me to the many exciting management interventions that occur regularly on the Reserve- and the lack of communication thereof.

For some inexplicable reason, I am extremely passionate about communicating conservation and environmental related topics and rendered my creative services to the Reserve in the hopes of informing the public of the many exciting events that occur here.

I have since taken over our social media platforms such as Facebook and Instagram, and launched a blog site that showcases (in thorough detail) recent Reserve research and management updates.

However, I do understand that all people are different and not everyone has succumbed to the hub-bub that is social media. How then, could we keep our “off-the-grid” members in the loop?

This is where “TAILS” comes in. This publication aims to bring relevant, up-to-date information straight to your (metaphorical) doorstep, making information accessible to anyone and everyone who is invested in our beloved Reserve.

So please, sit back and relax, prop your feet up and enjoy flipping through this entertaining collection of Welgevonden tales... or should I say, tails?

-JESS



# TWO ELEPHANT COWS GET A COLLAR UPGRADE

On an overcast morning on the 27th of February, Welgevonden's management team, in collaboration with Dr Peter Caldwell, expertly re-collared two elephant cows...



The elephants selected are both key individuals within their herds and had already been fitted with collars in 2006/7. However, these collars were lacking revolutionary GPS technology and an upgrade was necessary for improved monitoring and data analysis.

Once Matthew Thorp, the Reserve's elephant monitor, had successfully located the two herds browsing in the northern region of the Reserve, he and Dr. Caldwell took to the air in a helicopter where they located the first matriarch.

From this vantage point, the vet was able to dart the elephant with a concoction of anesthetic drugs, rendering the elephant unconscious for the purposes of the procedure.

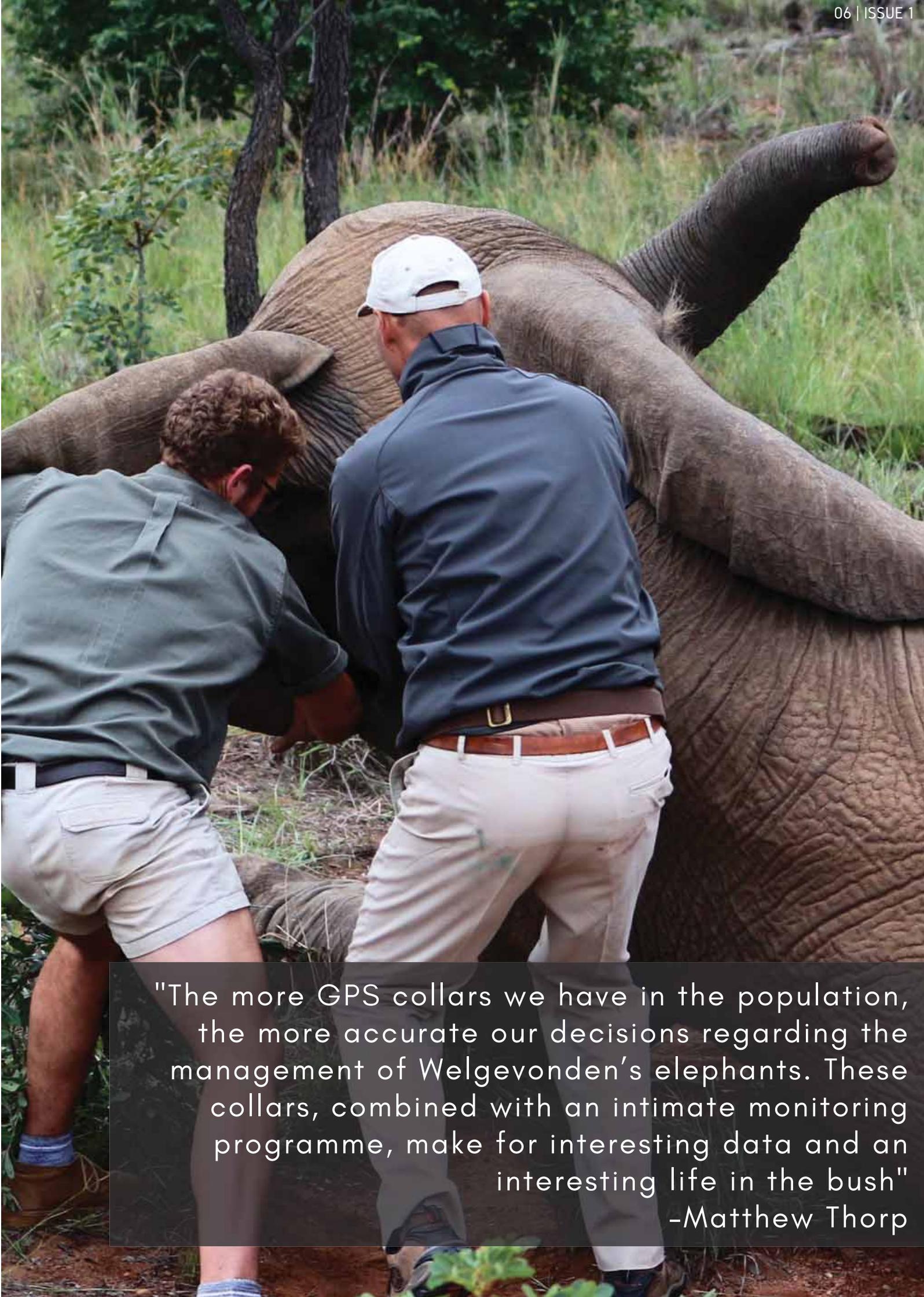
Once the elephant was down, Dr. Caldwell monitored the elephant's vitals during, enabling the management team to focus solely on the efficient fitting of the new collar as quickly as possible.

Once the elephant was collared, the vet proceeded to administer the reversal drugs, allowing the animal to come to and return to her feet. Although slightly disoriented, as we all are after being under anesthetic, the elephant managed to meander back into the thicket where she relocated her anxiously awaiting herd.

The second elephant collaring was just as smooth a process as the first, although on this occasion, Matt and Peter had to slip the collar over the large cow's ear while she was in the process of getting back onto her feet. Once the collar had been adequately re-positioned, the two men beat a hasty retreat back to the safety of the vehicle.

Welgevonden would like to thank the Jennings family (above) who kindly sponsored both elephant collaring procedures.

If you are interested in sponsoring an elephant collar, please contact Matthew Thorp at: [matthew@welgevonden.org](mailto:matthew@welgevonden.org)



"The more GPS collars we have in the population, the more accurate our decisions regarding the management of Welgevonden's elephants. These collars, combined with an intimate monitoring programme, make for interesting data and an interesting life in the bush"

-Matthew Thorp

# RUNNING ON THE "WILD SIDE"

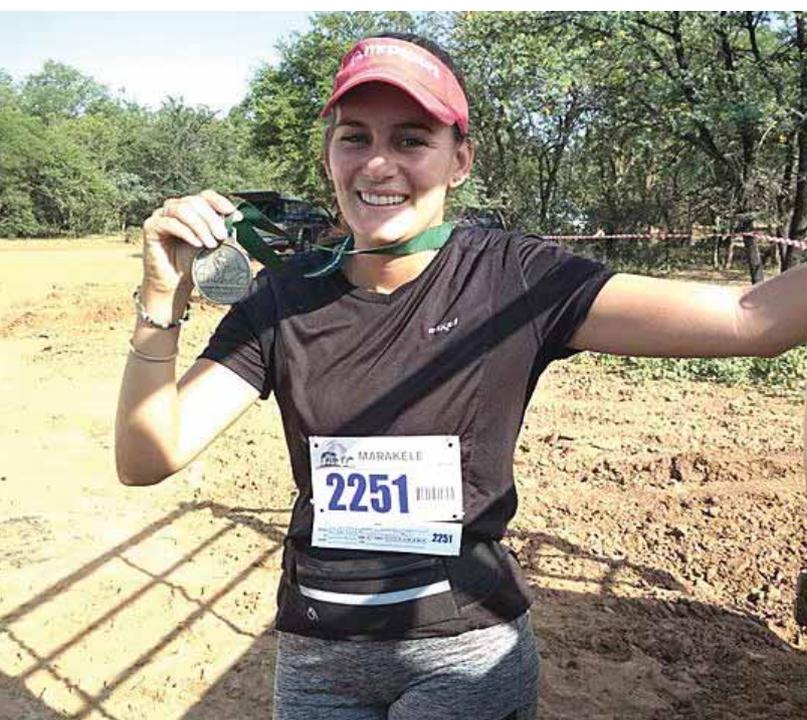


On World Wildlife Day, 5 March 2018, 7 members from the Welgevonden management team donned their running shoes and headed through to Marakele National Park for a "run on the wild side". Our passionate runners were not only running for sheer enjoyment, but to make use of the opportunity to raise awareness around issues such as the critical state of rhino and vulture poaching in South Africa.



Our marathon runners, "Running Rhinos", Bradley Schroder and Sam Davidson Phillips, finished their race in top form despite the 12kg rhino suits weighing them down for the full 42.2km.

Their constant companion in this endeavor was Pip Myram, who ran the entire race alongside the two suited Running Rhinos, providing much needed motivation towards the latter stages of the race.



Matt Thorp, Jess Oosthuysen and Carmen Warmenhove all completed their first half marathons in approximately two hours, while our WIL student, Craig Symons, put up a great performance during his 10km race.

The Welgevonden team would like to thank all who supported them on the day! Both the rhino and vulture fundraising campaigns managed to raise a fair amount of money that will go directly towards the conservation of these species.



# RE-THINKING LION MANAGEMENT



The African lion is, thanks to Disney and numerous other influential media platforms, commonly referred to as “The King of the Jungle”. Unlike Mufasa, wild lions are not very well educated when it comes to the “circle of life” and where they exist in large numbers within enclosed reserves, their impact on prey species can potentially be catastrophic.

Welgevonden Game Reserve experienced a devastating blow to their lion population in 2015 when both the Southern and Western Prides became infected with a virulent strain of canine distemper- a deadly virus that primarily affects the gastrointestinal, respiratory and neurological systems. Sadly, only one lioness managed to survive the outbreak.

With lions being a favourite tourist attraction and a vital element of the savannah ecosystem, Welgevonden made it a priority to bring lions back to the Reserve.

The Reserve was deemed safe in June 2006 and a total of 5 lions, of various origins, have been introduced onto the Reserve since then.

These lions have done well to repopulate the Reserve since their introduction- perhaps a little too well. The current 11 lions are extremely effective hunters and if management allows the population to continue growing at its current reproductive rate, there is likely to be a dramatic decline in the ungulate population in the near future.

Controlling wildlife populations is a challenging task for Reserve managers. With little to no opportunity for translocation, wildlife managers across the African continent have previously been forced to depend on strategies such as euthanasia and contraception in an attempt to control their lion populations.

Neither one of these approaches were considered long term options as they interfered with the natural social structure of lion prides and failed to deal with the causal mechanisms that underpin rapid population growth.

Although new and improved methods were under constant investigation, it was only in 2011 that a suitable alternative presented itself.

The female reproductive organs of many mammal species contain two uterine horns- these enable the animal to house large litters. Lions in particular are capable of giving birth to up to six cubs at a time.

What's more is that within confined conservation areas, the likelihood of all these cubs reaching reproductive maturity is extremely high.

In order to combat this high reproductive rate, South African veterinarians have pioneered a surgical procedure known as a "unilateral hysterectomy".

The ground breaking operation has since proven to be extremely effective and involves the removal of a single uterine horn from the lioness's reproductive system, ultimately reducing the amount of available space for the implantation of fertilised eggs and resulting in the production of one or two cubs as opposed to four or five.

In an attempt to curb the rapid growth rate of the current lion population, Welgevonden management, in association with Dr. Peter Caldwell, conducted this novel procedure on two lionesses from the "Southern Pride" earlier this year.





Two lionesses, one of which was the fierce female that survived the canine distemper outbreak, were darted and brought back to a make-shift “open-air” operating table in the southern region of the Reserve, and prepped for surgery.

The operation is a simple one, with only a small incision in the abdomen required to access the reproductive organs. Upon the completion of the relatively short procedure, the muscle layers are then neatly stitched back together, and suitable pain killers and vaccines administered. Management then returns the lioness back to the veld where she will awaken with little to no cognisance of the abdominal wound, and swiftly return to her pride.

A unilateral hysterectomy offers a unique opportunity to limit the number of cubs born instead of inhibiting the breeding process entirely. This is highly beneficial from both a tourist and management perspective as it ensures enjoyable game viewing for guests while still reducing the growth rate of populations and keeping pride structures intact.

Stabilising the lion population will allow various other species to flourish, ultimately maximising the overall biodiversity of the Reserve and promoting a healthy, balanced ecosystem.

# COMPETITION ALERT!

Submit your favourite photo taken at Welgevonden to [jessica@welgevonden.org](mailto:jessica@welgevonden.org) OR tag us on Instagram at [welgevonden\\_game\\_reserve](https://www.instagram.com/welgevonden_game_reserve) and stand a chance to be featured in the next issue of TAILS!



This adult bull had been suffering from some severe external injuries - potentially after an aggressive encounter with another bull. This behaviour is perfectly normal and male rhino's are known to fight over territorial space.

However, with the current IUCN status of rhino species', it is imperative that we promote the health and well-being of each and every individual within the population.

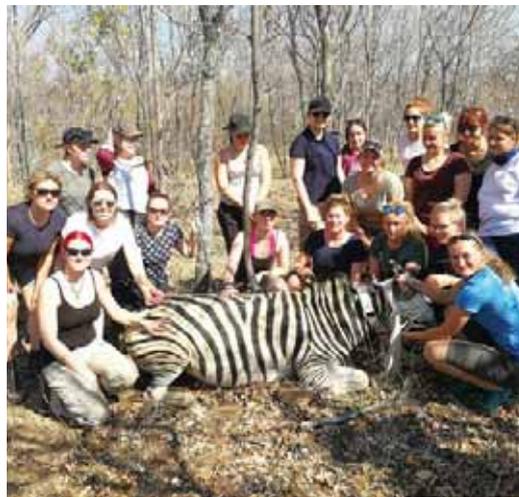
Our Anti-Poaching Unit, the Welgevonden Research Centre, and local field guides are highly involved in monitoring the condition of these magnificent mammals.

Upon noticing the poor condition of the rhino, local vet, Dr. Pierre Bester, was called in to attend to these injuries - ensuring a speedy recovery for the feisty bull.



# A NEW APPROACH TO ANTI-RHINO POACHING

All you need to know about Welgevonden's Wildlife Protection Project



Welgevonden Game Reserve is unique in that it collaborates with various external parties to oversee and implement a number of exciting, conservation related research projects. One such example is the Wildlife Protection Project. This project aims to utilise the behavioural changes of a set of collared herbivores as a sentinel to detect poaching activity, rhino poaching in particular, within a protected wildlife area.



## CURRENT POACHING FACTS...

Since 2007, the number of rhino poached in South Africa per annum has increased from 13 to a staggering 1 028! This increase correlates with the high demand for rhino horn in Asian countries where it is wrongly believed to have medicinal properties capable of curing a range of serious medical ailments (among other uses). In reality, rhino horn consists of nothing more than keratin (the same material that makes up human hair and fingernails). If rhino poaching continues at this rate, it is highly probable that Africa's rhinos may face extinction in the foreseeable future.

## WHAT WE'RE DOING ABOUT IT...

Recent research conducted by a number of esteemed ecologists from Wageningen University suggests that prey animals are likely to alter their normal behaviour upon hearing, smelling or seeing a potential predation threat. The (currently unpublished) data suggests that the presence of a predator will trigger an immediate response from prey animals, usually causing them to increase their speed and alter their spatial distribution.

The fact that animals increase their level of vigilance and flee from an area that poses a potential threat is quite obvious- survival of the fittest right?

But this information sparked a very intriguing idea: what if these behavioural responses were not limited to animal predators only? What if these prey species' responded the same way to a human disturbance within the veld?



Is it possible that the animals would also flee from a guide walking with his guests on a bushwalk, or more importantly, a group of poachers on their way to an unsuspecting rhino?

This concept has since fueled the idea of using predictive analytic technologies in an attempt to combat rhino poaching; prey-animal behaviour will be used as a sentinel to detect suspicious human activity within a protected game reserve, making poaching activity so easy to predict that it becomes practically impossible.

## HOW DO WE KNOW IT WILL WORK?

In the hopes of proving this concept, the Wildlife Protection Project goes about tracking the movement of a select number of ungulate species. With the exact whereabouts of the rhino kept secret, the analysis focuses on the response of these prey-animals to 5 different human disturbance experimental scenarios within Welgevonden's 1,200ha breeding camp.

These experiments encompass a variety of typical tourist activities within a reserve such as a guided game drive or bush walk, but also test for animal response to more stealthy behaviour such as hunting or hiding in the bush.

In order to collect these movement data, a total of 134 ungulate species were fitted with specially designed animal collars. These collars are embedded with a GPS and an accelerometer that collectively record movement related data and sends them directly to the university via the recently established LoRa network within the Reserve.





This, coupled with human disturbance data, is analysed by ecologists from Wageningen University who will develop rule based patterns, or algorithms, based on the prey-animal's response to the various perceived human threats.

## WHAT ABOUT PRACTICAL APPLICATION?

The model generated from predictable responses of prey-species to various human induced disturbances will highlight any suspicious activity within a reserve. Not only that, but it should also indicate the speed and direction of the disturbance. This pre-emptive element will improve the efficiency in which anti-poaching units are able to locate, intercept and detain intruders within the reserve, ultimately saving both animal and human lives in the process.

That being said, there is no guarantee that this project will spell the end for rhino poaching in its entirety, but we hope it will make a large impact on the number of rhino poached per annum. It is projects like these, along with environmental awareness, community involvement, and international cooperation that will eventually put an end to the rhino war.



"I don't believe that we as humans have the right to destroy, but rather the conscious capacity (and hence responsibility) to preserve and protect the environment.

- Jessica Oosthuysen  
(Wildlife Protection Project Coordinator)



## SOME THOUGHTS ON VISITING WELGEVONDEN

I had the pleasure of meeting Andrew Lahman earlier last year during his visit to Welgevonden- an obvious veteran of adventure and a man of exceptional character. He has since remarked that his visit to the Reserve was one of the best experiences of his life.

Upon agreeing to write a short piece on the trip for "Tails", I had expected the keen journalist to document the pristine scenery, interesting animals, and the phenomenal sunsets that were witnessed over that weekend. However, he has since written a very enlightening article from an angle that I least expected...

-Andrew Lahman

When I was asked to write something about my recent visit to Welgevonden Game Reserve, the lyrics of the Joni Mitchell song "Big Yellow Taxi" came to mind.

"They took all the trees  
And put them in a tree museum  
Then they charged the people  
A dollar and a half just to see 'em"

The visit to Welgevonden contributed to the gradual change of perception that I have been undergoing over the past decade or two. I'm 70 years old and grew up in Cape Town with a mountain on one side and the sea on the other. Weekend recreation consisted of walking up Table Mountain or a day on the beach or going out of the ocean in a boat.

The world of flora and fauna was something I took for free, then. No one charged me money to walk up the mountain or go swimming at Muizenberg. My unquestioned perception then was that the great outdoors was a free good. So I was very interested and intrigued to visit Welgevonden, which is first and foremost a business. This was the first time I have seen a fully commercial wildlife and tourism operation up close.





My host, Matthew, has been very busy over the last couple years training as a conservationist. It is something he is passionate about and very well suited to. About two years ago, he was fortunate enough to be offered employment at Welgevonden. Then more recently, he was chosen by Welgevonden to undertake a two-year research project into the elephant that roam this extensive reserve. During a leisurely drive around the reserve, he explained how it operates.



What I gather is that the game reserve is divided up into a number of areas. Each of these areas is leased to a number of independent companies, who are permitted to put up a guest lodge on the reserve. Those wanting to gain access to the reserve have to be a guest at one of these rather upmarket and expensive lodges. Guests need to leave their vehicles parked at the gate and be fetched by one of the lodges as no private vehicles were permitted on the reserve.



However, the management of Welgevonden retains the right to manage the reserve in its entirety and each of the lodges has to abide by the rules laid down by overall reserve management. The lodge buildings are cited in such a way that their presence is discrete and their visual impact limited. The Welgevonden business model is one where lodges derive revenue from the guests and a percentage of this is paid to the company managing the reserve.

For those of us who are over 50, for most of us a game reserve experience was limited to trips to the Kruger National Park. One could pay some money at the gate and go and wander around the park and even stay over for a night or two. I have no idea how the business model of the Kruger Park worked – then or now – but it struck for even then, that the income from day tripping tourists was insufficient to fund the operation of extensive infrastructure such as Kruger.

How do you derive sustainable income from an extensive land area– in the case of Welgevonden, 340 km<sup>2</sup> – that due to the climate and the soil type is not suited to crop agriculture?



As a reserve, Welgevonden has got a lot going for it. First of all, being a very sizeable piece of ground, means it is possible to have a reasonably complete spectrum of wildlife living on the reserve. In addition, the reserve is sited on the edge of the Waterberg massif. This means that the topography of the reserve is varied and is characterised by many picturesque hills and valleys. Very scenic.

There are a couple of things about Welgevonden that impress. For example, there are a number of other researchers looking into various aspects of this reserve. This says to me that Welgevonden is continually trying to improve the management of the asset and is prepared to reinvest substantially to do so.

On Sunday afternoon, Matthew took us for a long drive around the reserve. Apart from the pleasure of being out in this fairly pristine environment, the state of the infrastructure - roads and fences - attested to professional management practice.

If one drives around Kruger Park, one is often in the company of other vehicles.

During the four-hour tour of Welgevonden, I most probably saw three other vehicles - all official game drive vehicles with neatly uniformed rangers. There is something contemplative in the enjoyment of the solitude to be found away from the urban crush. It's not something one necessarily wants to share with a multitude.

Many years ago, a conservationist said to me: "Conservation has less to do with the preservation of wildlife and more to do with the preservation of human beings."

After the visit to Welgevonden, I have gained further insight into the wildlife business and that sustainable preservation has to have a sound financial footing. Unfettered access to wildlife and its habitat is a thing of the past, however, Welgevonden provides a viable alternative to putting trees in tree museums.

As population growth places increasing pressure on wildlife environments, organisations such as Welgevonden are going to be playing an increasingly vital role in the preservation of wildlife and, ultimately, us humans too.

2018

# ENVIRONMENTAL CALENDAR





# WELCOME TO THE FAMILY

Meet the newest members of the Welgevonden Team

## Thinus Steyn

Finance and Administration  
Manager

Thinus started his finance career in Johannesburg working at a medium sized audit firm while studying for his Bachelors of Accounting Science degree through UNISA, completing it in 2013. He completed his Postgraduate Diploma in Accounting Science in 2015. Thinus is currently continuing with his studies to become a registered Chartered Accountant.

Thinus has always had a love and passion for nature and numbers, he was appointed as the Financial and Administration Manager of Welgevonden in December 2017.

## Moji Kitsi

Environmental Awareness  
Programme Co-Ordinator

Moji was born and raised in Maboloka near Brits in the North-West province, where he matriculated in 2001. He started working as a welder in Brits immediately after high school, yet this didn't diminish his childhood dream of working with wildlife. He has since worked in various fields, including anti-poaching.

Moji was employed by Welgevonden to manage and coordinate the newly launched Environmental Awareness Programme which has been designed so as to expose underprivileged, local communities, specifically school children, to the greater network of wildlife related activities and companies within the Waterberg region.

UP NEXT...

ISSUE 2

WELGEVONDEN

# TAILS

THE LATEST RESERVE UPDATES

LEARN & CONSERVE



An inside scoop on  
Welgevonden's  
Environmental  
Awareness Programme

EARTH DAY



Welgevonden's guides  
showcase their best  
photography

DAZZLING DAMSELS



A brief look into the  
Waterberg Dragonfly  
and Damselfly survey

