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RHODES UNIVERSITY
Where leaders learn

The Spekboom

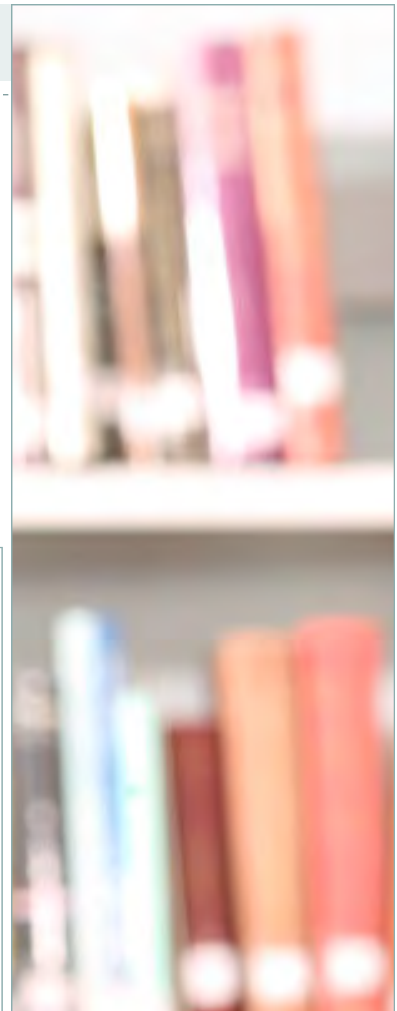


DES WELCOMES DR LU-AMBO RAMARUMO

Luambo Jeffrey Ramarumo was born in a small rural village called Motlonwaneng, in Mpumalang Province. When he was three months old, he then relocated with his parents to Murunwa Village, in the Vhembe Biosphere Reserve, Limpopo Province. Luambo started his primary education in Nyatema Primary School, and his secondary education in Mathede Secondary School where he matriculated in 2006. Luambo completed the following degrees from the University of Venda: BSc in Conservation and Biodiversity, BSc Honours in Botany and MSc in Botany. His Honours and Master's re-

search projects focused on invasive botanical resources. In May 2022, Luambo graduated with his Ph.D in Ethnobotany from the University of Fort Hare where his doctoral research project focused on utilization and conservation of threatened botanical resources.

Luambo is the second born from his Mopulana Mother and Venda Father. His love for plant science and ethnobotany was invigorated by his late Mopulana Grandmother by the name of Sekgakwane Monareng, who was also a Traditional Medicinal Practitioner, specializing in Infants Health Care. From the tender age of four, Luambo use to accompany his late grandmother, when she was going to collect her herbal medicinal materials for treating various infant ailments. Growing up in a village, where people mostly depend upon their surrounding natural resources has enabled Luambo to gain indigenous knowledge and to learn about the technology associated with utilization of botanical resources, indigenous conservation, ethnobotanical values and bioprocessing of botanical resources into various indigenous bioproducts.



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WHOSE AFRAID OF THE BIG BAD TREE? BY CHARLIE SHACKLETON



Most, if not all, of the contributors to and readers of the Spekboom newsletter are environmentalists to their core. And as such we generally support any initiatives to promote, conserve and maintain biodiversity in its myriad forms and manifestations, from protected areas, to conservancies and stewardship programs, to litter and invasive species removals, through to tree planting and urban green spaces.

Urban greenery in general is a core ingredient in urban social and environmental wellbeing, a dynamic that is currently insufficiently recognised in urban planning frameworks and approaches in South Africa. It also indicates that if urban greening is to be promoted as a strategy towards urban sustainability and citizen wellbeing, then some innovative and long-term interventions are required to temper the fear of treed streets and parks commonly expressed by many urban residents in South Africa.

However, as we are well aware, not all South Africans are die-hard environmentalists, and hence environmental viewpoints and programs can be a cause of opposing views and preferences, disagreement

and at times even conflict between opposing factions. Take for example the physical violence against, and even murders of, environmental activists opposing certain mining developments, or public protests against removal of invasive alien species.

As environmentalists most of us are in favour of urban greening because it offers so many benefits to the wellbeing of urban citizens, as well as supporting biodiversity in the concrete jungle. However, as with many environmental initiatives, not all would agree with this perspective. Indeed, in many parts of the world, including South Africa, there is a widespread fear and perspective that trees in public urban spaces, such as parks and along streets, are associated with increased risks of crime. Holders of these views argue that trees or dense greenery provide hiding places for criminals from which they either jump out and rob pedestrians (or worse) or secretly watch one's property and plan how and when to burgle it.

Despite this globally pervasive feeling, the bulk of the literature internationally shows the opposite, namely crime rates are lower in greener areas. There are a number of competing theories as to why this might be so, which is beyond the scope of a newsletter article. However, as with many research fields, the literature is dominated by studies from Global North countries, which are generally characterised by quite low crime rates on average (but recognising there are marked spatial disparities in urban crime rates (and greening)).

In contrast, South Africa lamentably experiences some of the highest crime rates in the world, which perversely allows examination and testing of the relationship between urban greening and crime at "the extreme", so to say. This is what we did and reported in a recent paper led by Zander venter published earlier this year (Venter et al. 2022 in *Science of the Total Environment*, 825: 154005 DOI: 10.1016/j.scitotenv.2022.154005). It is one of only a very few studies of this rela-

tionship from a Global South country and the first to do it at a national scale.

Crime incidence data were obtained for every police station in the country from the national database maintained by the police services, and the different types of crimes then aggregated into three, i.e. violent, property and sexual crimes. The level of 'greenery' per policing area was then determined via remote sensing, using three indices, namely, % total green space (i.e. all green surfaces in public and private settings), % canopy cover and mean distance to a public park.

What did we find? Despite several confounding variables, the following key patterns emerged. First, that the % of total green space was associated with lower violent and property crimes. There was no relationship for sexual crimes. Second, there was a positive association between the extent of tree cover with property crime but a negative association with violent crime. Third, locations closer to public parks experienced higher property crimes, but not violent or sexual crimes. Fourth, there were a number of interactive effects that warrant consideration, that are discussed in the paper.

Thus, using the broadest measure of greenness, i.e. % total green cover, this work echoes the common finding in the general literature that greener areas experience lower crime rates. However, this relationship does not hold, and may even be reversed, when more specific measures of greenness and specific crimes are used, such as proximity to urban parks and tree canopy cover. This is explained by the higher property values adjacent to urban parks and in greener neighbourhoods, and that higher value properties are more attractive to would be thieves because of the concentration of assets to steal and sell.

Additionally, affluent people are more likely to report property crimes to the police than are poorer households, because they require the police case number for insurance claims. In terms of parks, other literature indicates that the maintenance and safety features in a park have a strong bearing on whether it and neighbouring residential properties experience significant crime rates or not. In other words, neglected parks are associated with higher crime rates than are well maintained and secure ones.

DEO APPOINTED AS THE DRC'S KAHUZI-BIEGA PARK DIRECTOR



Deo Kujirakwinja completed his PhD at Rhodes University at the Department of Environmental Science in 2018 under Prof. Sheona Shackleton and Dr. Alta De Vos' supervision. After his PhD, he was appointed as Country Technical Director for the WCS-DRC Program where he was supporting three projects including the Kahuzi-Biega Park. With

changes happening in the management of protected areas in Central Africa, WCS has signed the Public - Private Partnership (PPP) with ICCN. Deo was then appointed as Kahuzi-Biega Park Director on the 15th April by the DRC Protected area Agency (ICCN). Deo is responsible to improve the management of the Park. He will be managing more than 300 staff including rangers.

Kahuzi-Biega National Park (KBNP) was gazetted in 1970 and extended in 1975 and it is one of the five world heritage sites in DRC. KBNP is located in the eastern DRC and covers 6,000 sqkm with tropical forest and rivers. It is one of the important protected areas that protect Grauer's gorillas (*Gorilla beringei graueri*), which are endemic to the eastern DRC. Years of civil unrest in the Democratic Republic of Congo (DRC) have taken their toll on both the eastern lowland gorilla and the mountain gorilla. The eastern lowland gorilla makes its home in lowland tropical rainforests in the eastern DRC. In the last 50 years, its range has decreased from 8,100 square miles—about the size of the state of Massachusetts—to about 4,600 square miles today. This subspecies may now occupy only 13% of its historical range.

There were nearly 17,000 eastern lowland gorillas in the mid-1990s but scientists estimate that the population has declined by more than 50% since then. An accurate accounting of the animals has been impossible for many years because of violence in the region. Other than these gorillas the Park conserves other key and endemic species such as elephant and chimpanzee. However, it is threatened by human activities as well as insecurity with the presence of armed groups.

MORE INFO ON

GRAUER'S GORILLAS

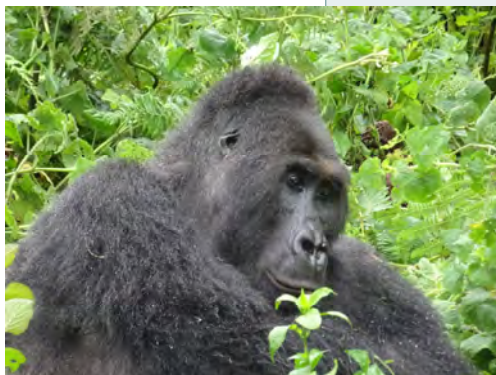
The eastern lowland gorilla—also known as Grauer's gorilla—is the largest of the four gorilla subspecies. It is distinguished from other gorillas by its stocky body, large hands and short muzzle. Despite its size, eastern lowland gorillas subsist mainly on fruit and other herbaceous materials, just like other gorilla subspecies.

Gorillas move around in family groups that can range from a couple of individuals to more than 40 members. A dominant male leads and holds the position for years.

Charismatic and intelligent animals, gorillas share 98.3% of their DNA with humans. They are our closest cousins after chimpanzees and bonobos.

Adult male gorillas weigh up to 440 pounds and can reach a height of six feet when standing on two legs. Mature male gorillas are known as “silverbacks” for the white hair that develops on their back at about 14 years of age.

Females have a gestation period of 8.5 months and nurture their young for several years. Generally, females give birth to one baby every four to six years. This slow population growth makes it harder for gorillas to recover from any population decline.



SES METHODS “HACKATHON” BY ALTA DE VOS



Hackathon participants at work (above and below)



Feedback and chairing sessions (above and below)



Some content ideas for the SES methods website



Over the course of three sunny days in Stockholm, a group of over 50 researchers and students came together with one goal: to improve the accessibility of methods related to social-ecological systems. The Centre for Sustainability Transitions (CST), in collaboration with the Stockholm Resilience Centre (SRC) and Rhodes University, recently hosted a “Hackathon” for an exciting new SES Methods website. This new website is envisioned as a research commons- with researchers all over the world working together to create useful resources related to Social-Ecological Systems (SES) methods.

The SES field is often very wide-reaching, covering numerous focal topics, and so by necessity, needs a large number of methods for its study. However, many SES researchers are often only trained in a few select methods that they have had direct experience with. This is especially true as many researchers come to the field with either a natural science or a social science background, with little bridging background between the two. This problem was tackled by the *Routledge Handbook of Research Methods for Social-Ecological Systems*, published last year, which was edited and authored by a number of CST researchers, as well as collaborators around the world.

The new SES methods website now aims to extend the reach of this book, by making short visual resources, such as summary videos of different methods, available to all. Improving resources for teaching methods is another key goal of the project, with the website aiming to provide a teaching activity for each of the 28 groups of methods explored in the book. Other exciting components include videos exploring the foundational concepts of SES systems, as well as a list of datasets useful to researchers.

The hackathon was planned with three principal goals in mind- firstly, to bring a wide range of researchers together with dedicated time to create content on the methods they work with; secondly, to create a space for new collaborations between the CST, the SRC and Rhodes University; and finally to test run the idea of “hackathons”, and see whether this is a viable strategy that could be used by anyone who would like to get involved in the

SES methods website.

We started the first of the three-day Hackathon with an introduction to the concept of the website, why it would be a useful resource and by discussing what formats would be best to present these concepts. The participants then split up into groups, each working on a particular set of methods. The rest of the day was spent discussing what type of products the groups would like to make, either individually or as a group. We ended the day with a fun garden party, with everyone coming together to get to know each other.

On the second day of the hackathon, we started the morning with a presentation by Owen Gaffney, the director of international media and strategy at the SRC. Owen talked through how to communicate your messages clearly and accessibly, to all audiences. After this inspiration, everyone got down to work- discussing and researching the best way to present products and starting to create the different materials- whether this was using a slide presentation or creating a new teaching activity summary. Our second day ended as socially as the first- with a dinner for everyone attending.

Our final morning was spent by groups finalizing their content, and in a feedback and sharing session. Everyone gathered on the grass to share what they had learnt over these three days, and importantly, suggest ideas on how to improve this process. The hackathon feedback suggested that it had been a creative, inclusive and welcoming event, with key feedback being the fact that this event provided the opportunity for connecting about methods across multiple topics, and for students to learn from senior researchers. We will now take a number of suggestions forward to make a guide for running other hackathons around the world.

We would like to thank Erasmus + and Resilient Waters Project for funding for this event, and all participants for their creativity and hard work.

The [SES methods website](#) is now live.

[Handbook on SES methods](#)

TILL SUMMER SCHOOL IN GERMANY BY ENYA MUNTING



TRANSECTS Transdisciplinary International Learning Laboratory (TILL)

When I saw a funded opportunity to learn more about transdisciplinary research practice and to go to Germany at the same time, I jumped at it. It looked like an experience that could enrich my life and my education in a big way, and I wasn't going to let such an opportunity pass without trying my luck! Well, my luck held and I was chosen, alongside some other South African students, to travel to a small town called Lenzen in the Elbe-Brandenburg Biosphere Reserve in the least populated part of Germany, where I could even see the Milky way! Here I would meet an international group of students and mentors from Germany, Canada, France, and South Africa, and play a role in answering some important questions about the Biosphere Reserve. We had a few Zoom meetings beforehand to get everyone up to speed on transdisciplinary research practice and some research methods that we could choose to use if we liked them, and then we were off!

When I arrived, I expected a classroom and a timetable, because that was what education has always looked like to me. I was amazed when I started to realise that these people were reinventing education to allow us to have as much freedom as we possibly could, even though we had a jam-packed program. We were encouraged to go into the field and collect not only the interviews that they had arranged for us but also to conduct any other interviews we could, and to use all our senses to

understand the environment that we were working in. We were allowed immense freedom with our research, including how we interpreted the questions posed to our groups and how we chose to answer them. The mentors were there to give us guidance when we needed it, but never forced their ways of doing things on us, rather allowing us to develop our independent ways of doing that worked for our groups. This allowed us to learn from each other as much as from our mentors and in all honesty, it was a huge lesson in transdisciplinary research practice to see how much better it feels to work in a self-directed environment when you're on a team doing important work!

The education that I received at the summer school was one that is incomparable to any that I have experienced in my lifetime. As someone who has never felt truly at home with the strict and boxed-in ways of doing that are so common in a "normal" education, this experience was one which gave me hope for a kinder and more inclusive education system. I felt that I learned more in these two weeks of self-directed, curiosity-driven work on real-world problems than I would have in the same number of weeks anywhere else. Furthermore, the results of our work were important, and we had a Biosphere Reserve manager listening to all our presentations and taking careful notes so that he could implement any feasible suggestions we made. This was an education that had an impact on both those being educated and those doing the educating. The only thing that was more meaningful to me than the unique education that I received was the beautiful souls that I met at this summer school - a group of people who I will never forget and who will always have a place in my heart for the way that they love and care for our Earth and the people who inhabit it. I am eternally grateful for this opportunity, and I can say with certainty that I am a much better researcher because of the fact that I could attend such an amazing summer school!



REBECCA GOES TO CAMBRIDGE

By Rebecca Farquharson

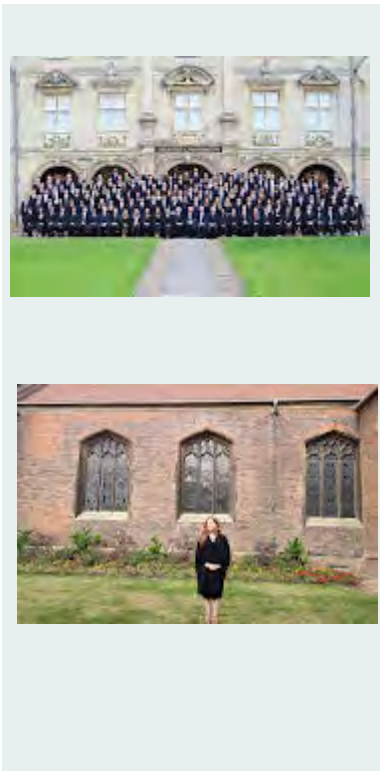
I have officially started at Cambridge to read for my MPhil in Holocene Climates.

December has just begun, the Christmas lights are all up, and its completely freezing here. However, Cambridge remains beautiful: swans on the Cam alongside my college (Magdalene), autumn leaves almost all fallen, Christmas lights are up in the Porter's Lodge, and we have a Christmas banquet on Monday to bring the Michaelmas term to a close.

It is such a privilege to be studying at this university. My cohort is mostly international, and so I have friends from Japan, America, Canada, Hong Kong, Ghana, Nigeria, India and Greece to name a few. This college is also full of South Africans which makes me feel right at home, and there is a beautiful portrait of Mandela (an honorary fellow of Magdalene) in our 500-year-old formal hall.

I would not be here without the steadfast support of Prof James Gambiza and Dr Kath Smart. And, to the Environmental Science Department, this clearly reflects on the high standard of education I experienced at Rhodes, thank you! I also look back and reflect on those who made my Rhodes career possible - Etienne Nel and John Gillam and the Rhodes Finance department - to them I say "Thank you for your belief in me".

Aim high, it is possible to achieve your dreams. I have dreamt of international study since I was a child, and am still in an abundance mindset as I go through each day.



UWIWE ATTENDS THE NATIONAL SYMPOSIUM ON BIOLOGICAL INVASIONS

By Uwiwe Bolosha

I have been fortunate to attend the National Symposium on Biological Invasions this year (2022) at the University of Fort Hare (UFH), which was offered by the South African National Biodiversity Institute (SANBI), UFH, and the Department of Forestry, Fisheries, and the Environment. This was after the COVID-19 pandemic, when our world was turned upside down. The conference theme was "Investing in Biosecurity to Improve Human Livelihoods," which was centred around improving biosecurity in the country. Biosecurity, in a nutshell, is a series of measures to protect against the entry and spread of biological invasions. This conference was a platform for postgraduate students, their supervisors, researchers, invasion experts, policymakers, etc. (mainly in the biological invasion fields) to showcase and share their work. So basically, the conference was attended by delegates from various institutions, companies, and government officials.

What I have learned from the conference is how biological diversity is altered by invasive alien species (IAPs) and their impacts on the functioning of ecosystems and the services they deliver. Since IAPs have important environmental and socio-economic impacts, numerous aspects of these species were discussed and presented, i.e., the drivers of invasions and trends, the status and impacts of alien and invasive flora and fauna, their management, measuring success in weed biological control in South Africa, etc. Numerous knowledge gaps about some IAPs were also identified. Furthermore, I was also able to present part of my research work, which was on the effects of *Lantana camara* (a noxious invasive plant species) invasion on native vegetation and soil physical properties. This greatly improved my communication skills. The conference was concluded with a gala dinner, where the attendees filled up their glasses to toast a successful and insightful conference, and an award ceremony was conducted.

Thank you to my supervisors, Prof S. Ruwanza, Prof G. Thondhlana and Prof C Shackleton to the opportunity, and to the funders.



MY SUMMER SCHOOL BY KWANELE SIYENGO



Summer school participants on a trip around Lenzen on bicycle



In front of the local Mayor's house during the interview stages of our research, where we got to interview the Mayor himself

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Uviwe Bolosha

I feel incredibly blessed to be able to reflect on the amazing opportunity that the summer school held in Germany gave to me. Applying for it earlier in the year was met with incredible self-doubt yet sheer excitement to even have opportunities like this provided to us. I applied with great enthusiasm as I had noticed that it would tie in very well with my academic focus in trans disciplinary and would conceptualise biosphere reserves in valuable ways for me.

Getting in was not only exciting because I was going to engage in transdisciplinary work, but also because it provided an opportunity for a young black girl hailing from the Eastern Cape to travel abroad for the first time and immerse herself in such beautiful diverse intercultural spaces. I was truly excited to see that I would be travelling with 5 other South African students who were just as eager and as excited as I was. I knew it was going to be one of the most impeccable learning opportunities I would ever be exposed to.

Seeing and touching down in Europe for the first time ever felt unreal! Upon arriving to Germany, we were met with the greatest hospitality and care by the programme leads as our learning journey began. The focus of the academic programme was to learn about Biosphere reserves but not only this, we were required to be part of the team to offer solution-based interventions of to some of the challenges faced by the Biosphere reserve at the time. I really liked this because it was situated, peer learning which equipped us with social ecological systems methods of doing research. This assisted a great majority of the group in our masters and PhD projects. We met incredible science academics from all around the world which added so much more to our learning experience.

Besides the academic programme, we got incredible opportunities to explore Lenzen on bikes learning about the German culture and heritage. Being a small town, it had such an amazing sense of place and we could practically get anywhere by foot or bicycle. We even got opportunities through the summer school to converse with amazing people in the towns such as historians and mayors.

Through the summer school, I have made lifelong friends from all over the world and that adds value and meaning to me as a scholar from South Africa.

The learning and networks built were a highlight and I will forever be grateful for the opportunity! I would advise students to never shy away from going for opportunities such as these because they will change your life!



Team South Africa at the summer school with students from Rhodes, NMU, and Wits