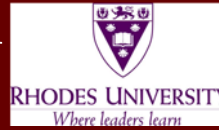




The Spekboom



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DES welcomes a new lecturer: Dr Alta de Vos

In less than a month, I will pack up my life in Cape Town and join the Environmental Science department at Rhodes University as a lecturer. This being my first academic faculty position, it is fitting, perhaps, that this move should be to the “*Frontier Country*” - there are certainly a lot of unknowns and challenges that await me. However, in large part thanks to the welcoming staff and propitiousness of this new chapter, it is with great excitement, rather than trepidation, that I take this next step.

I originally hail from the buzzing metropolis that is Grootfontein, Namibia – a town best known for a giant meteor, a military base, and a Victoria’s Secret supermodel. My parents, a minister and a hospital matron who have never been anything but supportive of my two younger siblings and I, still live there now.

After school, I moved to South Africa and completed most of my undergraduate

and postgraduate education at UCT, culminating in a PhD in Zoology. For my doctorate I researched seal/shark interactions under the guidance of Professor Justin O’Riain, whom I still consider my teacher and mentor today.

Although behavioral ecology was a fun discipline, I was looking for a more applied angle to my research by the end of graduate school. Conservation seemed like a sensible direction to go, but in reality I knew very little about it. How did the system work? What were the gaps, the issues, the players? How could I apply my energy to the greatest affect?



Hoping to learn the answers to these questions, I left academia in 2010 and joined the MAPA Project, a non-profit that serves to make African conservation more visible using online mapping tools.

I didn’t find the answers to my questions, exactly; but I did learn a lot of other things. Like, for example,



how important it is to talk to people from other disciplines and industries, the value of translating scientific information, and the power of maps. I also learned that there are different ways to think about “conservation”. As I discovered, first at MAPA, and then subsequently as a postdoc in professor Graeme Cumming’s protected area group, the point is not necessarily to protect and safeguard. Rather, it might be more helpful to know how, and when, to build resilience.

It is in exploring this topic that I arrive at Rhodes University, both as an educator and learner. I hope that, with the help of colleagues, students and collaborators, my time here will see the continued development of our thinking around the resilience of protected areas. I also hope that, on the basis and back of good relationships and a spirit of co-learning, this knowledge can be applied to the benefit of these social-ecological systems.

ENVIRONMENTAL CALENDAR

- 12th August: International Youth Day
- 19th August: World Humanitarian Day
- September: National Biodiversity Month
- 7th September: National Threatened Species Day
- 20th September: World Parks Day
- 4th October: World Animal Day
- 6th October: World Habitat Day
- 20th-26th October: National Water Week
- 7th November: International Walk to Work Day

RUESPPA Bursary awarded to 3rd year student

By Mwazvita Sachikonye

Thanks to the generous donations from alumni and staff this bursary has been awarded to Siphumelele Dunywa, a 3rd year student in the department. This is what she had to say:

I am 21 and live with both my parents in Mdantsane, which is a township just outside East London.

I am studying a BSc in Environmental Science and Geography.

My mother is the sole breadwinner as my father was medically boarded in 2010 and has been unemployed since. Not only is she responsible for ensuring that my tuition and accommodation fees are paid, but also for supporting our household and her extended family.

I am inspired by my mother. Despite the numerous hardships and challenges that she has faced, she has never given up and has achieved a lot. The support

of my family and the faith that they have in me motivates me to work hard-



er and put my all into everything I that do.

I am also motivated by my desire to excel and be successful in my professional career and life outside of work, by the opportunity and desire to grow and learn new things and to one day be able to provide my parents with all that they desire.

This bursary came at a time when I was starting to lose hope and I am extremely grateful for being chosen as a recipient. It has given me the opportunity to complete my studies and to fulfil my potential.

A message from Sheona:

thank you to the alumni that responded to my appeal, we have managed to boost the bursary fund but not enough yet and so we are still looking for more donations.

Career talk with Shafick Hoossein



Shafick Hoossein Branch Manager (Gauteng), Principal Consultant holds a and MSc (cum laude) in Environmental Science, BSc (Hons) Environmental Science and BSc in Zoology and Environmental Science from Rhodes University.

On the 15th of May 2014, the department of Environmental science had the

privilege of host a career talk at the botany major lecture theatre. We were honoured to have a guest lecture from Mr Shafick Hoossein who was at Rhodes about 14 years ago, and currently doing his PhD in Environmental science, a peer of our very own Dr Cundill, who facilitated the career talk. His talk focused on pursuing a career within environmental science.

He spoke about the opportunities within the field due to changing legislation that requires environmental compliance, citing the example of FNB amongst others, which uses environmentalists to assess clients applying for loans. He talked about how he did his masters in contact with a consulting firm, and how he then worked his way up to a consultant for Coastal and

Environmental Services (CES). He was then head hunted by the provincial government in Gauteng for the position of Director of Environment for the Gautrain project and other major projects such as those for the 2010 World Cup. He then joined his current multinational firm CES, at its headquarters in Colorado USA, and now he is the Branch manager for their Gauteng office. He emphasised the importance of teamwork in broader working world as there is a lot of integration of specialised skills. He also encouraged students to learn general administrative roles as they relate to the environment, and also to be patient in pursuing a career in the environment which can take up to 5 to 6 years to take shape.

Sheona goes to Benin for a thesis defence

In December 2013, Sheona Shackleton made a trip to Contonou in Benin after being invited to serve on the defence committee of a PhD student from Wageningen University. The thesis was entitled: **Analysis of collective performance in the Malian shea sector: from fields to markets.**

Eight PhD students defended their theses at the same event. The PhDs were all undertaken as part of a very interesting trans-disciplinary programme known as *'Convergence of Sciences: Strengthening agricultural innovation systems in Benin, Ghana and Mali'* (CoS-SIS)

CoS-SIS is a programme of comparative action research, which aims to gain a better understanding of the conditions that enable smallholders to innovate and improve their farming systems. It features diagnostic studies, innovation system analyses and participatory field and institutional experiments, working with multi-stakeholder innovation platforms at the local, district and national levels. It is a partnership involving the Université d'Abomey-Calavi, Benin; the University of Ghana at Legon; the Institut Polytechnique Rural de Formation et Recherche Appliquée at Katibougou, Mali; and, in the Netherlands, Wageningen University and the Royal Tropical Institute.

Each PhD student had a supervisor from both the natural and social sciences, and from West Africa and the Netherlands. Many of the students had not been exposed to trans-disciplinary work before so said it had been a real learning curve for them. The candidate I examined ended up studying institutional processes and local knowledge, yet had a background in agricultural sciences. All, however, felt enthusiastic about what they had done especially the direct links to some positive interventions on the ground. For exam-

ple, the Shea cooperative in the study I looked at had been given some working capital.

The defence process was extremely ritualistic and formal with us addressing the candidates as "respected candidate". All the Wageningen academics were dressed in their heavy black woollen gowns – thank goodness mine was a bit lighter weight as it was very HOT (see photo below). The poor candidates were in suits! It was an interesting and highly individual and personal process with supervisors publically sharing many a story regarding the candidates after the defence. It is really designed to make the new PhD graduate feel very special.



Contonou is an interesting city with water and fishing being central to livelihoods in the capital. Below are a couple of photos of a "floating" village on the huge lake adjacent to the city.



Why I chose Rhodes University: Austin Theu



I am Austin Patikani Theu, a Beit Scholar from Malawi. I am pursuing a Master of Science Degree course by research in Environmental Science. Rhodes was not my first choice when I was deciding which university to at-

tend for my postgraduate study. However, after my research, I found that it is one of the best reputable and internationally recognized universities in Africa. It has a unique mission geared towards producing graduates of international standards, good learning facilities and a very conducive environment for learning. Good interaction between tutors and students also prevail which makes learning interesting, enjoyable and effective. In spite of this, I have always wanted to pursue my postgraduate studies by research and this is exactly what Rhodes offers. The Department of Environmental

Sciences, in which I am studying, has renowned professors and doctors who have made great contribution not only to Rhodes but also to the world at large. This deepened my interest for the university and I am hopeful that after completion of my postgraduate studies, I will have been fully equipped with the requisite knowledge in environmental science and practical research skills which will assist me in my future endeavors.

Urban Tree Diversity Conference by Peter de Lacy

On Friday the 13th of June 2014, I embarked on my maiden international voyage to Sweden. I was accompanied by Professor Charlie Shackleton and Nanamhla Gwedla. We arrived at our destination, Malmo, on Saturday, giving us time to see the sights of the city. Monday brought about the first day of the Urban Tree Diversity Conference, which was hosted by the Swedish University of Agricultural Sciences, in Alnarp, Sweden.

There were 210 individuals that attended the conference, representing a total of 35 different countries! Talks were hosted in parallel sessions and looked at a variety of topics such as how urban trees are selected, management techniques, strategies and planning, as well as urban tree diversity and the affect that it has on urban populations.

All three of us representing our department presented on the second day of the conference to a full auditorium. The third and final day of the conference allowed participants to go on a

field trip of their choosing. One could either visit the Alnarp and Malmo area, or travel to Copenhagen, to view the different measures that have taken place to make the city greener, visiting the different parks as well as looking at their street tree planting methods. The latter trip was chosen by the Rhodes delegation and it was extremely interesting. This completed the conference and allowed myself and my colleagues to continue exploring both Sweden and the city of Copenhagen, Denmark for the remainder of the week.

I would like to thank Rhodes University, the Department of Environmental Science, SARCHi, as well as Professor Charlie Shackleton for this once in a lifetime experience.



A Scandinavian Adventure by Nanamhla Gwedla

We stayed at the Elite Hotel Savoy in Malmö, Sweden. This hotel is in the heart of Malmö and is conveniently just opposite the Central Station (which on our arrival was not so obvious). We arrived in Malmö in the afternoon by bus from Copenhagen as the rail industry was on strike. After getting off in Malmö Central Station we got lost a bit, only to find that we had taken the wrong route and should have just crossed the road to get to the hotel.



On our first afternoon we took brief walks around the town (I had never seen so many bicycles in one place before!) and eventually had supper in an Italian restaurant. Unfortunately, I was too sick to enjoy supper and even Charlie's suggestion that I eat soup backfired, so I ended up drinking water.

On Sunday we all did individual exploring of the town and we got to see the beautiful architecture of Sweden, including the famous Turning Torso.



From Monday, 16 June to Wednesday, 18 June we attended the conference which ended with a very informative and fun excursion to Copenhagen, Denmark. On the first evening of the conference we had dinner at the City Hall.... Such beauty! After the conference it was now time for us to do some touring around the town and Copenhagen. On Thursday we all went our separate ways for excursions of our choice. My highlight for that day was touring around Malmö in a ferry. It was my first time on a ferry and I enjoyed every bit of it. I got to learn exciting facts about the town and see beautiful structures. I also got to see a very big boat which had "appeared for a few seconds in the movie *Titanic*".



Sites of interest included the Castle, the Botanical Gardens and the very old but beautiful buildings.

On Friday Peter and I embarked on a brave journey to Copenhagen, Denmark by train. We were both mostly clueless about the journey and all we knew was that we had to get on a train. On our arrival in Copenhagen our first stop was the Tivoli Gardens. It did however come as a surprise that to have access to the Gardens, even if we were not going to use any facilities or ride the rollercoasters, we had to pay 99DKK. By that time both Peter and I were becoming low on cash, but anyway it was a once in a lifetime opportunity, so we went in. The view inside the gardens alone was fulfilling and we spent about two hours walking around and eventually playing a few

games.

We then set out to see the Queen's Castle and the famous "Little Mermaid". We did all of this on foot because we thought everything was within reach, stopping every now and then when we saw something interesting or

which caught our eyes. By the time we got to the The Little Mermaid I could hardly walk and the sun was very hot. The vicinity of the mermaid statue was filled with



tourists and everyone wanted a picture with the "most photographed woman in the world". After all the fun and viewing of the vicinity around the statue we set out to find something to eat, after which we boarded a train back to Sweden.

The journey back home was bitter-sweet but life had to go on. We are very grateful for the opportunity to have gone abroad because not only was it educational but it was also relaxing and a once in a life time opportunity. We would like to thank our supervisor, Professor Charlie Shackleton for making this experience possible for us by sponsoring the trip.



DES hosts community leaders and government to discuss a way forward in the development of co-management agreements on protected areas

On the 8th July, the department of Environmental Science hosted a workshop aimed at building the capacity of both government officials and community leaders involved in land claims on protected areas to develop co-management agreements. With more than half of the provincial reserves in the Eastern Cape under claim by communities, building capacity at all levels to enter into co-management agreements is a major concern in the province. The workshop, lead by Georgina Cundill, Lawrence Sisitka and Monde Ntshudu, shared recommendations regarding the essential contents of such agreements, and also shared lessons from around the country regarding challenges and opportunities associated with entering into co-management agreements.

The full spectrum of Reserve managers and the Communal Property Association leaders of land claimant communities from the Great Fish River Nature Reserve, Dwesa Cwebe Nature Reserve, Mkambati Nature Reserve, Induli Lutshaba Nature Reserve, and Silaka Nature Reserve were in attendance. In addition, the Eastern Cape Parks and Tourism Agency, who

largely funded the workshop, was well represented through the provincial head of People and Parks, regional managers and a number of individuals from head office.

The Department of Rural Development and Land Reform was also represented at the meeting through the Director of Operations and a project coordinator responsible for post-settlement support to communities. The workshop offered community leaders and reserve managers from different parts of the province a rare opportunity to interact with one another, and also brought key stakeholders together to try and forge a way forward in what is shaping up to be a difficult journey toward equity, redress and compromise.



Dwesa-Cwebe Nature Reserve



Mkambati Nature Reserve

Silaka Nature Reserve

Georgina Cundill teaches at the SAPECS Winter School at NMMU

As part of her involvement on the Southern African Program on Ecosystem Change and Society (SAPECS), Dr. Cundill contributed toward a Winter School aimed at developing the capacity of new scholars involved in research on the link between ecosystems and society to plan, execute and interpret their research. The Winter School was hosted by the Sustainability Research Unit at NMMU's George

Campus. The focus was to strengthen the capacity of students starting out on their post-graduate journey at the interface of ecosystems and society in disciplines such as environmental science / studies, conservation ecology, botany, zoology, anthropology and geography. Established PhD students and academics were part of the process, where conceptual frameworks, methods and tools were discussed.



People and Protected Areas internship - a chance to see theory in practice

By Olivia Higgins



Our experience on the internship at Great Fish River Reserve was a great adventure. It was a wonderful opportunity to see theory from our People

and Protected Areas course in action and therefore was a great learning curve. The reserve staff made us feel very welcome and our time at the reserve was very interactive.

We were exposed to knowledge sharing and numerous types of relationships; such as those between the reserve staff and the CPA (successful land claimants), those between the individuals of the reserve staff, between the CPA and Parks Forum (neighbouring villages); and those within these communities. From our experience there are clearly complex

dynamics surrounding land claims in South Africa and these dynamics are seen in the interactions among the various partners of co-management.

We had some amazing opportunities such as helping out with the blood testing of buffalo before their auction and got to see various activities that occur on a reserve. Overall, the week was filled with great opportunities and was a great way to see the practical side of our course, as well as having a lovely time getting to know one another.

DES involved in restoration of the Klein Karoo

The Gouritz Cluster Biosphere Reserve's Jobs for Carbon Project is set to transform degraded areas of the Klein Karoo while helping to clear the atmosphere of excess carbon dioxide. And it's expected to provide jobs – and even tourism opportunities, too.

The overall goal of the Jobs for Carbon Project is to improve the rural economy and the health of ecosystems in the Klein Karoo by exploring carbon farming as a sustainable land use. The ambition is to establish millions of the plants in selected areas where spekboom used to occur naturally – over the next twenty years. The Klein Karoo makes up a substantial portion of the Gouritz Cluster Biosphere Reserve (which also includes large parts of the Southern Cape region: along the coast from the Breede River to the Great Brak River, and inland to Montagu in the west, Prince Albert in the north,

and Uniondale in the east).

According to Jan Vlok, a well-known botanist who works in



close relationship with the Biosphere Reserve, the spekboom (*Portulacaria afra*) "is an amazing plant: when you plant it in areas where overgrazing, erosion, and dust have caused biodiversity collapse, it quickly helps restore the natural system – which includes restoring biodiversity, and restoring the soil's ability to retain and slowly release its moisture, which in turn revives the natural flow of the watercourses."

"But it's remarkable, too, for its ability to fix carbon from the atmosphere – which is vital to the global struggle to contain climate change."

The spekboom's ability to absorb carbon from the atmosphere is unusually high for a semi-arid-area. Four years of intensive field work by researchers at Rhodes University in parts of the Eastern Cape where rainfall and topography are broadly similar to the Little Karoo, suggest a carbon sequestration rate opportunity of around 50 tonnes per hectare of restored veld. And, according to Dr. AnneLise Vlok, regional ecologist with CapeNature (the Western Cape Province's statutory conservation organisation), it's incredibly easy to propagate.

"Basically, you can just take cuttings and put them directly

DES involved in restoration of the Klein Karoo (contd...)

into prepared holes in the ground – and you don't even need to come back to water them, which means that even unskilled labourers can learn to plant them quickly, and that they can plant large areas relatively quickly."



"We've selected the Kannaland area in this initial phase, where unemployment is high and there are large areas where spekboom has been totally eaten up. But ultimately we would like to expand the initiative across the entire Klein Karoo," said Mr Vlok.

He said that the Project has received enthusiastic support from individuals and local authorities alike – a position that was confirmed by Vernon Gibbs-Halls, environmental control officer at the Eden District Municipality, who said that, "We'll definitely back it in as many ways as we can."

According to Charles Basson, director on the board of the Gouritz Cluster Biosphere Reserve Non-Profit Company, many other opportunities exist

where spekboom can make a positive difference for local communities. "For example, if we could get additional funding there are three other initiatives we would like to pursue: the restoration of vegetation on road reserves between De Rust and Oudtshoorn; the rehabilitation of a disused gravel quarry at De Rust, and the construction of a maze to attract tourism in Oudtshoorn."

He said that planting spekboom on the road reserve between De Rust and Oudtshoorn would have a mitigating effect on the dust caused by ostrich feedlots alongside the road (which often blows across the road), and improve the area aesthetically while reducing air pollution, whilst the restoration of the closed borrow pit at De Rust would reduce erosion and improve the beauty of the landscape for the benefit of tourism.

"And although both initiatives would create only temporary employment for up to twenty people each, we are hoping that they would lead to sustainable jobs in the future – especially since projects like these can earn carbon credits on the international market.

"But the maze – which would cover a whole hectare when it's planted – could create twenty jobs in the short term, and five medium-term positions for people who'll look after it when it

opens to the public."

The Jobs for Carbon Project is implemented in partnership with the Wildlife and Environment Society of South Africa (WESSA) and Rhodes University's Restoration Research Group (RRRG). It is largely financed by the European Union, which has contributed 589 thousand Euros (approximately R7.5 million), while the national Department of Environmental Affairs is expected to provide additional funding.

For more information please contact:

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The Gouritz Cluster Biosphere Reserve promotes sustainable development through combining local community efforts with sound science in order to safeguard our collective future. Internationally recognised by UNESCO for its astonishing diversity in cultural significance and indigenous environmental assets, the GCBR is uniquely positioned to fulfil UNESCO's vision of reconciling the conservation of biological diversity and economic development through partnerships between people and nature.

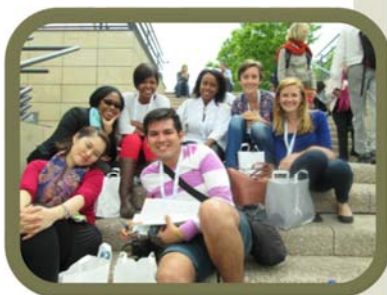
Experiences at the Resilience 2014 Conference in France

By Karabo Chadzingwa

Early in May 2014 the Environmental Science team which was lead by our awesome supervisor Dr Georgina Cundill, travelled to Montpellier, France to attend one of the biggest science and policy conferences of the year.

We students found ourselves extremely excited to meet prominent scientists whose work we'd read since we were undergraduates, a phenomenon we coined 'academic groupie' behaviour. However, we were not the only excited ones. Between the 4th and the 8th of May, twitter was abuzz as the hundreds of participants from 67 countries took to social media to share these cutting-edge insights.

The aim of Resilience 2014 was to bring together diverse perspectives from large international organizations, government and business sectors to add to the academic debate on challenges facing social development. Human societies are an integral part of the biosphere, and in a time where human activi-



ties are impacting the state of the biosphere globally there is increased vulnerability. This vulnerability is present in several areas such as economic systems, large losses of biodiversity and changes in ecosystems.

The cool part about the conference was that it not only utilised speed-talks, panels, seminars and plenary debates, but delegates were also engaged in dialogue through games, forum theatre, circus, outings, music, dance and socializing.



The highlight of the trip was having the privilege to see Paris. The French experience would of course, not have been complete without visiting the city of love. One of the most beautiful aspects about this romantic city was the pride that its residents had in their culture, language, history and art.

From the Palace of Versailles and its majestic gardens which took over 40 years to complete, to the carpets of cobble-stoned al-

leys between old buildings. From the echoes of violins and cellos through the metro tunnels as musicians perform in public, to the vintage shops and art galleries near Châtelet-Les-Halles. Paris is indeed a muse.

Everywhere I turned was a public garden, a *patisserie* with the freshly-baked smell of croissants and crepes, or a café frequented by fashionable hipsters smoking or having a coffee outside. France



is so much more than its tourist destinations. The country's true magic lies at the point where its over-the-top attractions meet the alluring and classic subtleties of

