

Special points of interest:

- 2nd August: Dr James Gambiza Public lecture.
- 20 September: RU Enviro Savvy Annual Schools Quiz
- 22 September: World Car Free Day
- 28 September: Green Consumer Day

Inside this issue:

Charity Relay Race	1
IX International Rangelands Congress	2-3
Luna Summer School	4
Research in Kgalagadi	5
African Education Week	6
Alumni profile: Geri Simak	7
Photos	8

The Spekboom



Environmental Charity Relay braves the rain

Story by Charlie Shackleton.

The department held its fifth annual charity relay to Port Alfred on Saturday 7th May. The relay consists of teams of ten members drawn from the staff and students of the dept, running from Grahams-town to the Kowie River Nature Reserve just outside Port Alfred.

Each runner completes between four and eight kilometers and this year there were also two cycle teams, of four cyclists each. The five running teams and the two cycle teams set out in damp and mist weather. Throughout the day participants were subjected to periodic strong downpours of rain, making it a considerable challenge and rather soggy.

But the spirit remained high and the first running team completed the 60km route in slightly less than five hours.

The first cycle team made it in under 3.5 hours. Twenty minutes before completion of the relay, the clouds lifted and the tired runners were able to have a well deserved rest and braai at the reserve.

A total of R2348.00 was raised by the event. This was greatly aided by the Eastern Cape Parks & Tourism Agency substantially reducing the entrance fee to the Kowie River reserve. Nominations of five deserving environmental NGO's or charities with a presence in the Eastern Cape were received and one drawn out of a hat. The lucky recipient was the South East African Climate Consortium Student Forum (SEACC SF). This is a consortium of student groups from Rhodes,



NMMU and Fort Hare universities advocating for action around combating climate change.

Previous recipients of the funds generated through this environmental relay have been the Grahamstown's Millennium Tree Planting Project (MTTP) and the local branch of the Wildlife and Environment Society of South Africa (WESSA).

Research in Kgalagadi Transfrontier Park

Story by Nadya Anscombe.

Research in Kgalagadi Transfrontier Park – a pioneering project that spans South Africa and Botswana – has shown that if conservation approaches are to be successful, natural resources must be managed so as to meet the multiple and immediate needs of different local communities and households. The study shows that if these needs are not met, social fragmentation and intra-community conflicts threaten the success of conservation efforts in the park. Kgalagadi Transfrontier Park lies within the Kalahari region, a vast semi-desert where tem-

peratures can reach 45oC in summer. In 1999 two local communities, the Khomani San and the Mier, were awarded land inside and outside the park in an attempt to redress land dispossession by white settler.

The San, or Bushmen, are Africa's earliest and only indigenous hunter-gatherers. Previously roaming widely across southern Africa, they were forced to retreat into the Kalahari by persecution from Bantu settlers in the north and European settlers in the south. The Mier people, traditionally farmers, settled in the Kalahari



Mier members delivering firewood

region around 150 years ago, fleeing British rule in the Cape Colony. The Mier people, traditionally farmers, settled in the Kalahari region around 150 years ago, fleeing British rule in the Cape Colony.

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Downtown Rosario

“Nearly half of our planet’s land surface area, some 67 million km², qualifies as rangeland, supporting a vast proportion of the human population, as well as much of its biological diversity.”



Rangelands in the Puna, Andean region (Argentina) (From Bonvissuto and Chiosso 2007)

The IX International Rangelands Congress, 4 – 8th April 2011, Rosario, Argentina

By Craig Weideman.

The 9th International Rangelands Congress was this year hosted in Rosario, Argentina’s third largest city, located about 300km from its famous capital Buenos Aires. I was fortunate enough to be awarded sponsorship to attend by the Argentinean conference organisers *Instituto Nacional de Tecnología Agropecuaria* (INTA), along with a strong South African delegation from the Agricultural Research Council (ARC). The conference brought together a diverse range of scientists with interests in rangeland ecology, production and management from afar afield as Mongolia, China, Australia, Ethiopia, Brazil, Uruguay, the UK and the US, to name a few.

While the term “rangelands” is probably familiar to most of us from watching old cowboy movies, many would be hard pressed to define what a rangeland is exactly. The origins of the word actually date back to 15th Century England, where it evolved to refer to grasslands and wooded areas. It was later taken by early colonists to the Americas, where the meaning was expanded to describe the vast, unenclosed natural lands that were exploited in their extensive cattle grazing systems. It has since been universally appropriated to define nearly all “semi-natural” systems that, usually, support some form of livestock production by humans. Typically, rangelands are comprised to a large extent of native grasses, forbes or shrubs, sometimes including a woody component, and occur where rainfall is generally too low or too variable to support conversion to regular dryland cropping or improved pasture. The origin of the terminology reflects the early anthropocentric emphasis on the pastoral qualities of these systems, but modern rangeland science explicitly recognises the diversity of the

functions that rangelands perform, and attempts to engage with them holistically.

By this rather broad definition, nearly half of our planet’s land surface area, some 67 million km², qualifies as rangeland, supporting a vast proportion of the human population, as well as much of its biological diversity. In South Africa, rangelands comprise some 80% of the land surface area spanning nearly all of the major terrestrial biomes, and are critical in terms of food production and water provision, and by virtue of sheer extent, are the principle stores of terrestrial carbon. Growing population pressure is increasingly bringing human use needs into direct conflict with biodiversity and ecosystem functioning in the world’s rangelands, however, and, coupled with the uncertainty

vastly different hydroclimatic and biophysical conditions, and specifically in the context of Payments for Ecosystem Services (PES) models. Together with my MSc. co-supervisor, Senior Scientist at the ARC’s Animal Production Institute Tony Palmer, our poster submission to the congress described a technique to approximate catchment scale vegetation water use, specifically with a view to support PES interventions for conservation and water production in South African rangelands. What struck me from the research presented by Argentinean and Australian scientists are the fundamental differences in the nature of the problems relating to managing landscapes for water production across the world. In South

Rangelands in the Parana Delta region near Rosario (Argentina)



of global climate change, there is an urgent need to elucidate how these life support systems are responding. These questions are made all the more challenging given the multiple, often conflicting human uses of rangeland resources, and the changing perceptions and values of society, and these issues were prominent in research topics over the four days of presentations.

I was particularly interested in the work being done on the importance of rangelands in terms of water production by scientists from countries with

African conditions of chronic water scarcity, the paradigm is inevitably focussed on retaining water in our catchments at all costs. By contrast, in the flat Pampas and Chaco regions of Argentina, by reducing plant biomass loads, landscape conversion has led to reduced rates of evaporation, resulting in elevated groundwater levels that have caused flooding and activated salt transportation processes. A similar situation has occurred in Australia, rendering much of their prime productive land useless, and despite chronic water scarcity problems huge efforts are



The IX International Rangelands Congress

made to remove water from the landscape by increasing evapo-transpiration. Although I was aware of these phenomena to a certain extent, it was a valuable perspective to see scientists engaging with problems relating to the issue of landscape water production that are so at odds with our own.

Ian Watson of Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO) concluded the session's proceedings, making a few hard hitting points regarding the state of the art. Some that stuck related to the fact that, despite the substantial research output in the field of PES, both at the conference and in the research community at large, we are still lagging behind in operationalising the knowledge at a large scale. Another was a comment regarding the need to be continuously innovative in the questions that we are asking, and the science used to engage with these questions.

We fortunately also managed to spend some unsupervised time outside of the watchful eye of the IRC organisers, and took the opportunity to explore the city and some of the famous Latino culture that Argentina is known for. Rosario itself is a relatively large centre, being a major port on the Parana River, and has a population of approximately 1 million people. Its origins date back to the 17th Century, and its historical roots show in its classical European architecture and narrow cobblestone streets. Unlike some of its South American neighbours, Argentina has a distinctly more European than American feel, and its far more likely that you'll see Fiats and Renaults in the street than Chevys or Fords. The city is arguably most

famous, however, as the birthplace of Ernesto "Che" Guevara, who of course was later killed in neighbouring Bolivia, following a stint fomenting revolution in Cuba



Tango in Avenida Florida

and then (rather less successfully) Zaire, as it was known.

The Santa Fe (the province in which Rosario is located) landscape is not particularly remarkable, being unrelentingly flat and occupied invariably by soy crops as far as the eye can see, at least in this region. Some variation was provided by the odd Australian Eucalyptus here and there, which appeared to be doing quite well so far from home. It was also interesting to see some of our usual suspects, including pampas grass (*Cortaderia* spp.) and *Leucaena* on their home turf. Soy is Argentina's largest agricultural product, only just coming in ahead of maize. These are all dwarfed by its beef production, however. Argentinean beef is world renowned, and a serious part of their culinary inheritance - I can now reliably confirm that the reputation is deserved. Being that a real concern in the Santa Fe region, which includes Argentina's famous Pampas rangelands, is large scale transformation from pastoralism to more profitable

soy monoculture, I was interested in how a full accounting of the loss of ecosystem functioning accompanying the transition from beef to soy would balance out. Something to consider when opting for Fry's apparently environmentally benign cardboard sausages over the real deal.

After all the hard networking was done, it was impossible to resist the opportunity for a couple of days of R & R in the capital city Buenos Aires, given its reputation for late nights, roadside cafes, and tango clubs. The city is a bit of a cultural centre in South America, and is frequented by tourists from all over the continent. It is huge, with a population of nearly 13 million people, but it has a pretty good bus system and an underground, which in Spanish is called the "subte", so its quite easy to get around if you can get even a basic grasp of the language. Buenos Aires is a truly cosmopolitan city with a strong sense of its own identity, harking back to its often romanticised heyday in the Peron era. Downtown Buenos Aires centres on Avenida Santa Fe, and if you didn't know better you could be walking down any high street in Milan or possibly Paris, with high fashion clothing boutiques, cafes and opulent glass fronted stores vying for space along the sidewalk. Time ran out after an all too short week on the continent, and pretty soon we were boarding an SAA flight bound directly for Jo'burg on the other side of a very big stretch of Atlantic Ocean.



Ernesto "Che" Guevara's birthplace in Rosario

"Unlike some of its South American neighbours, Argentina has a distinctly more European than American feel."

Downtown Buenos Aires





Luna Summer Schools



Some LUNA students

By Catherine Ward and Michelle Evans.

The LUNA (Livelihoods, Urbanisation, Natural Resources in Africa) Project was started in 2009 as a partnership between five African and three German research institutions, funded by the Volkswagen Foundation. LUNA aims to analyse the impact of urbanisation on the use of natural resources and livelihoods in five African countries, namely South Africa, Botswana, Tanzania, Cameroon and Cote d'Ivoire. The project also aims to develop research partnerships, training and expertise on issues surrounding urbanisation, livelihoods and natural resource use. Masters and PhD students from participating universities will collect data from medium sized towns (100 000 to 200 000 inhabitants) through an in-depth, standardised survey.

Phalaborwa (Limpopo) and Queenstown (Eastern Cape) were the South African towns selected for the LUNA project. Michelle Evans and Catherine Ward are Rhodes University Masters students from the Environmental Science Department who are participating in the data collection for South Africa. In addition to examining the overall use of natural resources along the rural-urban continuum, each Masters project has an individual focus. One project looks at livelihood coping strategies employed by respondents and the other focuses on agricultural practices along the continuum.

As part of the LUNA project, Summer Schools were organised for 2010 and 2011 to encourage research partnerships, enhance skills training and monitor the overall progress of the project in each country. The Summer Schools were held in three different countries and the themes planned according to the host institution's strengths, with student planning and participation forming an intricate part of the process. Participants of the Summer Schools included the LUNA project co-ordinators and students, guest lecturers and German students doing similar work from various Ger-

man research institutions. The first Summer School was held in Moshi, Tanzania from 24 May to 4 June 2010; the second in Freiburg, Germany from 6 to 19 September 2010; and the third in Gaborone, Botswana from 18 to 27 May



Market place in Moshi, Tanzania

2011.

The Moshi Summer School was themed 'Action Research into Livelihoods in Transition' and hosted by the Moshi University College of Cooperative and Business Studies. Topics discussed included the LUNA project (Prof Axel Drescher); Action Orientated Research (Alice Hovorka); Livelihood Analysis (Dr Fred Kruger and Dr Msuya) and Food Security (Dr Msuya). Students from each African country presented their individual project proposals and were given feedback from supervisors and guest lecturers. Workshops were also held to discuss the standardised LUNA livelihood questionnaire and practical issues around the administration and implementation of the project. Participants of the Summer School were taken on field trips around the greater Moshi urban centre to look at different ideas involving the rural-urban continuum; town planning issues and to observe livelihoods in general.

The second Summer School was hosted by

the Albert-Ludwigs-Universität in Freiburg and themed 'Urbanisation, Policy and Poverty'. Main topics of the Summer School were Local Governance in Africa (Prof Illy); Local governance and town planning in international development (GTZ) (Dr Schworer); Sustainable Town Planning (Prof Daseking); Urban Agriculture (Prof Axel Drescher); Research Implementation Gap (Prof Charlie Shackleton) and Urban Poverty in Africa (Dr Msuya). Background information on urban water and waste management in a German context was discussed, followed by field trips to examine these management systems. A Freiburg city tour was also organised, looking at allotments and social disparities in German towns, as well as an excursion to the surrounding Black Forest areas. The students participating in the LUNA project gave progress presentations and individual project difficulties were discussed by the group. Students were also expected to make posters of their individual projects to be presented at the Summer School. Skills training included GIS (Geographic Information Systems), data analysis, power point presentations and poster presentation.

The Gaborone Summer School was hosted by the University of Botswana and themed 'From Research to Impact: Translating Research into Action'. Topics discussed at the Summer School were the Sustainable



Fieldtrip excursion in Moshi, Tanzania





Luna Summer Schools contd..



training included the implementation of GIS into student projects and high resolution aerial maps of individual country study sites were provided by the German partners. Fieldtrips around the

Livelihoods Framework: Constraints and shortcomings (Prof Fred Kruger); Communicating Research: What researchers need to know (Prof Msuya); Urbanisation Impacts on Livelihoods: A hydrological perspective (Mr Ditiro) and Scientific Writing (Prof Charlie Shackleton).

Students presented progress reports and these were discussed by project co-ordinators and supervisors as well as the other LUNA students. Skills

Gaborone urban centre examined the rural-urban continuum within the Botswana context, and an excursion was taken to the country's study site in Palapye.

As with all workshops organised with multiple partners from different countries and backgrounds, the logistics were fairly complicated and co-ordination very challenging. Some LUNA project members could not make all the Summer Schools due to visa complica-

tions or civil unrest within certain African countries. Communication was not always clear during student presentations as not all LUNA students spoke English fluently, which also impacted on their contribution to discussions held by the group.

Accommodation for students was not always convenient and time was often wasted trying to get from one venue to another due to a lack of accessible transport. However, we would like to thank all the Summer School and LUNA co-ordinators for doing a fantastic job despite many difficulties. This has been an invaluable experience and we deem these Summer Schools a success in enhancing research partnerships, training and expertise on urbanisation, livelihoods and natural resource use.



Mt. Kilimanjaro, Moshi, Tanzania

"As with all workshops organized with multiple partners from different countries and backgrounds, the logistics were fairly complicated and co-ordination fairly challenging".

Kgalagadi Transfrontier Park (contd from pg 1)

When the Kalahari Gemsbok National Park was formed in 1931, both the San and Mier people were evicted from the land.

Gladman Thondhlana, a PhD student in the dept, spent a considerable amount of time getting to know both communities and analysing the way they use natural resources. "I found that the San community is largely interested in direct consumption of natural resources while the Mier depend on livestock grazing," he told *environmentalresearchweb*. "Other sources of livelihoods, such as tourism, are also important for certain groups of households."

He also found that, while the San were once thought of as a homogeneous and harmonious group of people, today they are a collection of different

peoples brought together to make up the required number for the land claim. The post-settlement period was, and continues to be, characterized by social fragmentation and intra-community conflicts between so called "traditionalists" – who want the land reserved for traditional purposes such as hunting, gathering of medicinal and food plants – and "modern Bushmen", who want more land for livestock and housing.

For the San, the "traditionalist-modernist" dichotomy defines who gets what resources, when and how. "Access to land for livestock grazing is also a major basis of conflicts," said Thondhlana. There have been issues near to the park with illegal fuelwood harvesting for sale, overgrazing and over-hunting of wild animals.

"The giving of land back to the local communities was seen as a politically correct and morally acceptable thing, and this park arguably lives as a model of future conservation approaches not only in South Africa but also across the region," said Thondhlana. "However, it is clear from my research that the challenges of basically pitching relatively powerless communities against powerful and organized park management (which resulted in further disempowerment) were overlooked".



San member after harvesting hoodsia, a popular food and medicinal plant.



African Education Week

The African Education Week began its 5th Annual meeting; 6-8th July 2011.

By Zukiswa Kota

On the 7th July 2011, the Minister of Basic Education, Angie Motshekga addressed an estimated 1 400 delegates at the opening of the African Education conference. Delegates included officials from the Department of Basic Education, Ministers of Education from various countries, non-governmental organisations, curriculum advisors, publishing companies and education funders.

The conference was divided into Basic Education, Higher Education, Safety and Security and Technology with a wide range of topics covered across the theme areas.

I presented a workshop on the potential role of school food gardens and gardening in promoting ecological literacy. Running concurrently with other conference seminars and exhibitions, workshop topics ranged from technology innovations in the classroom, dealing with stressed learners to the art of positive thinking and the work of the Wildlife Society of South Africa (WESSA) and World Wildlife Fund (WWF-

SA) eco-schools.

Personal highlights included a presentation by the National Co-ordinator of WESSA/WWF-SA eco-schools, Bridget Ringdahls, a keynote address by Professor Brian O'Connell (rector and Vice-Chancellor at the University of the Western Cape) and a computer technology demonstration by ACER representatives. Also sitting fairly high-up on the list of highlights was a wine and chocolate tasting opportunity during the opening cocktail evening.

"Social fragmentation and internal conflicts should be overcome for conservation approaches to be successful"

Feedback to San & Mier Communities

By Gladman Thondhlana.

The feedback to the San and Mier communities based on research that started in 2009 took place on 6 July at Andriesvale area in the Kalahari. The research findings and implications (based on several studies on aspects of conservation and development in the Kgalagadi Transfrontier Park area and surrounding resettlement farms) were presented by the 3 students namely Lelani Mannetti (MSc, Stellenbosch University), Gladman Thondhlana (PhD, Rhodes University) and Johane Diggang (a PhD student from the Environmental Policy Research Unit, Department of Economics at the University of Cape Town).

Representatives for local San and Mier communities, SANParks headquarters (Pretoria), Research office (Cape Town), Regional office (Upington), Kgalagadi Transfrontier Park management, Peace Parks Foundation, Mier Municipality, South African San Institute, San technical advisors and Rhodes University (Dr. Sheona Shackleton) were in attendance. Attendance by local community San and Mier members was impressively high and the nature of the presentations was largely informal and interactive, which ensured participation by communities members while delivering the message of the day. Dr Sheona Shackleton and Gladman role played the various challenges facing

local communities in meeting livelihood and conservation needs. The communities showed understanding that social fragmentation and internal conflicts should be overcome for conservation approaches to be successful and that natural resources must be managed so as to meet their multiple and immediate needs. Local communities were also happy that for the first time, researchers came back to give feedback as promised during proposal presentations in May 2009.



Dr Shackleton & Gladman Thondhlana presenting research findings.





Alumni profile: Geri Simak

Thrown in the deep end would be an understatement. When I left Rhodes all green and naive I was ready to conquer the world and the evil giants out there intent on destroying it. After an internship with Arup after my third year I was fortunate enough to get a bursary for my Honours and a job as a graduate environmental consultant on completion of my degree. 3 months into life in the working world I was placed on Transnet's New-Multi Product Pipeline (NMPP) Project as an Environmental Officer. This project entails 1 main liquid fuel pipeline from Durban up to Heidelberg (550km) as well as terminal sites (tank farms/storage facilities) on each end and 8 pump stations along the route. 2 shorter pipelines (approx. 80km each) were also put in to expand the existing network in Gauteng and Mpumalanga. I quickly learnt the ways of the construction world and machines such as side-booms and excavators and TLB's and more importantly – the difference between them!

The daily challenges to overcome were overwhelming at first – but once defeated were very rewarding. Environmental compliance is still a new bugbear in the contractor's world, and required a lot of work to convince them that complying with EMP's and Water Use Licenses was in their own interest. Seems nobody likes a treehugger – especially not a female

one in this male dominated industry. Daily tasks included environmental awareness on site, erosion control (some treacherous areas such as down the slopes of Van Reenens), waste management and fauna and flora rescues. In the 550km from Durban to Heidelberg we crossed no less than 500 wetlands and numerous large river systems with the Duzi, Tugela and Vaal River to name just a few. Working closely with wetland specialist we learnt a lot and have developed best practice over the last 2 years. What is probably most rewarding is getting to the stage of reinstatement and rehabilitation. To see how your efforts during the construction phase pay off when a year down the line the only evidence that you were there are the white markers spaced out over the distance.

If I had to give advice to anyone looking to come into this industry it would be simple. Never be afraid to be wrong, learn from your mistakes and move on, it is only by trying that new solutions are found. Listen to those around you – a contractor with 40 years experience might not know about SASS 5 monitoring or Environmental Best Practice but he has been there, in the sun, everyday for years, and only by working together are you going to get a solution that works for you both. Be practical, realistic and innovative. If possible, don't go straight into that office job



doing EIA's, EMP's, BA's and Water Use Licences until you have been out there, in the sun, having to implement those conditions yourself. I have read too many EMP conditions that look great on paper, but are simply not possible out on site. Go out, get your hands dirty! Hammer in some silt fences and catch a couple of snakes (yip – I've done that too – love it when the burly tough men call me to come rescue them!). Once you have seen what it is all about, you will be a better consultant for it.

“Never be afraid to be wrong, learn from your mistakes and move on. It is only by trying that new solutions are found.”



Grahamstown to Port Alfred Annual Relay Race



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