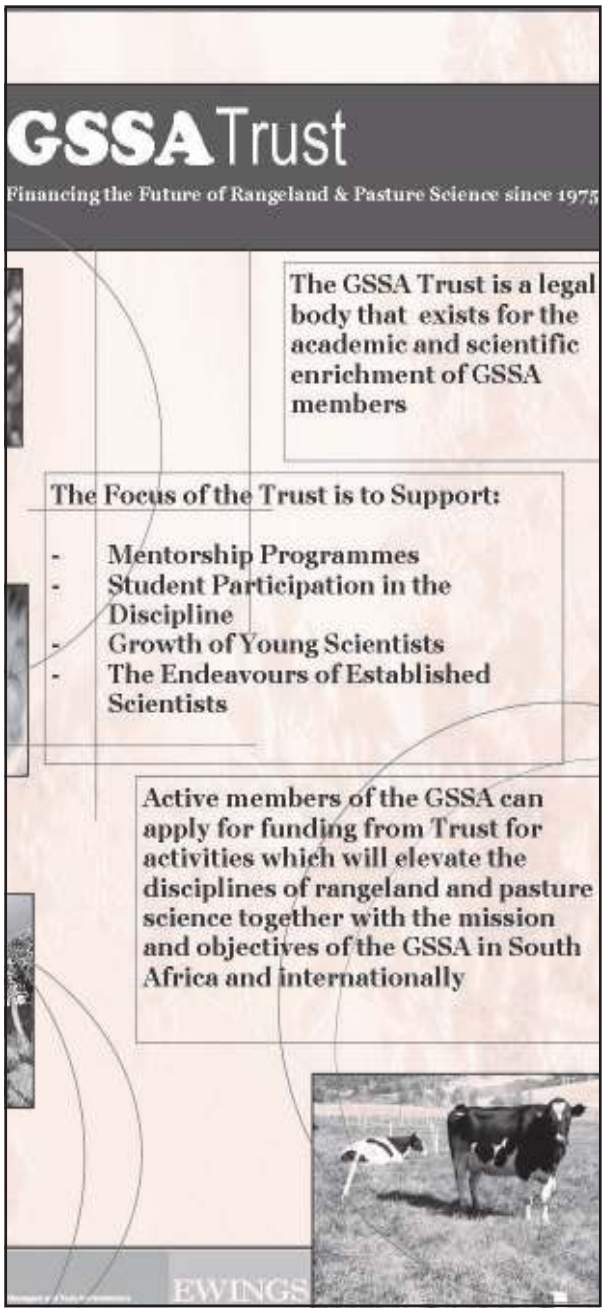

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Grassroots
Newsletter of the Grassland Society of Southern Africa

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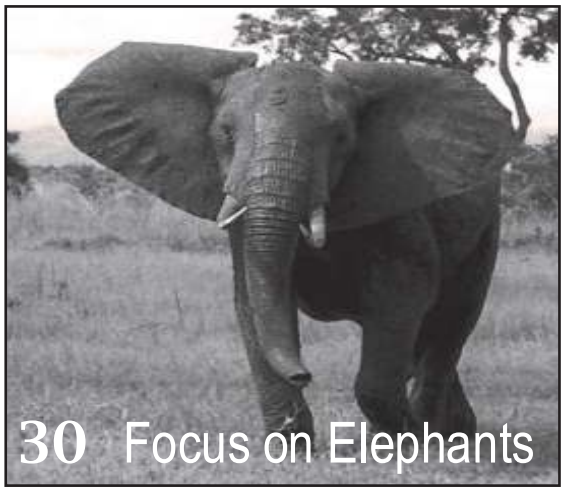

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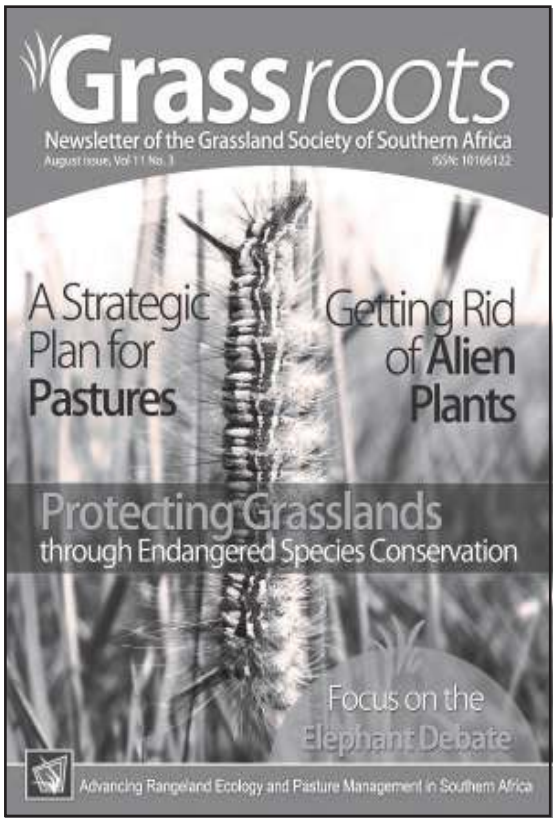
Guru, Geof Calvert drops us a line from his residence in Zimbabwe



On The Cover: The cover image of a caterpillar was taken by Honorary Treasurer: Justin du Toit

New Members
Habteab Ghebrehiwot: University of KwaZulu-Natal
Marguerite Westcott: North West University
Joseph Ngamole: North West Department ACE
Fidelis Washayanyika: KwaZulu-Natal Department DEAE
Johann Olivier: Monsanto South Africa
Natalie Horn: Gauteng Nature Conservation
Dikeledi Manamela: DAFF - Agricultural Disaster Risk Management
Ntsikelelo Lester: North West Department ACE
Phenya Tshenkeng: North West Parks & Tourism Board
Rikus Lamprecht: Anglo American Thermal Coal
Sophia Rusike: RioZim Ltd
Peter Shisani: SANBI

Resigned Members
Anthony Maluka: DAFF - Land Use and Soil Management
IB Oosthuizen: Suidwes Landbou
Kate Matchett
Patrick O`Farrell - CSIR
Rick Dillon

Editor's Note

Dear Readers

Welcome to the second 2011 issue of Grassroots. I hope that, despite the cold, all enjoyed the GSSA Annual Congress held at Grootfontein Agricultural College in Middelburg. About 160 delegates attended this year's congress, which is less than the previous congress and may be of concern.

The geographic location and the IRC being in the same year may have contributed to the reduction, but one of the reasons that people don't attend congresses is lack of funding. I would like to appeal to those who would like to attend next year's GSSA Congress in the Western Cape to start source funding early. There have been concerns and discussions about the need to revitalise the discipline of planted pastures within the Society and in South Africa.

Finally, Chris Dannhauser and Wayne Truter have drafted a strategic plan on the above issue. Please have a look at this feature article in this issue of Grassroots and provide comments and suggestions where applicable.

I made a call during the Annual General Meeting at Grootfontein that supervisors must encourage their students to make use of Grassroots to publish their research findings such as reports or short articles – please would academics encourage your students to both join the Society and to contribute articles!

Enjoy this issue of Grassroots and hope to see you in Cape Town for next year's Congress.

Julius Tjelele

Letters

Dear Plant Chatters

Just to update you on events at the Nomenclatural Session at the International Botanical Congress in Melbourne Australia.
It was clear from the start that the Chairlady and Rapporteurs would not allow any discussion on the appalling behaviour shown at the Vienna Congress regarding the changing of the type species of *Acacia* so that Africans and Asians could not use the name *Acacia*.

This will have very negative scientific and economic implications for South Africa, seriously affecting the end users of plant names (Ecologists, Physiologists, Environmental Managers, Educators and Horticulturalists). Despite a lot of discussion it was evident that the majority of Australian (and many American) botanists where not even open to an amicable compromise put forward by the Legume experts, which would have treated everyone equally. Unfortunately the Nomenclatural purists also agreed with this stance - believing in a self-serving Code rather than a Code that serves the end users. The Session this afternoon rejected, in a secret ballot, the compromise stance put forward leaving a situation where Australians can continue to use the name *Acacia* but Africa can't.

It was an interesting and disheartening process clearly showing Nomenclatural Imperialism at work - a population of some 14 million people have managed to walk over the needs of some 2 billion people in Africa and Asia; many of which do not know and will not understand why the name *Acacia* was stolen from them. The message below, which appeared on the Taxacom Website, summarises the outcome.

"The Section also spent a long time on Acacia, quickly dismissing the Brummitt proposal (= everybody gets their own Acacia), but going over the Turland proposal (= nobody gets Acacia; everybody loses) in detail, although it was clear from the outset it had no chance whatsoever (it was voted down 70-30% eventually, to the relief of Nick Turland). Presumably, the African community will now publish the name Acanthacacia and submit a conservation proposal for it, to be approved or disapproved ofin six years"

I am sure that you will all get a more complete account of events from people attending when they return home from the IBC.

Ashley Nicholas (PhD)
Associate Professor
School of Biological Conservation Science
George Campbell Building, Howard College, University of KwaZulu-Natal, Durban, 4000, South Africa
Tel.:+27-31-2601636 Fax.: +27-31-2602029

Dear GSSA Members

Sorry to take so long to respond, but we gurus [I LOVE this one !], esp non-cyber fluent ones like me [and Ents: just run our LotR videos through our up-dated system] need ponder-time . At least that's my excuse .

Not having personal www. access due to our rural Zim residence & the 1 1/2 km string-with-tins which used to be a 'phone line, and having cyber-snail not an e-mail as a consequence, there are delays depending on when we HAVE to drive to Byo for unavoidable reasons, visiting the server in the process and uploading/downloading our e-Box in the process.

This can be anything from weekly to monthly, esp when we forget to put Little Punkin in the vehicle as has happened twice in the last two weeks.
So, please would you renew my Membership as follows:
Name: MR GEOF M CALVERT
Amount: ZAR 150.00
Covering: 1 yr Guru Membership
1 yr Grassroots postage
1 Office Rooibos Teabag

I'm tickled pink, lekker kool, in the new vernacular, at the 'guru', rather than, I assume, Senior Citizen, membership, being 75 mid- year plus 24 yrs as a member.
I now look forward to being a GMSSA!

I'm waiting to hear from 'Koos' v d C Kappeyne [GSSA No 2] if he's reached such eminence, because if not I'll expect considerably more respect from him than he's shown me over tha last 30 years as a colleague, and, of course friend ! He was out & about when I rang him just now, but Wyfe Dr Bon was as amused as I at the very thought!

Grassroots. I cherish my copies as received and will try & draft something when my manifold distractions inherent in living on a 27 acre smallholding in a 50 yr plus homestead needing more & more routine maintenance in the Zim ['Mungabwe'] of today.

One I've been agitating periodically for is 'To Burn or not to Burn, in light of Climate Change' or equivalent. Prof Winston? However answered here last week by Richard Peake, owner/ manager of the Malalangwe Tourist Nature Reserve [half of which has been stolen by some 'Senator' as part of ZANU[M]'s 'land redistribution policy'] some 50 km east of us here --NO CHOICE --

In our situation here where there is no longer 'law' as we understood & practiced it in general and land management control in particular, one HAS to burn for personal property protection. Last year, uncontrolled & uncontrollable veld fires cost Richard 20 years' mowing & mulching across his entire area, so planned burning is unavoidable.

We ourselves were burnt out completely during the holiday weekend [no labor] of 2010 by a fire which snuck upon us with no warning until too late, despite a network of slashed breaks on our dozen hectares only.

Intrigued by predecessor Dennis Barnes' 'Referees' article, I feel this offers the opportunity to comment from a later administrative view, one of my 'career omission's being a lack of 'published papers'. Technical Workshop & Seminar papers yes, Journal papers no, to the extent that an emigrated Padre friend said my epitaph should be 'If Only I Had Written It Up'.

I was brought up from 1957 in the N Rhodesian/Zambian tradition that our research was directed at our national needs and 'published' annually in our internal Annual Reports, through our extension service and field days.

International publication was done in one's own [over-]time, not Office, unless genuine 'spare' time was available. This to some extent pertained at Matopos when I joined the Station in 1983 but the 'publish or perish' ethos became pervasive with the 'post-independence' [sic] influx of new 'staff-in-waiting', advised/supervised by expat experts 'late '80ies, to the detriment of user-information & results. I lived through it, even to the tune of becoming Head of Station, albeit Acting, for 13 months in 1989-90.

I met out going President socially, & very briefly, last year when he & his family were visiting Zim in company with forest specialist Stuart Christie of the SFM SA with whom I'd previously spent an interesting 4-day field session [which incidentally put me in bed for a week, we gurus not being a rugged as we thought we were].

I explained my informal MGSSA use on the same basis of the Forest Institute, not on Papers Published & Council Approval, etc., at which he said 'not a problem, send me your details & I'll see that you're "cleared" ', which I haven't Having also forgotten his name - please convey my regards & best wishes to him [& family!], and to any other appropriate colleague, Prof Winston, Dr Hennie, & esp Dr Dennis, --- tell him my Afrikaans has not improved since Bloem, despite regular weekend listening to Fanie Smit en Willem Beyers by SAG Short Wave . . Congress attendance most unlikely for me nowadays, but keeping up to date with hands-on practice through Grassroots still of importance and interest as local technical staff occasionally seek information which I provide to the best of my ability.

A Facilitator.

Best Wishes,
Love & Light,
Geof Calvert

Getting rid of Alien Plants

Ingula Newsletter Update

In March 2010 this publication reported on the alien eradication programme, which had just kicked off.

Since then the land management team has been hard at work and has reduced the number of live wattle trees on the Eskom property by about 95%.

Conservation Manager Peter Nelson said, "It appears that treating the trees in-situ seems to be more effective than the cut-and-fell method. The aim is to have no flowering wattles by 2013."

There are still large stands of alien trees in the Bramhoek catchment, outside Eskom's property, that need to be eradicated and negotiations are under way with representatives from the Working for water project and neighbouring landowners to address the situation.

There is a concern about the spread of bug weed in certain areas and a programme will be implemented to eradicate them. Peter added that, with the Bramhoek Dam now filled, monitoring of aquatic aliens will be intensified.

"The aim is to have no flowering Wattles by 2013"

R225m for Acid Mine Drainage not Enough, Parliament Hears

Creamer Media

Johann Claassens was addressing Parliament's Portfolio Committee on Water and Environmental Affairs on acid mine drainage. The R225-million set aside to deal with acid mine drainage (AMD) would not be enough, and closer to R750-million would be needed to address the problem successfully.

Dr Henk Coetzee from the Council for Geoscience said that urgent action was required in the Western basin of the Witwatersrand gold fields as acid mine water is already decanting to the surface and impacting on the Cradle of Humankind World Heritage Site.

AMD is also affecting the Krugersdorp game reserve, which is an area where "there is no longer a functioning ecosystem", Coetzee told Parliament. In the Western basin, where there are several non-operational mines, 17.7 Ml/day of untreated AMD is currently decanting into the Tweelopiesspruit, with flows having reached peak levels of 50 to 60 Ml/day during the past summer.

Rand Uranium and Mogale Gold have been the most active in this region in assisting the Department of Water Affairs to address the problem.

Rand Uranium is pumping out and neutralising 12 Ml/day and the company's plant is being upgraded to 30 Ml/day. The intention is also to upgrade the Mogale Gold treatment plant to 24 Ml/day.

Even though decant of AMD in the Western basin may be halted with these treatment plant upgrades, it could take up to two years to reduce the AMD levels in the basin to below the environmental critical level (ECL). The ECL is defined as the level within a mine void where AMD begins to contaminate the surrounding groundwater or surface water system. Claassens said that in addition to the Rand Uranium and Mogale Gold plant upgrades, the construction of a new plant to pump and neutralise AMD in the Western basin is due to start in January 2012, but will not be commissioned until September 2012.

Portfolio committee chairperson Johnny de Lange expressed his dismay at what he felt was an unnecessarily lengthy process. "It can't be that while our waters are being polluted we are going to sit back," De Lange said. "We are going to take months and months to do this once we have agreed on what the solution is. It just seems wrong."

Coetzee and Claassens said immediate intervention is also required in the Central Witwatersrand basin, which at the current average rate of rise of AMD of 0.4 to 0.6 m/day will decant into the Boksburg area by as early as March 2013, should no intervention be taken. However, AMD could reach the ECL by June next year.

Coetzee said the crisis in the Central Witwatersrand basin was precipitated by East Rand Proprietary Mines halting its pumping and neutralisation process of 60 Ml/day after its pumps were flooded. While the ECL level in this region is 173 m below the collar of the south-west V shaft, Central Rand Gold (CRG) has an interest to keep the water level below 400 m in order to continue operations in this area. As a result, CRG is assisting in the Central basin and has ordered pumps, which when installed, will maintain the water level of 400 m.

"The R225-million set aside to deal with acid mine drainage (AMD) will not be enough, and closer to R750-million will be needed to address the problem"

Council News

The Council met on 11 July prior to the start of Congress 46th 2011 Grootfontein, Middelburg. What a wonderful week Congress 46 has been – and fortunately no snow or extreme cold weather! Thank you very much to the Organizing Committee who made it a memorable experience. Congratulations to all the award winners.

The adjudication guidelines for the Norman Rethman Planted Pastures Award have been compiled and hopefully this award will be presented at next year's Congress.

Council is considering hosting another Research Skills Workshop in Nelspruit in March or April 2012. We are also looking into the possibility of obtaining SETA accreditation for the workshop.

For the first time since the launch of the website Australia features on the top five visiting countries list. With Website Editor now being an appointed position on Council we believe that the website will further increase the profile of the Society. Please submit any opportunities or events directly on the website or to the Website Editor. Also look out for the GSSA Facebook page!

"Our membership is steadily increasing and members are urged to advertise the Society as widely as possible."

A workshop with all AJRFS Assistant Editors is planned to address some technical issues.

The proposed GSSA budget for 2011/12 was accepted at the AGM with a membership increase of 5%.

Trust has disbursed some money for members to attend international congresses – the reports are elsewhere in this Grassroots issue.

Student awards have been presented throughout the year to deserving candidates. The Eskom Expo is continuing as normal and Council would like to thank all judges who are willing to assist during these events.

GSSA Council Members

Agricultural Business Chamber (ABC) participates in a meeting with Minister of Rural Development and Land Reform, Minister Gungile Nkwinti

ABC Media Release

The ABC leadership was invited to a meeting between the Minister of Rural Development and Land Reform (DRDLR) and commercial farmers. After the meeting was opened, Minister Nkwinti presented the audience with his views on the various Land Reform models. He specified that assisting land reform beneficiaries and emerging farmers cannot be done by government alone, hence this important engagement.

The Minister emphasised the benefit of interacting with farmers and role players to enable government's ability to achieve land reform targets. "Closing the gap through talking solves many problems". The Minister urged for better communication, especially between beneficiaries and neighbouring commercial farmers. However, he depicted that the beneficiaries should ask for assistance. "Dit het niks te doen met kleur nie", the Minster said, when he said black and white farmers should de-racialize the rural economy and stand together to speak with one voice, and defend with one voice their property and farming interests.

The Minster announced that representatives in the audience will be asked to assist in rewriting the legislation to enable a better land reform model, based on three generally accepted principles; 1) The de-racialization of the rural economy, 2) The democratic land allocation and use across gender, race and class, and 3) the strict production discipline for guaranteed food security. Sustained production discipline was especially highlighted by the Minster as an essential fundamental which should be maintained throughout the land reform transaction process. "The lack of maintaining the sustained production discipline was due to the land reform model being wrong".

The Minster informed the audience that the Green Paper on Land Reform, which release is still pending, is based on a three tier system of tenure;

"Closing the gap through talking solves many problems"

1) State land transfer will be enhanced to achieve progress without much pressure on government budget. State land should also be leased, instead of handing out, to ensure that people with interest, passion and commitment receive this land.

2) Limitation of size of land ownership. "We want to reduce mega corporation of agriculture", is how the Minster explained the situation. However, the Minister urged commercial farmers to assist government to enable an understanding on what is a commercially viable entity in different regions and different enterprises.

3) Foreign ownership of South African land. "South Africa belongs to all of us – black and white. We should defend our land – that's what our constitution says", the Minster said in explaining the problem caused when foreigners, with unfair objectives, own land.

After the Minister's speech, the Acting DDG at the DRDLR informed the audience on the outcomes of the workshops, interactions and reviewing of the different programmes and models within Land Reform.

AgriSA and TAUSA presented comments on the Minister's speech, on behalf of the commercial farmers in South Africa. Dr John Purchase, CEO of the Agricultural Business Chamber (ABC) presented the perceptions and expectations of agribusinesses.

"We realize that the land issue in SA is complex and emotive, but what remains a critical point is not to destroy value".

Dr Purchase elaborated why agribusinesses want to be involved in land reform:
1) The agribusinesses generally hold bonds on the land;

2) the land is security for production loans;

3) their business lies in sustainable production, sufficient farming operations and ensuring food security and

4) social and environmental sustainability, especially in the rural areas. The ABC considers successful land reform as essential; however, recognising that each role players' understanding and expectation differs. Therefore, the ABC urges that it is extremely important to engage on a continuous basis.

Dr Purchase emphasised that the ABC approach to land reform is from a business perspective as indicated by "We realize that the land issue in SA is complex and emotive, but what remains a critical point is not to destroy value".

The ABC agrees with the Minister that Government cannot manage land reform on its own and needs to involve key stakeholders in a proactive manner. "We need to build trust and predictability" – Dr Purchase. He also related the need for more assurance from government, such as through the recent statements by President Zuma and Deputy President Motlanthe about land reform taking place within the confines of the constitution of the country.

The ABC in general concurs with the three principles highlighted by the Minister; the question, however, remains how this will translate into legislation and effective programmes. Dr Purchase emphasised that the devil lies in the detail and that the ABC would welcome continuous and in-depth engagement to address the numerous challenges.

"From the ABC's side, our focus is primarily on Post Settlement Support to establish viable and sustainable farmers". On this basis the ABC has engaged DRDLR many times in the past. Many agribusinesses applied to become involved with DRDLR in, among other programmes, the Recapitalisation and Development Programme, which has not performed due to a lack of transparency and delivery from governments' side.

These programmes create expectations and the lack in delivery thereon creates frustration among beneficiaries with the intention to

Mr Jethro Mbau, Chairman of AFGRI, member of the ABC and also a farmer, contributed that there is a huge lack of common understanding among benefitting communities, which causes fragmentation and fighting amongst them and drastically inhibits their progress. The Minister responded that this fighting is detrimental to their production. The Minister admitted that they haven't done enough to solve this problem. The Minister announced that this is the reason why there are so many failures in restitution.

"Another important point is the extension of property rights, rather than nationalisation of land", Dr Purchase continued.

The ABC further urged for the official release of the green paper on land reform. "The industry needs certainty in this regard. The ABC and some of its members have been constructively involved in various workshops and reviewing processes reported on by the Acting DDG of DRDLR, such as the PLAS workshop, reviewing of the Farmer Equity Schemes, etc. The ABC commits to further contribute constructively in this regard."

The Minster re-emphasised that this engagement is the initialisation of continuous future engagement with stakeholders, especially in the writing of the legislation. "The ABC provides a willing hand to constructively engage with government to improve legislation and to ensure successful Land Reform", said Dr Purchase, CEO of ABC.

Upcoming Events

Farm Planning Course
Date: 19-28 September 2011
Venue: Tempel Holiday Resort, Modimolle, Limpopo
Tel: 014 717 3819
Cell: 078 228 0008
Website: www.alut.co.za

SANSOR Training Course for Authorization of Samplers and Inspectors
Date: 22-26 August 2011
Venue: CSIR Conference Centre, Pretoria, Gauteng
Contact: Tessa Kleyn
Tel: 012 349 1462

Sustainable Agricultural development and Food Security
Date: 29-31 August 2011
Venue: Southern Sun Grayston Hotel, Sandton, Johannesburg, South Africa
E mail: andrewp@amc-insta.com

11th Agricultural Outlook Conference
Date: 13-14 September 2011
Venue: CSIR International Convention Centre, Mering Naude Street, Brummeria, Pretoria, South Africa
E mail: minda@amtrends.co.za

Africa Agriculture Investment and Product Innovation Conference and Exhibitions
Date: 27-30 September 2011
Venue: Sandton, Johannesburg, South Africa
E mail: calvi@africa-agriculture.co.za

7th International Wildlife Ranching Symposium
Date: 10-14 October 2011
Venue: Kimberly, South Africa
Contact: Glaudin Kruger
Tel: 00 27 28 316 2905
E mail: Kruger@krugerassociates.com

NZ Conference of the International for Conservation Biology
Date: 05-09 December 2011
Venue: Auckland
E mail: 2011@combio.org
Website: www.conbio.org

Movers & Shakers

Dr. Sikhalazo Dube has been appointed Program Manager: Rangelands Management beginning 1 July 2011. Prior to joining the ARC he was a Senior Scientist at the Council for Scientific and Industrial Research (CSIR) in Pretoria where he was an Ecosystems Modeler in the Global Change and Ecosystems Dynamics Research Group. His research, student supervision and policy inputs focus on rangelands ecology: the dialogue between science, resources users and policy formulators, development of decision support tools and mapping of resources in light of a changing world. He is a member and current Immediate Past President of the GSSA. His publications include over 40 articles in scientific journals, proceedings, books and chapters in books. He is an author and co-author of several technical reports. His work has been presented in over 20 papers at local and international conferences. Dr. Dube holds a Ph.D. in Rangeland Ecology and Management (2005) with a 3.857 GPA, from Texas A&M University, College Station, Texas, USA. He holds a number of other qualifications which include Project Management Practices and Principles in Organizations (UP), Finance for Non-Financial Managers (NMMU) and Professional qualities for facilitation and collaboration in Natural Resource Management .

Program Manager: Rangelands & Management
Agricultural Research Council: Animal Production Institute
Tel: 012 672 9314
Cell: 073 952 8052

I've been appointed as the Deputy Director of Biodiversity and Climate Change Sub-directorate, at the Department of Environmental Affairs, Pretoria. My main responsibilities are:

Co-ordination of policy development on the effects of climate change on biodiversity, providing sound science-based risk assessment and response planning advice for managing the impacts of unavoidable climate change on terrestrial biodiversity, and enhance climate change adaptation research and analytical capacity. I am doing well and the adjustment has been smooth though lots of responsibilities. The environment & colleagues are great.

Vhalinaho Khavhagali
E mail: khavhagalivp@yahoo.com
Cell: 0722656747

In March 2011 I left CSIRO in Adelaide, Australia and joined the Georg-August-Universität in Göttingen, northern Germany as a Professor of a Department in the Agricultural Faculty called "Crop Production Systems in the Tropics" (http://www.uni-goettingen.de/de/sh/106511.html). My new role is teaching in a English MSC program and building up a funding base and MSc/PhD students to undertake research with the main focus on improving the sustainability and productivity of rainfed smallholder production systems in the tropics – to achieve this we combine farming systems research techniques with crop-soil modelling skills to develop more resilient and adaptive farming systems.

Prof. Dr. Anthony Whitbread
Georg-August-Universität Göttingen
Department for Crop Sciences
Crop Production Systems in the Tropics
+49 (0)551 393751 (office)
01751823724 (mobile)
awhitbr@gwdg.de

Filling Elephant-sized Gaps

Dr George Chirima and Dr Tony Swemmer - SAEON Ndlovu Node

Throughout the protected areas of southern and eastern Africa, elephant populations continue to grow, trees continue to fall and managers and scientists continue to argue. The so-called “elephant debate” began decades ago, as the impact of elephants on the vegetation of game reserves and national parks started becoming visible to managers, tourists and scientists.

In a recent article in SAEON eNews, “Mom, I want to be an ecosystem engineer", SAEON’s Observation Science Specialist, Prof Tim O’Connor describes how his long-term research in a private game reserve provides direct evidence of how a relatively low density of elephants is transforming a woodland into a shrubland, and may eliminate a number of tree species from the protected area.

While not as detailed, other studies and observations indicate similar transformations for much larger protected areas, such as the Kruger National Park, Chobe Game Reserve, Hwange National Park and Amboseli National Park.

Is this information adequate to initiate large-scale management interventions to stop the growth of elephant populations over much of Africa? This is not a trivial, “bunny hugger” concern given the extent of land that falls within protected areas containing elephants, the invaluable contribution of these areas for the continuation of ecosystem services and much of Africa’s remaining biodiversity, and the potential for elephants to dramatically alter the nature of these ecosystems.

"The so-called “elephant debate” began decades ago, as the impact of elephants on the vegetation of game reserves and national parks started becoming visible. "The last point is the critical one.

While it is clear that elephants can and are changing the structure of ecosystems by breaking, pushing and uprooting trees, it is not clear what the long-term consequences of such changes will be for the thousands of other species that inhabit these ecosystems. If elephants transform a tall savanna to a short savanna, or a woodland to a shrubland, or bushveld to grassland, will this result in a net loss of biodiversity in the long term?"

Considering that the conservation of biodiversity is the primary mandate of protected areas, this is a key question in the elephant debate. Unfortunately, very little scientific evidence is available to answer this question. Despite decades of research and an imposing bibliography on elephant ecology, it is a question that continues to boggle the minds of scientists and managers alike.

Dr George Chirima, a scientist at the SAEON Ndlovu Node has begun synthesising previous research on the impacts of elephant on biodiversity, with over 300 published and non-published articles on this topic located to date. Most, if not all publications have underscored the need for more real data in order to generalise impacts on other species resulting from elephant foraging. A small fraction of this published work spanned more than five years, and comparisons between findings from different areas have been inconsistent, not quantitative and not exhaustive enough to draw meaningful generalisations.

How other components of biodiversity including birds, insects, reptiles, small mammals and herbaceous plants respond to elephant impacts remains largely speculative, or entirely unknown. What is clear is that long-term research spanning different ecosystems and covering a range of soils and climates, is needed to produce reliable data, and ultimately consensus amongst the leading experts and managers.

The SAEON Ndlovu Node will be contributing to filling this knowledge gap with a new project aimed at determining the effects of elephants on many aspects of biodiversity, over and above tree structure and species diversity. This new project will make use of the Node's network of tree monitoring sites established by Node Manager Dr Tony Swemmer over the past few years, which includes some sites in protected areas with no elephants, and some with elephants.

The Node will also be working with Kruger National Park scientists, particularly Dr Sam Ferreira to exploit existing elephant exclosures as additional study sites. These exclosures consist of blocks of some 50 ha with electrified fencing that keeps out elephants, but allows smaller herbivores to move freely in and out. This provides a valuable research tool for disentangling the impacts of elephants from those of other herbivores. Partnerships with private game reserves bordering the Kruger National Park have allowed for control sites to be established in protected areas with no elephants. Variables to be measured include not only local impacts on various types of biodiversity over a time-scale of years or a decade, but also those that relate to ecological processes that will improve models and predictions of future changes.

A Scientific Heritage Neglected?

SAEON Newsletter

Any society would normally cherish its cultural heritage, important hallmarks of which are commonly preserved for enjoyment by the public in museums and galleries. I wish to propose that our legacy of scientific endeavour relating to the natural world is deserving of similar protection for future use by our scientific community.

I write about long-term field experiments conducted by natural resource agencies and universities. Although this article reflects personal opinions, it was motivated by the potential benefits recognised for SAEON in maintaining these experiments for purposes other than those for which they were established. The workings of the natural world are not easily understood. A scientist embarking upon their first major study is soon confronted by bewildering complexity.

I attempted to understand the effects of grazing on rangeland dynamics but soon had to confront simultaneous and complex synergistic effects of fire type, season of burning, animal type, animal numbers and distribution, season of grazing, rainfall variability, tree abundance, and soil type, to name a few. Insights gained were obviously incomplete, but hopefully a piece was added to the puzzle. My experiences cemented the viewpoint that a deeper understanding could only emerge if an appropriate period of ecological time was studied – decades, not years.

"A scientist embarking upon his first major study is soon confronted by bewildering complexity."

How might we increase the rate and quality of pieces added to a puzzle? A foundation stone of the scientific approach is to tease apart experimentally the effects of individual factors.

This approach is as relevant now as it was between 1930 and 1960 when a host of field experiments were set up across the country. The most prominent of these during this golden era were the trials conducted by agriculture, water affairs and forestry, national parks, other conservation agencies, and associated universities. These entities did not undermine the potential quality of their science by constraining it to a short-term funding cycle - they were in it for the long run.

The experiments addressed objectives relevant to their time. A common critique is that the original objectives are no longer relevant and that the money could be better used for other research. I posit an alternative that they offer high quality, cost-effective opportunities for emerging theoretical and applied issues. A range of cases is described in order to demonstrate their broad value.

† ANTHONY SIEBERT

7 April 1953 – 18 July 2011

Anthony (Tony) Siebert passed away suddenly on Monday, 18 July 2011 in Medi-Clinic, Potchefstroom at the age of 58. His sudden death from a heart condition came as a great shock to his family and all who knew him as a keen tennis player, avid jogger and digger of antique bottles.

Anthony was born on April 7, 1953 in Johannesburg, the son of the late Dulcie and Tienie Siebert. He was the youngest of three siblings and grew up in Potchefstroom with his brother Chris and sister Marian, who tragically died in 2000.

He matriculated at the Potchefstroom High School for Boys and attended Potchefstroom University and the Pretoria Technikon. He was employed by the Potchefstroom Agricultural College before joining Advance Seed Co in Krugersdorp, where he was pasture seed production manager for many years before starting his own successful consultancy, Siebert Seed Consultants, based in Potchefstroom. Over the years, his work in pasture seed production and sales made him a well-known and respected figure in farming communities.

Anthony was a staunch member of the tennis club at the Potchefstroom Country Club for over two decades and also had one of the finest collections of antique South African ginger beer bottles in the country – a life-long interest that led him to often hair-raising 'mining' activities at old municipal dumps at Potchefstroom, the West Rand, the Eastern Cape, Kimberley and Cape Town. Anthony is survived by his son, Paul (20) and his brother and sister-in-law, Chris and Berna Siebert, of Faerie Glen, Pretoria.

A memorial service, led by the Rev. Charles Kuhn, was held on Friday, 22 July 2011 at the Potchefstroom Methodist Church, of which he was an active member.

GSSA Trust

Financing the Future of Rangeland & Pasture Science since 1975

The GSSA Trust is a legal body that exists for the academic and scientific enrichment of GSSA members

The Focus of the Trust is to Support:

- Mentorship Programmes
- Student Participation in the Discipline
- Growth of Young Scientists
- The Endeavours of Established Scientists

Active members of the GSSA can apply for funding from Trust for activities which will elevate the disciplines of rangeland and pasture science together with the mission and objectives of the GSSA in South Africa and internationally

Report for the 9th International Rangeland Congress in Rosario Argentina as the GSSA Representative

Mike Peel
Agricultural Research Council
Animal production Institute
E mail: mikep@arc.agric.za

Dr. Mike Peel is Immediate Past President of the GSSA and is also the Programme Manager Rangeland Ecology housed in the Animal Production Institute of the ARC.

The 9th International Rangeland Congress is the premier international congress for rangeland scientists in the world. The congress provided an excellent opportunity for rangeland scientists and practitioners to share their research and experience.

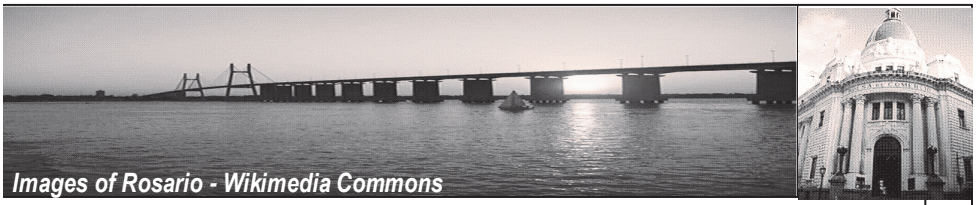
The GSSA is the major Society dealing with research relating to research and management of southern Africa's grasslands and rangelands. Natural rangelands provide the nutrition for almost all of South Africa's national herds (cattle, sheep, goats and wildlife) and the health of these rangelands is paramount to the sustained production of these herds.

The 9th IRC held in Rosario, Argentina, provided the international platform for the presentation of the results of research in range and forage production.

It further provided the opportunity to exchange information with international researchers from all continents and to expose these scientists to the science and practice of range and pasture management in southern Africa as strived for by the GSSA.

In terms of the Society, three of the major objectives were achieved:

- In promoting and creating awareness and opportunities in southern Africa for range and pasture scientists, technologists and farmers to confer and exchange ideas; and
- In disseminating knowledge and information in the field of rangeland science through attendance of congresses and publications;
- Encouraging liaison with other societies having similar or common interests both nationally and internationally



Images of Rosario - Wikimedia Commons

I co-chaired Session 2.2 titled „Diversified uses of Rangelands and Conservation" with Dr Nestor Maceira (Argentina).

I presented the closing summary for the session as well as the written summary for the closing congress for the session. My attendance allowed me to make platform presentations titled "The Value and Costs of Wildlife in the Eastern Lowveld of South Africa" (author Mike Peel) and a platform presentation for Winston Trollope titled "Assessing Range Condition - A Fire Management Decision Support System to Mitigate Climate Change in South Western Zambia".

I further attended a breakfast meeting addressing the "Drylands" of the world with Constance Neely (FAO, World Agroforestry Centre USA/Kenya), Matt Barnes (Society for Range Management USA); Pablo Borrelli (Ovis XXI Argentina) and Brian Marshall (Savory Institute Australia).

The overall aim of the programme is to improve the livelihoods of and increase opportunities for development for poor people living in the drylands of Africa and the world. This will be achieved by studying and understanding a selection of successes in land rehabilitation and resource management, and using the knowledge obtained to stimulate the significant up scaling of successful practice.

The Congress thus provided an opportunity for the GSSA to:

- Promote improved cooperation between South African and international research groups.
- Highlight South African excellence in Science and Technology in the southern African sub-region;
- Encourage Science and Technology partnerships;
- Advances the achievement of strategic South African S&T priorities and strengthens global partnerships; and
- Enhance the internationalisation of the African Research Area.

The stand had many visits and the journals and copies of Grassroots were much sought after (I had to protect some copies or all of the copies would have been removed in the first hour of the stand opening).

As a co-chair of a session and keynote speaker the GSSA benefited through the organising committee paying towards my accommodation while in Rosario, my congress registration and through some negotiation on Freyni du Toit and my part the waiving of registration for the GSSA stand! The ARC gave me permission to travel, an investment in my time away from office.

Further return on investment was large through widespread interest in the GSSA stand and hopefully some of these contacts will subscribe either as Associate or Individual members (time will tell). Contact with members of the Drylands programme in particular has great potential for raising the profile of the Society in Africa.

Protecting Grasslands through Endangered Species Conservation

Leigh Potter and Ian Little
The Endangered Wildlife Trust, Threatened Grasslands Species Programme
E mail: leighp@ewt.org.za

Internationally, only 1.4% of grasslands are protected, the lowest of any terrestrial vegetation type. Similarly, grasslands are one of South Africa's most threatened ecosystems, with only 2.2% formally conserved and more than 60% already irreversibly transformed.

The Endangered Wildlife Trust's (EWT) Threatened Grassland Species Programme (EWT-TGSP) aims to protect South Africa's precious grasslands through implementing their various endangered species conservation and monitoring projects.

It all started with the EWT's Blue Swallow (BSWG) and Oribi Working Groups (OWG) which implemented conservation action for grasslands, but were based on a single species approach.

Conservation globally has moved away from the single species approach in favour of an ecosystems based approach. In order for the EWT to achieve an ecosystems approach to grassland conservation the intention was to implement conservation action for priority areas within the grasslands and for suites of priority species inhabiting them to be grouped under one programme.

In 2009 the single species working groups, namely the BSWG and OWG and the KwaZulu-Natal Biodiversity Programme became projects of the EWT-Threatened Grassland Species Programme.

In the beginning of July 2010, Ian Little was appointed as the new Manager of the TGSP and Samson Phakathi joined Leigh Potter and Enos Zulu as field workers. These changes in staff accompanied a change in the focus of the programme as a whole. While the previous work has continued, with some changes to the focus – a shift from pure monitoring to identification and mitigation of major threats, there has also been the initiation of new projects and thereby, the inevitable growth of the programme into a true grassland biome conservation unit.

These changes have and will also bring us in line with the mission of the EWT-TGSP which is "the conservation of threatened grassland species and their grassland habitat."

Projects of the "New look" EWT-TGSP

The EWT-TGSP is now looking at a suite of 5 species from different taxonomic groups that together are indicators of healthy grasslands.

Through our "on-the-ground" communications with landowners, we are also able to contribute to the various Stewardship initiatives in the provinces where we work. This is one way to ensure that our grasslands and endangered grassland species are protected.

Blue Swallows

The EWT has been involved with the monitoring of South Africa's Blue Swallow (*Hirundo atrocaerulea*) population for a number of years. Unfortunately, the results show a steady decline in the numbers of active nest sites utilised in South Africa, sometimes in spite of a seemingly successful breeding season i.e. high number of fledglings. As expected, the South African population has been assessed as critically endangered.

The EWT continues to monitor the populations in both the KwaZulu-Natal and Mpumalanga provinces (there have not been Blue Swallows seen in Limpopo for many years). It has become apparent that in order to conserve Blue Swallow the EWT-TGSP needs to look beyond the borders of South Africa to the other African countries where Blue Swallows are known to occur, including both the

"The Conservation of Threatened Grassland Species and their Grassland Habitat."

It has been said that around 47% of the non-breeding areas are currently not under formal protection, leaving them vulnerable to the threats of mining and development. The EWT-TGSP has taken the first step in Initiating communication amongst the relevant countries with the aim of updating the 2002 International Action Plan for Blue Swallows and developing a new, feasible action plan for the various countries. The EWT-TGSP is currently trying to source funding to host workshops towards the review of the 2002 and development of the 2012 Blue Swallow International Action Plan.


Oribi - Andre Rossouw

Oribi

Oribi (*Ourebia ourebi*) population monitoring, through landowner consultations and the national survey, will continue. The survey will be conducted on an annual basis, instead of a biennial basis, to ensure that any changes in number or increase in threats can be dealt with swiftly. According to the 2009 survey, there are approximately 1907 Oribi left in South Africa.

The South African population is listed as endangered due to its rapid decline in recent years, caused primarily by habitat destruction and continued persecution by man.

Yellow-breasted Pipit

The first new project to roll out will be the Yellow-breasted Pipit (*Anthus chloris*) project. This species is a habitat specialist and is sensitive to any form of habitat disturbance, such as grazing and fire. This highlights the need for conservation attention in the moist highland grasslands.

This project, in collaboration with SANBI and the EWT's Conservation Sniffer Dog Project, will focus on reassessing the conservation status of this threatened (vulnerable – IUCN) and endemic grassland specialist and in doing so, create a conservation awareness and grassland management plan for land-owners throughout the moist highland grasslands of South Africa.

The Kaapsehoop Cycad

The EWT-TGSP will be, in collaboration with SANBI and DEA, assisting with the development of Biodiversity Managament Plans (BMPs) for Critically Endangered cycad species. Currently, the TGSP's focus is on the critically endangered Kaapshoop cycad *Encephalartos laevifolius*.
It is listed as Critically Endangered on the IUCN's Red list. It is also listed on CITES (Appendix I).

This species has undergone significant declines and the estimated number of individuals remaining in the wild is between 700 and 820 individuals. The main threats to this species are habitat loss (through increases in invasive alien plants and through afforestation). Illegal collecting for ornamental collections has had a substantial effect on *E. laevifolius* populations. Also, the stems of this species are used in traditional medicines, which could lead to unsustainable harvesting.

The EWT-TGSP will be collating all known information and data on *E. laevifolius* towards the development of the BMP. Biodiversity Management Plans are legally binding and they are gazetted by the government. The EWT-TGSP is currently looking for funding for the various workshops that are necessary for the BMP, to ensure that all relevant parties have been consulted and informed.

Besides the compilation of the BMP, EWT-TGSP staff will be incorporating cycads into their fieldwork schedules to assist local authorities with the monitoring of these threatened plants.

"This species has undergone significant decline and the estimated number of individuals remaining in the wild is between 700 and 820 individuals."

The Giant Girdled Lizard / Sungazer

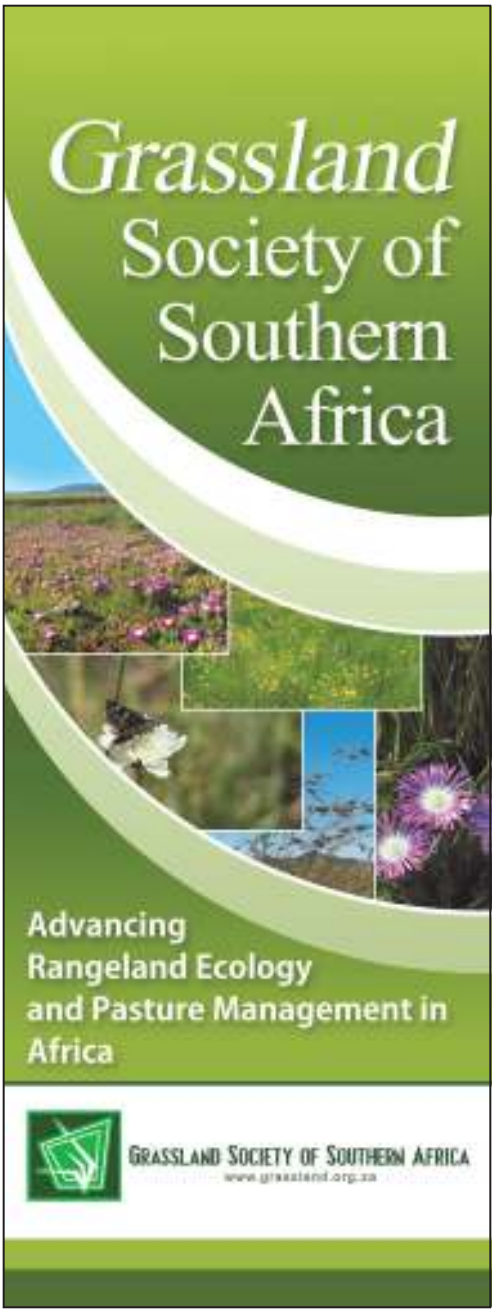
The EWT-TGSP has recently initiated an MSc research project on Sungazers in collaboration with Graeme Alexander (WITS), Ray Jansen (TUT) and Michael Cunningham (UFS). The MSc student, Shivan Parusnath's project will contribute significantly to the conservation and monitoring of this species.

The Giant Girdled Lizard (Sungazer) *Smaug giganteus* lives in colonies and digs burrows in silty soil. They are endemic to the *Themeda* grasslands of the North-eastern Free State, South-western Mpumalanga and North-western KwaZulu-Natal provinces in South Africa.

The species is currently recognized by the IUCN red list authority as vulnerable, although this assessment was conducted in 1996. The recorded decline in numbers is a result of habitat destruction (conversion of grasslands to farmland) and illegal collecting for the pet trade. Ploughing is known to be fatal to Giant Girdled Lizards and formerly ploughed lands can no longer support populations of this species.

While the species is listed on CITES Appendix II it is believed that illegal collection from the wild poses a further, currently unquantifiable threat to the population. Hopefully, with the information provided by this research, their status will soon be updated and mitigation measures can be initiated to minimise the threats to this species, thus ensuring their survival.

These projects highlight the expanded focus of the EWT-TGSP, but are by no means the limit to the programme. The EWT-TGSP hopes to continue to initiate new and exciting projects to highlight the importance of South Africa's grasslands in an effort to ensure the conservation.



46th Annual GSSA Congress held at Grootfontein Agricultural Development Institute.

Justin du Toit
Grootfontein Agricultural Development Institute, Middelburg, Eastern Cape, South Africa

Coinciding with Grootfontein's centenary celebrations, the Grassland Society of Southern Africa (GSSA) held its annual congress at the College during July. Around 160 delegates attended the week-long function, travelling to the Karoo from around South Africa and neighbouring countries. Having been warned of the cold winter conditions, everyone padded up with extra layers, brought gloves and beanies, and enjoyed the low temperatures. The opening function combined an overviewof the College by the Principal, Strydom Schoonraad, the presidential address by Sikhalazo Dube, and a keynote address on integrating science and policy by the well-known water biologist Tally Palmer. Over the next few days there were talks by delegates from a wide range of backgrounds, as well as a special session on the invader shrub Slangbos, and a session titled "Rangelands, both sides of the coin", where farmers and scientists discussed issues on the interface of science and practice, including some interesting presentations on land reform success stories.

The rich history of Grootfontein was showcased with visits to long-term grazing trials, as well as a tour of the Museum led by Elana Kitching. A promising upshot was that several scientists expressed an interest in collaborating with Grootfontein on exploring further the interactions and links between soil, livestock, and plants in this semi-arid rangeland. The academic component of the congress ended with a discussion on Fracking in the Karoo, where presentations by local farmer Lukie Strydom, who had just vis ited the USA, and by Jonathan Deal of Treasure the Karoo Action Group, were well received by delegates. The discussion provided informa tion to the Director of GADI, Tino Herselman, for establishing what the future position of the Department of Agriculture, Forestry, and Fisheries will be on the issue of shale mining in the Karoo. During and following the congress there was a wealth of positive comments from the delegates who had enjoyed the programme, the activities, the College, and the town of Middelburg. The GSSA thanks all who contributed in so many ways to making the event such as success.

Sikhlalazo Dube, Immediate Past President, Lorraine van den Berg, Vice President and Wayne Truter, President

GSSA Members kicking back after a long week of Science Talks

Klaus Kellner, Yolandi Els and Wayne Truter

GSSA delegates - Long term trial at Grootfontein: The oldest in Southern Africa

GSSA Group Picture

Revitalizing Planted Pastures in South Africa

Wayne Truter[1] and Chris Dannhauser[2]

E mail: wayne.truter@up.ac.za and chriswei@vodamail.co.za

There is concern amongst members of the Grassland Society of Southern Africa (GSSA) about the future of Planted Pastures in South Africa. During the council meeting, in January 2010 at Kimberly, it was decided to start a campaign to revitalize this discipline by encouraging research, publications and training and most importantly mentoring of young scientists and specialists. Since then a Strategic Plan was drafted and is as follows.

Draft Strategic Plan

After reviewing the membership list of the GSSA, and as far as possible grouping the Grassland Scientists (who have some specialization in planted pastures) from the list, a few conclusions and/or deductions were made.

The conclusions drawn from this exercise and after communicating with specialists in the field, consequently recognized a few factors that has contributed to the dwindling numbers of planted pasture specialists, academics and/or researchers in the country, which then ultimately supports the importance of revitalizing the planted pastures component of the Grassland Society. These conclusions have also in the recent years been supported by the fact that the Department of Education, regards Pasture Science as one of the most scarce agricultural skills in the country and requires significant inputs to address this issue.

Of the 487 members, approximately 18 % (+/- 87 members) of the members have some expertise in planted pastures, and of these members 9 % of them are academics at tertiary institutions training under- and post graduate students and 3.33 % of these members excluding the academics that do research as well, are researchers and the remaining 88% of
people with planted pasture expertise are either government officials, self-employed, parastatal or in industry (seed companies etc.). The factors that contribute to the shortage of effective planted pasture research and training in South Africa are as follows:

1. In government institutions and research institutions, there are many vacant positions, run down infrastructure, insufficient running capital and significant red tape and most importantly, the absence of mentors. Inter-provincial Planted Pasture working groups, with remaining specialists can be an opportunity to address this challenge.

* Department of Plant Production and Soil Science, [1]University of Pretoria, Pretoria and School of Agriculture and environmental Science, [2]University of Limpopo, Sovenga

2. There is lack of vision with in Departments to prioritize research, and this can be an avenue that the GSSA can help guide government of important research opportunities

3. There are significant changes in agriculture with serious financial implications, and new technologies and developments in this field are required. Shortage of Plant Breeders – Need to encourage/attract students in the Genetic Sciences to become more involved in Planted Pastures

4. The dairy industry of South Africa, which is primarily located in the coastal areas, is entirely dependant on planted pastures, and this discipline is mainly supported by animal scientists. It is therefore, imperative that the dairy industry is approached to support the campaign.

5. Insufficient marketing of the importance of the discipline – this can be addressed by having popular articles endorsed by the GSSA.

6. More involvement of stakeholders (meat, wool, fertilizer & seed industries), through financial support (bursaries) and internships, in the training of young scientist.

7. More short courses endorsed by the GSSA.

8. The shortage of academics in the discipline, resulting in the loss of Planted Pasture education at tertiary level. Of all the larger universities, there are probably 4 left that actually offer more than one Planted Pasture course, and not even to mention a research programme in Planted Pastures.

"Pasture Science is one of the most scarce agricultural skills in the country and requires significant inputs to address this issue."

Relevant Contacts

The GSSA membership list has been scrutinized to establish relevant contacts in the following categories.

Potential Mentors

Currently a number of mentors have been identified, but have not yet been contacted to establish their availability.

Funding Opportunities

The following institutions listed are to be contacted for support: NRF, Industry (Seed Companies, Fertilizer Companies etc.), MPO, RPO, Protein Research Foundation (Legume production), EU funding (EP7 Framework) – Innovative Research Funding etc.

Creating links with Industry

Various links are to be made with industry
- to sponsor bursaries and where possible be followed by internships,
- involve and invite associated societies such as RPO, MPO, Wool growers Association, SANSOR and SANCID to attend congress and/or have them publish in Grassroots , and reach an agreement for GSSA to publish or be represented at their events.

The Popular Agricultural Press

Media releases in popular agricultural magazines and newsletters are planned to highlight the status quo of the Planted Pasture Science discipline, thus the importance of planted pastures, scientists and specialists in the agricultural sector of Southern Africa.

At the initiation of this campaign, and the drafting of the strategic plan, it was proposed that an open letter be sent to all listed persons the GSSA has record of with some expertise in Planted Pastures. Below is the open letter, and it would be appreciated if any person who has not yet received such a letter and would like to participate in this campaign, please send us their details so that we can make contact with them.

Open Letter to Pasture Scientists

To all Planted Pastures Specialists in SA

Planted Pastures in South Africa: The way forward?

For quite a few years there is concern amongst GSSA members about the future of Planted Pastures in SA. The number of publications in this field is declining in our journal and it seems as if the Planted Pasture Scientists are on the "red list". During the last GSSA council meeting, Prof. Chris Dannhauser and Dr. Wayne Truter were tasked to "revitalize" the Planted Pasture component of the GSSA. The plan of action at this stage is to:

- List all the experienced Grassland and Pasture scientists in SA, who are specifically involved in Planted Pastures. Even those who are retired, because they can make valuable contributions.
- Form a National Working Group on Planted Pastures to facilitate this campaign.
- Encourage people on the list of specialists to consider publishing within the next year. This can be a publications based on historical or new data. It can be a full scientific publication for our Journal or a popular article for our Grassroots bulletin.
- Establish reasons for the decline (or "retrogression") of specialists and/or interest in this field of specialization and consequently find solutions for the problem.

A request to all the Planted Pasture scientists who received this notice: Are you willing to participate in this action? If yes, in what way possible? Please indicate (with a √ or x) in the table below: Any further suggestions for this campaign will be much appreciated.
Please send us updated contact details and comments and suggestions.

Chris Daunhauser:

chriswei@vodamail.co.za

+27 (0)82 8734736

Wayne Truter:

wayne.truter@up.ac.za

+27 (0)83 4703964

Action	Y	N
Are you willing to participate by phone?		
Are you willing to participate by e-mail?		
Are you willing to participate by fax?		
Are you willing to participate by post?		
Are you willing to serve on the Working Group?		
Will you consider a publication?		
AJRS Journal?		
Grassroots?		
Can you help as a mentor for younger scientists?		
Please let us know of any other person who can contribute	Names please	

Filling Elephant-sized Gaps

Dr George Chirima and Dr Tony Swemmer - SAEON Ndlovu Node

Throughout the protected areas of southern and eastern Africa, elephant populations continue to grow, trees continue to fall and managers and scientists continue to argue. The so-called “elephant debate” began decades ago, as the impact of elephants on the vegetation of game reserves and national parks started becoming visible to managers, tourists and scientists.

In a recent article in SAEON eNews, “Mom, I want to be an ecosystem engineer", SAEON’s Observation Science Specialist, Prof Tim O’Connor describes how his long-term research in a private game reserve provides direct evidence of how a relatively low density of elephants is transforming a woodland into a shrubland, and may eliminate a number of tree species from the protected area.

While not as detailed, other studies and observations indicate similar transformations for much larger protected areas, such as the Kruger National Park, Chobe Game Reserve, Hwange National Park and Amboseli National Park.

Is this information adequate to initiate large-scale management interventions to stop the growth of elephant populations over much of Africa? This is not a trivial, “bunny hugger” concern given the extent of land that falls within protected areas containing elephants, the invaluable contribution of these areas for the continuation of ecosystem services and much of Africa’s remaining biodiversity, and the potential for elephants to dramatically alter the nature of these ecosystems.

"The so-called “elephant debate” began decades ago, as the impact of elephants on the vegetation of game reserves and national parks started becoming visible. "The last point is the critical one.

While it is clear that elephants can and are changing the structure of ecosystems by breaking, pushing and uprooting trees, it is not clear what the long-term consequences of such changes will be for the thousands of other species that inhabit these ecosystems. If elephants transform a tall savanna to a short savanna, or a woodland to a shrubland, or bushveld to grassland, will this result in a net loss of biodiversity in the long term?"

Considering that the conservation of biodiversity is the primary mandate of protected areas, this is a key question in the elephant debate. Unfortunately, very little scientific evidence is available to answer this question. Despite decades of research and an imposing bibliography on elephant ecology, it is a question that continues to boggle the minds of scientists and managers alike.

Dr George Chirima, a scientist at the SAEON Ndlovu Node has begun synthesising previous research on the impacts of elephant on biodiversity, with over 300 published and non-published articles on this topic located to date. Most, if not all publications have underscored the need for more real data in order to generalise impacts on other species resulting from elephant foraging. A small fraction of this published work spanned more than five years, and comparisons between findings from different areas have been inconsistent, not quantitative and not exhaustive enough to draw meaningful generalisations.

How other components of biodiversity including birds, insects, reptiles, small mammals and herbaceous plants respond to elephant impacts remains largely speculative, or entirely unknown. What is clear is that long-term research spanning different ecosystems and covering a range of soils and climates, is needed to produce reliable data, and ultimately consensus amongst the leading experts and managers.

The SAEON Ndlovu Node will be contributing to filling this knowledge gap with a new project aimed at determining the effects of elephants on many aspects of biodiversity, over and above tree structure and species diversity. This new project will make use of the Node's network of tree monitoring sites established by Node Manager Dr Tony Swemmer over the past few years, which includes some sites in protected areas with no elephants, and some with elephants.

The Node will also be working with Kruger National Park scientists, particularly Dr Sam Ferreira to exploit existing elephant exclosures as additional study sites. These exclosures consist of blocks of some 50 ha with electrified fencing that keeps out elephants, but allows smaller herbivores to move freely in and out. This provides a valuable research tool for disentangling the impacts of elephants from those of other herbivores. Partnerships with private game reserves bordering the Kruger National Park have allowed for control sites to be established in protected areas with no elephants. Variables to be measured include not only local impacts on various types of biodiversity over a time-scale of years or a decade, but also those that relate to ecological processes that will improve models and predictions of future changes.