
Celebrating 50 years of Rangeland Ecology and Pasture Management in Africa

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The Grassland Society of Southern Africa is 50 years old! The first congress was held in Pietermaritzburg in 1966 at the then University of Natal in Pietermaritzburg, with 103 delegates. The 25th Congress was also held in Pietermaritzburg in 1990, with 123 delegates attending. In 2015, the Society again returned to its roots and the 50th Congress was held in Pietermaritzburg at the Royal Agricultural Showgrounds. The Showgrounds proved to be an excellent venue, and a total of 259 delegates attended the prestigious event. Of the 259 delegates, 231 were South African, 18 from other southern African countries, 6 from further afield in Africa and 4 from other continents. The Congress was strongly supported by the University of KwaZulu-Natal, Ezemvelo KZN Wildlife, the KZN Department of Agriculture and Rural Development and the Friends of UKZN Agriculture (an alumnus association) with the organizing committee drawn from those organizations.

The GSSA has held a 2 day Research Skills Workshop immediately preceding its annual congresses over the last few years, and once again a successful workshop was hosted with 55 delegates

attending. The Congress was opened with an insightful address by Professor Albert Modi, the Dean and Head of School of Agricultural, Earth and Environmental Sciences at the University of KwaZulu-Natal and the Chairman of the South African Agricultural and Life Sciences' Deans' Association. The opening plenary address was given by Professor Scott Collins from the University of New Mexico, and focused on grasslands and grassland research globally. He gave interesting perspectives on future research directions. Prof Collins is also a past president of the Ecological Society of America, which is celebrating its 100th year anniversary in 2015. At the opening "meet and greet" function, he presented an overview of the role of professional societies in science and in society at large. Professor Roland Schulze, from UKZN, gave a second plenary address focused on climate and man's impact on the climate, with a view to identifying future priority research areas. The scientific programme comprised several key focal points, including various aspects of veld and pasture research and utilization. It was pleasing to see an increased level of interest in pasture research.

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A successful Special Session (organized by the Endangered Wildlife Trust) was held to debate Holistic Resource Management. This was well attended, and stimulated some robust debate among delegates. A blog has been set up by Tapiwa Chatikobo and Heidi Hawkins to continue this debate*. Mid-congress tours were held to enable delegates view science in practice. These included a tour to visit pasture research sites at Cedara and several pasture based dairy farms in the Karkloof area, a visit to

a landfill conservancy to view successful ecosystem restoration and a visit to Ukulinga, the UKZN research farm, to view the 65 year old Veld Burning and Mowing Trial and Veld Fertiliser Trial. The Gala Dinner was a special event attended by several founder members of the Society, including Professor Winston Trollope, Professor Neil Tainton, Dr Rupert Jones, Professor Eugene Moll and Mr Peter Miller. The founder members all expressed appreciation for the manner in which the GSSA has adapted and survived, and continues to serve its members and society at large.



GSSA Past Presidents

*<http://www.plaas.org.za/blog/does-holistic-management-really-work-grasslands>

Presidential Address 2015 50 Years of the Grassland Society of Southern Africa

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Being the 50th year since the inauguration of the society, I would like to take a few moments to reflect on the contributions that the GSSA has made to the management and conservation of the rangeland resources of southern Africa. I have elected to use both these terms, because often they are viewed as in conflict with one another. A kind of ecological ying-yang. During the early years of my career, the livestock production sector was viewed with skepticism and in conflict with the objectives of conservation, where high biodiversity and fields of *Themeda triandra* were viewed as the desired state for all rangeland. It took a great many years before the realization that, with judicious management, both objectives could be achieved.

Today we witness the increased grassiness of the eastern Nama-Karoo and the Grassland biomes, reported on most recently by several members of the society but most eloquently articulated by Masubelele, Bond and Hoffman (2015). This change has important consequences for the livestock sector which is now faced with the opportunity to respond to the greater amount of grass biomass.

There has also been an increase in woody biomass throughout southern Africa. This has been documented in the special edition on bush encroachment which appeared last year. Since 1965, we have also witnessed the huge change in land-use which has accompanied the growth in the eco-tourism and formal conservation sectors. Many millions of hectares of rangeland previously under livestock production are now in the informal conservation sector. Land restitution since 1994 has also increased the area of land under the leasehold tenure system, and the management challenges that this change represents are dealt with in the special edition of the journal in 2013. In the planted pastures field, we have witnessed the development and release of several new cultivars that have been reported in the journal.

Membership

Since 1965, we have seen a radical transformation of the membership of the Society, and our membership now reflects the full diversity of people living in southern Africa. The number of members in 2014 was 399.

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Although membership has not changed very much in the year under review, the Society must remain constantly committed to recruiting new members. The discipline will always require new blood to enter into the fray and take over the responsibilities in the Society. We have seen some excellent contributions from our younger members on Council, and their dedication to new portfolios must be commended.

African Journal of Range and Forage Science

Under the editorship of James Bennett, the journal has continued to grow. With a growth in the number of papers submitted, and only a marginal increase in the page numbers, there has been an increase in the rejection rate. With over 100 papers submitted during 2014, and already over 50 for 2015, the journal is once again becoming a force in southern African ecological publishing. We have just been informed that the ISI Impact Factor has increased to 0.971, which is a substantial improvement from the 0.37 of the previous assessment. This is largely due to the efforts of the editors and guest editors who, over the past few years, have put together the most recent special editions on “Aligning policy with the socio-ecological dynamics of rangeland commons” and “Bush encroachment – changes, causes, consequences and cures”. These efforts have certainly focused attention on the journal and increased the impact factor. During 2014 we saw the publication of the special edition “Bush encroachment – changes, causes, consequences and cures” with guest editor

Colleen Seymour. This edition attracted some excellent papers, providing an extremely valuable perspectives on the patterns and processes that help us further understand this very important phenomenon that is prevalent across all our range-lands.

Relating to the significance of our journal and the importance of striving to improve the standard, I quote here from the recent DHET ‘Research Output Policy 2015’

- The purpose of the journal must be to disseminate research results and the content must support high level learning, teaching and research in the relevant subject area;
- Articles accepted for publication in the journal must be peer reviewed;
- At least 75 % of contributions published in the journal must emanate from multiple institutions;
- The journal must have an International Standard Serial Number (ISSN);
- The journal must be published at the frequency it is intended to be published, e.g. quarterly, biannually, annually or biennially;
- The journal must have an editorial board, with more than two-thirds of the editorial board members beyond a single institution, and which is reflective of expertise in the relevant subject area;

- The journal must be distributed beyond a single institution;
- Journals must include English abstracts if their language of publication is not English.

Grassroots

Dr Pieter Swanepoel has done an excellent job in editing Grassroots. We thank him for all the effort at presenting alternative views and to providing syntheses of some of the scientific papers published in the journal.

Website

The appearance and usefulness of the official GSSA website continues to grow, with the addition of the Grassland Research Database, in collaboration with the Society for Range Management in the USA. I am grateful to all those who have contributed over the year to improving the service we offer to our members.

Congress 49 2014

A very successful Congress 49 was hosted by the University of Free State, and held at Philip Saunders Resort. The local Organizing Committee did an excellent job, and the Congress started with a very entertaining and challenging address by the Vice Chancellor of University of the Free State, Prof Jonathan Jansen, who challenged all the members of our Society to do better. In his inimitable style, he managed to criticize every group within our rainbow nation.

Grassroots

November 2015

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Research Skills Workshop 2014

The Research Skills Workshop continues to provide an opportunity for young scientists to learn about the skills needed to develop their research careers. Thanks to the co-ordinator, Justin du Toit, and all the contributors who generously donate their time to this initiative.

GSSA Trust

Trust has not been able to meet this year and there has been little progress on their project which is the mentorship program. Pending the decision of the AGM, the current structure of the Trust may change. This decision is required because of the new rules regarding the registration of Trusts with the Master of the Supreme Court. Funds disbursed in 2014/2015 were R 7 500 to assist founding members to attend the Gala Dinner at the 50th Congress in Pietermaritzburg. Approval has been arranged for R20000, and more funds may be used from this allocation.

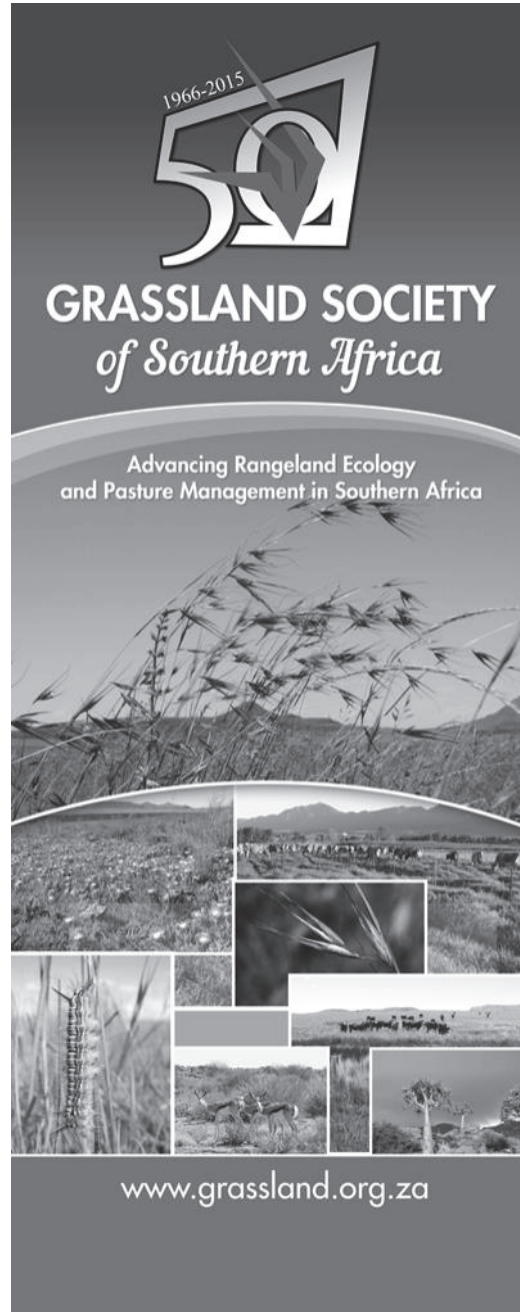
Professional Affairs Committee

The activities of the PAC have been put on hold because of the continued dominance of SACNASP in the registration of science professionals and the requirement from many government departments and agencies that professionals must be registered with SACNASP. Council has therefore decided to remove the portfolio from the Council. Revised Range and Forage Policy for the Department of Agriculture, Forestry and Fisheries. Over a number of years, several members have contributed

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to developing and improving the Range and Forage Policy for the Department of Agriculture, Forestry and Fisheries. This document is finally being reviewed by SANBI, and the GSSA has once again been invited to participate in the process. A co-ordinated response from several organizations (including the GSSA and the ARC), to the draft policy document, has been submitted to reviewers.

I would like to thank all of those members who have contributed to making the Society what it is today. We are fortunate to have several founding members with us at the Congress this year, and I extend a special thank you to them for joining us in this celebration. These stalwarts have continued to recognize the value of the Society and to remain loyal, serving on committees, editorial boards and organizing workshops. I would like to take this opportunity to thank all those who have supported me during the past year, especially the administrator, councilors and editors.



Mid-Congress Tour Marianhill Landfill and Conservancy

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This tour was very well attended, considering the rather miserable and rainy day that the weather had prepared for us for our mid congress tours. After a rather long bus trip in the rain, we arrived at the Marianhill Landfill and its conservancy. We were met there by Richard Winn, the horticulturalist, rehabilitation specialist and conservation manager for the conservancy.

Durban Solid Waste pride themselves in their 'closed loop system' landfill design – where everything that has been taken out of the environment is put back again. The effectiveness of this system was soon apparent at our first stop: the 30 ha rehabilitated conservancy. This conservancy was created by using locally sourced, indigenous plants that were germinated from seed or rescued from development areas and grown in the nursery. At the conservancy, we visited a hide overlooking a rehabilitated wetland, where over 100 different bird species have been identified. In addition to these bird species the conservancy is also home to the endangered black headed dwarf chameleon, although we were not lucky enough to see this elusive little creature. Richard explained the challenges of being an urban conservation manager for a savanna area like this, where electricity

servitudes and the methane produced by the landfill meant that no fire can be used to prevent woody plant thickening in the conservancy. The Plant Rescue Unit was a source of great interest for many on our tour when we were shown how the principle of planting a mini ecosystem within each plant packet. Many of the packets contained up to 6 different plant species in one bag. This also makes for easier transplanting at a later stage as well as for increased plant diversity in the rehabilitated site.

We were then directed towards Africa's first landfill Gas to electricity project. Here captured methane emitted by the landfill is converted to electricity and is finally added to the eThekweni power supply. An estimated 2 mega watt hours (mWh) is created daily. This is enough electricity to power approximately 1000 households every day. The leachate treatment plant was our final stop for the tour where delegates were amazed by the brown bubbling mass of landfill leachate in the large Sequencing Batch Reactor. This leachate is highly corrosive and we all made sure not to drop anything into it, with the fear of never getting it back again! Once the leachate has passed through the Reactor, it follows the path to a lined reed bed which removes any residual pollutants.

Once the liquid has passed through here, the water is completely free of toxins and can be used within the landfill property.

Thank you to Richard Winn for sharing his time and knowledge with us on a very interesting trip through the Landfill and Conservancy, and to everyone who braved the gloomy weather to join us on this tour.

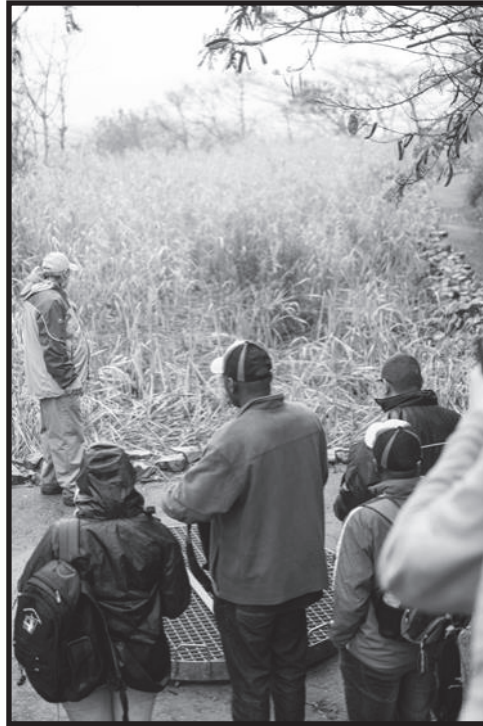


Photo Credits:
Stuart Demmer



Mid-Congress Tour Dairy and Pastures

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The mid congress pastures tour was quite an exciting affair. The weather was typical Natal Midlands nuisance weather, cold, slightly wet and very misty. The bus and driver were of the doubtful kind with the suspension reminding one of a ship on a particularly rough sea! The steering was little better.

The first port of call (excuse the pun) was Cedara research station where the group was introduced to the new evaluation trials under the government banner. From there it was a short trip to the ARC lands to see their evaluation trials and the long duration Jap radish being bred by the section. The first taste of bus problems was when the door refused to open to allow the group to climb back on. It was with some trepidation that all did eventually reboard when the pneumatic door was persuaded to open and then close again. The mechanic called to meet us to address the problem was never located but thankfully the door did behave for the balance of the trip. The first farm we visited was the dairy farm Denleigh owned by Rene Stubs in the Karkloof. Unfortunately the wet roads precluded the bus delivering the tour group to the destination of choice – the dairy – and the entire party had to squelch through mud on foot for about a kilometre to reach said dairy. The walk took us past Rene's

minimum till maize with winter pastures drilled in and his spectacular maize silage pits. Rene was most well informed and informative and a number of leading questions were asked with regards to his operation of over 1000 Frieslands in milk. After over an hour of standing in the cold it was decided to return to the bus at the bottom of the hill (fortunate members received a lift in the farm bakkie) and head for lunch. Karkloof Country Club was a stone's throw away and the warm coffee and blazing fire was a welcome relief. The lunch of wors rolls and salad was generously sponsored by Capstone seeds.

After lunch the trip was altered as it was plain that the bus would not cope with the planned scenic route through the Karkloof. It was back to Howick on the tar and then out to Fairfield Dairies at Currys Post. We visited the original farm owned by Kevin Lang, the factory has moved off site into Howick. The tour met with Kevin's manager and consultant, a disciple of the Albrecht system. Unfortunately the cold weather dampened the lively debate anticipated and after inspecting a mixed pasture and the silage pits the group repaired to the dairy to have coffee, delicious Fairfield drinking yoghurts and biscuits. The dairy has been built to facilitate watching

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milking on the rotary and all had an opportunity to watch Holsteins and Ayershire's being milked. The trip back to Pietermaritzburg was accomplished in heavier rain and it was with gratitude that we all debussed safely back at the show-grounds.

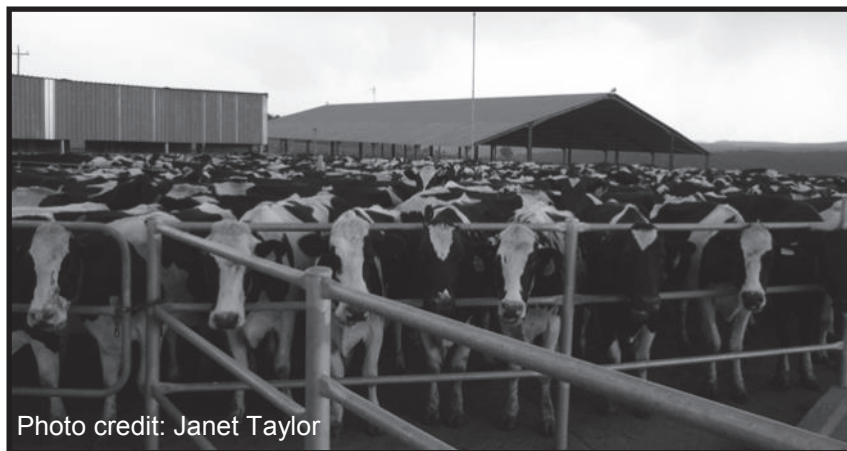




Photo credit: Janet Taylor



Photo credit: Janet Taylor



Photo credit: Sigrun Ammann



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Congress Delegates Revisit Famed Ukulinga Trials

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During the Grassland Society of Southern Africa's (GSSA) 50th Annual Congress held recently at the Royal Agricultural Showgrounds in Pietermaritzburg, Congress delegates took time to visit the renowned long-running mowing and burning trials and the veld fertilisation trials which were initiated in 1950 and are still being maintained today.

Kevin Kirkman, Professor of Grassland Science and Director of Professional Services in the College of Agriculture, Engineering and Science (CAES) took a group of around 40 visitors from the annual Congress along to the trials and guided them through the unique project. The tour was one of a few mid-Congress tours intended to give delegates an overview of various types of grassland and biodiversity projects underway in KwaZulu-Natal.

'Research conducted on the Ukulinga long-term trials has contributed critically to the core knowledge of sustainable management of humid grassland in South Africa,' said Kirkman. The tour was particularly special, given that the first annual GSSA Congress was held in Pietermaritzburg in 1966, where many Society members at the time were linked to the then-University of Natal, whether as lecturers, students or

collaborators. Two of the tour delegates, Professor Winston Trollope and Mr Koos Kappeyne van de Coppello, were at the University during the 1960's, and had fond memories of time spent at Ukulinga as students. Trollope remarked on how the fire exclusion plots had changed, with distinct bush growth and alien plant invasion.

Professor James Donald Scott, the first Dean of what was then the Faculty of Agriculture, started the trials in 1950, with the veld fertilisation trial set up as the Masters project of Peter Booysen, who would later become a Professor in the Faculty and Vice-Chancellor of the University.

The trials were set up to run indefinitely, and the visitors were impressed with the infrastructure of the trials and the professional manner in which they had been managed. Kirkman commented on the benefits of having delegates visit the trials, saying that attendees had put forward the useful suggestion of a reversal experiment where the veld fertilisation trials are split in half and only half fertilised to observe the effects on nutrient reduction. He added that the visit had sparked conversations about potential collaborative research that could take place.

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The trials are still extensively used in teaching and research, with second and third year Biology students doing practicals based on the trials, and a number of Honours, Masters and PhD students undertaking research on site. As for the future of the trials, Kirkman outlined the plans of the Discipline of

Grassland Science to expand the trials' international exposure and recognition through the publication of research papers in prestigious international journals and by registering the trials on the International Long-Term Ecological Research Network (ILTER).



Professor Kevin Kirkman showing GSSA delegates around the Ukulinga trials.
Photo Credit: Ian Rushworth

GSSA Congress 50 Awards

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Academic Award

Awarded by individual universities for an outstanding thesis in a grassland science discipline.

Melvin Swarts

Meritorious Awards

This award is made to a member of the GSSA in recognition of exceptional service to the Society.

**Craig Morris
Freyne du Toit**

Prestige Awards

This award is made to the scientist whose work has made a significant impact on range and forage science and/or practice.

Winston & Lynne Trollope

Tim O'Connor

Rob Scott-Shaw (Posthumous award received by his wife Maureen and son Bruce)

Peter Edwards Award

This award is made to a land-user in the area of the annual Congress in recognition of the sound application and practice of the principles of range and forage science and conservation.

Mike and Jeanette Rennie, Palmiet

Runners-up

Cilla Pickering (on behalf of Munyawana Conservancy)

James and Cheryl Kean, Mearns Farm

Best Paper in the AJRFS in 2014

This award is made to the author/s of the best paper published in the African Journal of Range and Forage Science in the preceding year.

Tim O'Connor (with James Puttick & Timm Hoffmann) Bush encroachment in southern Africa: changes and causes published in the 2014 bush encroachment special issue. Received by Tim O'Connor

Best Presentation: Tied between Suzi Vetter and Richard Fynn

Best Presentation by a Young Scientist: Nthuthuko Mkhize

Norman Rethman Planted Pastures

Award: Josef van Wyngaard

Awarded for an outstanding contribution to planted pastures by a young scientist.

Best Research Proposal Poster: Stephanie Lyle

Best Poster: Heinrich Cloete

Faux Pas: Winston Trollope

All Credit for the Awards Photographs goes to Stuart Demmer



Academic Award: Melvin Swarts



Meritorious Award: Craig Morris

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Meritorious Award: Freyni du Toit



Runner-up Peter Edwards Award:
Cilla Pickering (for Munyawana Game Reserve)



Prestige Award: Tim O'Connor



Prestige Award: Winston and Lynne Trollope



Prestige Award: Rob Scott-Shaw - Received by his wife, Maureen, and son, Bruce

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Peter Edwards Award Winners: Michael and Jeanette Rennie



Best Presentation: Suzi Vetter



Best Presentation: Richard Fynn

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Runner-up Peter Edwards Award:
James Kean



Best Paper - Tim O'Connor, James
Puttick & Tim Hoffman

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**Best Poster :
Heinrich Cloete**



Faux Pas Award - Winston Trollope

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Josef van Wyngaard with the Norman Rethman Award