

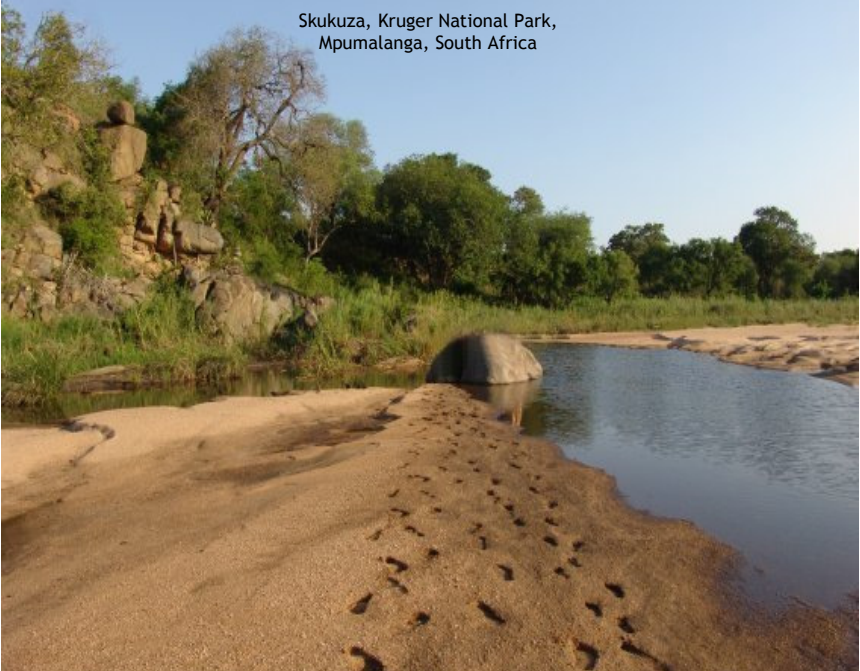
8th Annual Savanna Science Networking Meeting

08 - 12th March 2010



**South African
NATIONAL PARKS**

Skukuza, Kruger National Park,
Mpumalanga, South Africa



WELCOME TO THE 8TH ANNUAL SAVANNA SCIENCE NETWORK

MEETING

The Savanna Science Network Meeting is the most important annual event for the SANParks Scientific Services Department. It provides an opportunity for SANParks to gauge how effective the research programmes are and also to assess the progress in meeting SANParks' objectives towards biodiversity conservation. This meeting is intended to encourage researchers and prospective researchers to share ideas, their research findings and to provide a platform for dialogue between scientists. Scientific Services has a strong team of scientists working in different fields who, together with external scientists, conduct research in many topics including but not restricted to biodiversity monitoring, population studies, fire behaviour, vegetation monitoring and aerial game census techniques. Please visit <http://www.sanparks.org> for more information.

Research in SANParks

Scientific Services provides SANParks with scientific and technical support services to develop and leverage the body of knowledge needed to manage national parks for the conservation and sustainable use of biodiversity. From regional offices based in Kruger (Skukuza & Phalaborwa), Kimberley, Cape Town (Tokai) and Garden Route (Rondevelei and Knysna) we conduct research and monitoring on a spectrum of social-ecological themes together with external scientists from various institutions. Our mandate requires knowledge generation and harvesting, and importantly, integrating this appropriately back into park management. We hope to have our new project registration system that will be web based running by the end of the year and will keep everyone informed about this.

Skukuza Analytical Lab

The Analytical Lab in Skukuza will shortly be open again for business. Our new Laboratory Technician Purvance Shikwamba was appointed in February. You will be informed once she has finished her training and you may make use of this facility. Thereafter, all registered researchers are welcome to make use of the lab at a daily rate of R50. Please contact Purvance Shikwamba (purvances@sanparks.org) for more information.

Meals and General Arrangements

Breakfasts and lunches will be served in the Skukuza main restaurant. For entrance into the restaurant, please wear your name tag in a visible position. All dinners will be held at the Skukuza Golf Club, including the Gala dinner sponsored by the Mellon Foundation. All meals and teas are for registered delegates and invited guests only. There will be an information board posted in the Goldfields Auditorium foyer for news / events and updates. Please feel free to post any announcements on this board. Finally, mugs have been provided in your Network Bags, without this mug you will not be able to have tea / coffee during the regularly scheduled tea-breaks.

Mpumalanga Promotions

Mpumalanga Promotions arranged the delegate registration, the accommodation in Skukuza and the meals for the meeting. For further information about this events company, please contact Jackey Deacon on 082 447 1570 or dot@mpu.co.za

**The 9th Annual Savanna Science Network Meeting is scheduled for
13th – 18th March 2011**

SUNDAY 7 MARCH 2010		
TIME	EVENT	DETAILS/VENUE
14:00 to 17:30	Registration	Skukuza Reception
		All delegates are requested to bring an electronic copy of their presentation please. These will be loaded into the correct slot on the programme to prevent any delays to presentations
19:00	DINNER	Skukuza Golf Club: Registered delegates only

MONDAY 8 MARCH 2010			
CHAIR	TIME	PRESENTER	TITLE
Pienaar DJ	08:00	Kruger JM	Welcome
	08:10	Magome H	Opening
	Implementing Adaptive Management		
	08:30	Erasmus BFN	How well does research in the KNP support SANPARKS' management objectives hierarchy? An overview of all the Kruger Network meetings
	08:55	Ferreira SM, Hofmeyr M, Joubert J <i>et al</i>	Ecosystem services: Reconciling biodiversity and financial objectives?
	09:10	McLoughlin CA	Progress and lessons associated with adaptive management of Kruger National Park's river systems
	09:25	Du Toit DR, Biggs H, Pollard SR <i>et al</i>	Does it really matter what upstream users think? – a preliminary study of perspectives and beliefs of water resources management in the Crocodile Catchment
	09:40	Pollard SR, Du Toit DR, Mallory S <i>et al</i>	Towards freshwater sustainability of the rivers of the Kruger National Park: How well are we doing?
	09:55	DISCUSSION	
	10:10	TEA	
Biggs HC	Rivers & Wetlands		
	10:50	Dixon R, Bouwman H, Osthoff G <i>et al</i>	Crocodile deaths in the Kruger National Park
	11:05	Huchzermeyer KDA, Govender D, Pienaar D <i>et al</i>	Preliminary findings of a fish health assessment in the Olifants and lower Letaba Rivers in the Kruger National Park following a crocodile mortality event
	11:20	Gyedu-Ababio T & Venter F	Biofuels, water and biodiversity management in the Olifants River system, South Africa: a review
	11:35	Venter JA, Fouché PSO & Vlok W	Poster: The current distribution of the Southern Barred Minnow, <i>Opsaridium peringueyi</i> (Pisces: Cyprinidae) in South Africa: Is there reason for concern?
	11:40	Grundling P, Price JS, Grundling AT <i>et al</i>	Wetlands of Marakele National Park: Characterisation and Distribution
	11:55	Grundling AT, Price JS, Linstrom A <i>et al</i>	Poster: The South African National Wetland Classification System: Relevance to the wetlands in the Kruger National Park
	12:00	Baade J, Franz S & Reichel A	Spatial and temporal variation of reservoir siltation in selected ecozones of the Kruger National Park – Results of the 2008 reconnaissance survey
	12:15	DISCUSSION	
	12:30	LUNCH	
Gaylard A	Vertebrate Species Outcomes - autecology, monitoring and trends		
	14:00	Funston PJ & Ferreira SM.	Poster: Population estimates and trends of spotted hyenas in the Kruger National Park from 1984 to 2008
	14:05	Davies-Mostert HT, Burger M, Mills MGL <i>et al</i>	Baseline results of the 5 th Wild Dog and 3 rd Cheetah Photographic Census of Greater Kruger National Park
	14:20	Snyman A, Funston PJ & Steyn V	Poster: Aspect of the ecology of leopards (<i>Panthera pardus</i>) in the Northern Tuli Game Reserve, Botswana
	14:25	Marnewick K & Somers MJ.	Poster: Modelling habitat selection of cheetahs in South Africa
	14:30	Botha J & Marshal JP	Poster: Fine scale resource selection in impala (<i>Aepyceros melampus</i>)
	14:35	Bowman, DMJS	Feral Asian water buffalo in Kakadu National Park, Australia – the ecology and management of Australia's 'new megafauna'
	14:50	TEA	
	15:20	Van der Westhuizen E, Zizadsa P, Gandiwa E <i>et al</i>	Poster: Elephants in the Gonarezhou National Park, Zimbabwe – moving towards an integrated management plan for the Greater Limpopo Transfrontier Conservation Area (GLTFCA)
	15:25	Meyer J, Santymire R, Bird J <i>et al</i>	Poster: Use of Non-invasive Techniques to Monitor the Endocrine Status of the Southwestern Black Rhinoceros Subspecies (<i>Diceros bicornis bicornis</i>) in Addo Elephant National Park, South Africa
	15:30	Harper CK, Peppin L, Ludwig A <i>et al</i>	Poster: DNA-Based identification of individual White Rhinoceros (<i>Ceratotherium simum</i>) from horn and other samples for forensic use.
	15:35	Botha AJ	Poster: Assessment, implementation and preliminary results of the implementation of patagial tagging on southern African Vultures
	15:40	Deacon AR	How successfully are small vertebrates conserved?
15:55	DISCUSSION		
19:00	GALA DINNER		Skukuza Golf Club: Registered delegates only

TUESDAY 9 MARCH 2010				
CHAIR	TIME	PRESENTER	TITLE	
McLoughlin CA	Landscape-level drivers & mechanisms			
	08:00	Khomo L , Trumbore S, Chadwick O <i>et al</i>	Mineral controls on organic carbon turnover in sub-humid African savannas	
	08:15	Cullum CJ & Rogers KH	Poster: Catenal Elements in the Southern Granites and Basalts of Kruger national Park	
	08:20	Chadwick O , Khomo L, Levick S <i>et al</i>	Climate and weathering as modifiers of catena morphology	
	08:35	Barichievy C & Rogers KH	Self organization in Shingwedzi vegetation, theory vs reality	
	08:50	Lorentz SA , Riddell ES, Ngcobo NB <i>et al</i>	A comparison of soil water dynamics across selected geologies, vegetation zones, and climate zones in the Kruger National Park	
	09:05	Riddell ES & Lorentz SA	Wetland hydrology in the lowveld – lessons from the Sand River headwaters	
	09:20	Farmer H , Witkowski Ed & Peel M	Towards understanding impacts of water supplementation in a heterogeneous landscape	
	09:35	Colgan MS , Asner GP & Levick SR	Climatic, Topo-edaphic, Fire, and Herbivore Controls on Woody Plant Carbon Storage at the Landscape Scale in Kruger National Park	
	09:50	Kutsch WL , Merbold L, and Scholes RJ	Poster: Spatial and temporal variability of carbon fluxes in African ecosystems – a CarboAfrica synthesis study	
09:55	DISCUSSION			
10:15	TEA			
Scheepers K	Human Interface - disease, wildlife & livelihoods			
	10:50	Van Schalkwyk OL, De Pus C , De Clercq EM <i>et al</i>	Poster: Ecological niche factor analysis for modelling distribution of cattle and buffalo at the wildlife–livestock interface of the Kruger National Park	
	10:55	Poshiwa X , Heitkönig IMA, Murwira A <i>et al</i>	Poster: Rainfall, Primary Production and Cattle density relationships in South East Lowveld of Zimbabwe	
	11:00	Getz WM , Bellan S, Brashares J <i>et al</i>	Endemic anthrax in the herbivores of Etosha National Park: a disease and movement ecology perspective focusing on zebra, elephants, and scavengers	
	Human Interface - people park relationships			
	11:15	Van Rooyen J , Vandamme E, Madder M <i>et al</i>	Poster: Key perceptions and needs of communal livestock farmers in the Bushbuckridge district adjacent to the Greater Kruger National Park, RSA	
	11:20	Chaminuka P , Selomane AO, Groeneveld R <i>et al</i>	Poster: Choice modeling of tourist preferences and willingness to pay for ecotourism in rural communities around Kruger National Park	
	11:25	Guerbois C , Doyen L & Fritz H.	Poster: Exploring large scale spatial arrangements of land uses for the sustainable management of wildlife through protected area: A bio-economical model of the Hwange elephant population	
	11:30	DISCUSSION		
	11:50	LUNCH		
Smit IPJ	Mapping and tracking vegetation change			
	13:30	Kleyn L , Erasmus BFN & Smit IPJ	Poster: Mapping sodic sites in the Kruger National Park, using object-based image classification techniques on multispectral data - the results	
	13:35	Naidoo L , Mathieu R, Cho M <i>et al</i>	Poster: Mapping of Bush encroaching species at canopy level using CAO Integrated Hyperspectral & LIDAR Data	
	13:40	Mathieu R , Main R, Leblon B <i>et al</i>	Poster: On the potential of fully polarimetric C-band Synthetic Aperture Radar technology to map vegetation structure in savannas	
	13:45	Vollrath A , Smit I, Lück W <i>et al</i>	Poster: SAR-monitoring concept and estimation of woody cover by means of the SIR-C/X-SAR Kruger National Park data set	
	13:50	Lück W & Kleyn L	Poster: Woody cover elements and attributes using satellite imagery, colour aerial photography derived surface models and object-based classification	
	13:55	Kirton A , Scholes RJ & Archibald S	Calculating tree wood and leaf biomass in savannas	
	14:10	Dwyer PC, Erasmus BFN , Witkowski ETF <i>et al</i>	Poster: Spatial estimation of herbaceous biomass using remote sensing in a southern African savanna	
	14:15	DISCUSSION		
	14:40	TEA		
Landuse: a driver & its outcomes				
15:20	Fisher JT , Erasmus BFN, Witkowski ETF <i>et al</i>	A spatially explicit analysis of the impact of rural resource extraction on vegetation structure		
15:35	Zisadza P , Murungweni C, Murwira A <i>et al</i>	Poster: Spatial and temporal changes in vegetation cover in and around Gonarezhou National Park, South-East lowveld of Zimbabwe.		
15:40	Wessels KJ , Mathieu R, Asner GP <i>et al</i>	Poster: Impact of land use on tree canopy height distributions: comparison of CAO Lidar data for Kruger NP, SabiSand and communal areas.		
15:45	DISCUSSION			
19:00	DINNER			
			Skukuza Golf Club: Registered delegates only	

WEDNESDAY 10 MARCH 2010			
CHAIR	TIME	PRESENTER	TITLE
Govender N	Fire & herbivory drivers & mechanisms - veg & herbivore responses		
	08:00	Bond W , Browne C, & Midgley J	Causes and consequences of a 'fire storm' in a forest-savanna mosaic
	08:15	Smith MD , Knapp AK, Collins SL <i>etal</i>	Convergence and contingencies in North American and South African savanna grassland responses to fire and grazing
	08:30	Wigley BJ , Fritz H & Bond WJ	Savanna woody plant trait responses to disturbance (browsing and fire) along a rainfall and nutrient gradient
	08:45	Helm CV	Investigating the vulnerability of marula stems to fire and bark stripping
	09:00	Vanak AT , Shannon G, Page B <i>et al</i>	Effects of landscape location, elephants and fire on large tree mortality in the Kruger National Park: a multimodel information theoretic approach
	09:15	Loarie SR , Le Roux E, Levick S <i>et al</i>	Fire frequency, vegetation structure, and sable antelope (<i>Hippotragus niger</i>) habitat use in the Pretoriuskop region
	09:30	Chamane S , Kirkman KP, Smith MD <i>et al</i>	Effects of fire frequency on herbivory and herbivore behavior
	19:45	TEA	
	10:15	Kiker GA	Poster: A spatial model of elephant, vegetation and fire dynamics for scenario-based adaptive management simulations.
	10:20	Cromsigt JPGM	Dynamics of grazing lawn formation in African savanna grasslands
	10:35	Van der Plas F , Anderson TM & Olf H	Different assembly processes form grasshopper and grass communities in bunch and lawn grasslands in Hluhluwe-Imfolozi Park
	10:50	Levick SR & Asner GP	The spatial extent of termite influences on large herbivore browsing in African savanna
	11:05	Buitenwerf R , Stevens N, Gosling C <i>et al</i>	Litter removal by termites is affected by environmental variables and grazing
11:20	DISCUSSION		
Bezuidenhout H	Plant Species Outcomes - autecology, monitoring and trends		
	11:30	Kiker GA	Re-analysis of past woody vegetation monitoring efforts to estimate historic woody vegetation cover and populations in the Kruger National Park.
	11:45	Woodborne S , Hall G, Basson S <i>et al</i>	Poster: The Death of a Giant: On the age of Baobabs
	11:50	Roux J , van der Merwe S, Malan R <i>et al</i>	Native trees in Southern Africa increasingly threatened by decline and death.
	12:05	Van der Walt K	Population biology and ecology of the critically endangered succulent <i>Adenium Swazicum</i>
	12:20	te Beest M , Stevens N, Olf H <i>et al</i>	Do soil biota enhance invasiveness of <i>Chromolaena odorata</i> in South African savannas?
	12:35	Mbenoun M , Begoudé B, Aimé D <i>et al</i>	Poster: Diversity of <i>Ceratocystis</i> species and their nitidulid beetle vectors on tree wounds in Kruger National Park
	12:40	DISCUSSION	
12:50	LUNCH		
AFTERNOON FREE TIME			
19:00	DINNER	Skukuza Golf Club: Registered delegates only	

THURSDAY 11 MARCH 2010				
CHAIR	TIME	PRESENTER	TITLE	
Ferreira SM		Elephants as driver & responder		
	07:30	Chamaillé-Jammes S	Two decades of elephant individual tracking: what have we learnt and is it useful in the context of the 'elephant debate'?	
	07:45	Gaylard A , Rogers KH & Owen-Smith N	Can we REALLY learn anything more about elephant impacts?	
	08:00	Scheiter S & Higgins SI	Poster: How many elephants can the KNP support? A modeling study.	
	08:05	Teren G , Owen-Smith N & Erasmus BF	The spatial dynamics of riparian woodland change caused by elephants in northern Botswana	
	08:20	Smit IPJ. & Ferreira SM	Culling & water provision affects river-bound spatial dynamics of elephants	
	08:35	Page BR & O'Connor TG	What limits elephants? Some thoughts emerging from modelling the dynamics of the Venetia population.	
	08:50	Duffy KJ & Page BR	Shifting mosaics in savanna vegetation mediated by overlapping home ranges of a large and a small browser.	
	09:05	Legendijk G , Page BR & Slotow R	Different sized herbivores determine woody species structure and species assemblages	
	09:20	Woolley LA , Page BR & Slotow R	Poster: Foraging strategy within African elephant family units: why body size matters	
	09:25	De Knegt H, Van Langevelde F, Van Wieren S <i>et al</i>	The seasonal and circadian rhythms of terrain-use by African Elephants	
09:40	DISCUSSION			
09:50	TEA			
Swemmer L		Human Interface - resource use & livelihoods		
	10:20	Matsika R , Twine W & Erasmus BFN	Is a firewood crisis looming in Bushbuckridge? Revisiting and re-evaluating the dire predictions of Banks <i>et al</i> (1996).	
	10:35	Swemmer AM	Could fuelwood harvesting on the western boundary of the Kruger National Park be sustainable?	
	10:50	Mannetti L	Poster: An ethnobotanical survey of wild plant use in the southern Kalahari, South Africa	
	10:55	Scheepers K	Towards a strategy for prioritizing resource use projects in SANParks	
	11:10	Gooch GD	Understanding bio-physical, socio-economic and cultural-spiritual vulnerability in the context of livelihoods and biodiversity: experiences from the LiveDiverse project in the Greater Kruger, Vietnam, India and Costa Rica	
	11:25	Twine W , Hunter LM, Collinson M <i>et al</i>	Poster: Sustainability in Communal Socio-Ecological Systems (SUCSES): Establishing a linked rural livelihoods and environment monitoring system in the lowveld	
	11:30	Carvalho LG , Seymour C, Veldman R <i>et al</i>	Linking conservation with agriculture –fruit crop productivity of NE South Africa depends on savanna's biodiversity	
11:45	DISCUSSION			
Grant CC		Species outcomes - understanding drivers & their mechanisms		
	12:05	Cain JW , Owen-Smith N, & Macandza VA	Comparative water dependency of Sable antelope and Zebra in Kruger National Park	
	12:20	Le Roux E , Loarie ,S Levick S <i>et al</i>	Disappearance of sable antelope (<i>Hippotragus niger</i>) from the Pretoriuskop region: a consequence of diminished nutrient availability or enhanced risk of predation?	
	12:35	LUNCH		
	14:00	Owen-Smith N , Macandza V, Chirima J <i>et al</i>	Disappearing sable antelope: what have we learnt?	
	14:15	Yoganand K & Owen-Smith N	What is influencing patchy space-use by wildebeests in central-western Kruger?	
	14:30	Crosmary W , Madzikanda H, Côté SD <i>et al</i>	Poster: African ungulates and their drinking problems: how sport hunting, in addition of natural predation, constrains the temporal use of surface-water by ungulates in African savannas.	
	14:35	Thaker M , Vanak AT, Ogdan M <i>et al</i>	Fangs or food: explaining herbivore distributions from predation risk and habitat selection	
	14:50	TEA		
	15:20	Shrestha AK , Van Wieren SE, BieS <i>et al</i>	In search of physiological and behavioural mechanisms of South African ungulates to cope with changing climate.	
	15:35	Drake DC	Gnus, gerbils and nitrogen-cycle feedbacks – a paired ¹⁵ N tracer study	
	15:50	Kloppers P , Siebert F & Siebert S	Poster: Plant diversity turn-over along disturbance gradients within the Nkhuflu exclosures, Kruger National Park	
	15:55	Scogings PF , Hjältén J & Johansson T	Woody vegetation change at the Nkhuflu herbivore exclusion experiment: 2002-2007	
16:10	DISCUSSION			
19:00	DINNER			
		Skukuza Golf Club: Registered delegates only		

FRIDAY 12 MARCH 2010

CHAIR	TIME	PRESENTER	TITLE
		Abiotic drivers and modulators of vegetation outcomes	
Freitag-Ronaldson S	07:30	Scholes RJ , Hanan N, Kutsch WL <i>et al</i>	Production ecology of the Greater Kruger Park system
	07:45	Kleynhans EH , Pienaar JJ, Beukes JP <i>et al</i>	Long-term temporal deposition of biogeochemically important trace species at Skukuza
	08:00	Cho MA, Mathieu R , Erasmus BFN <i>et al</i>	Poster: Variability of vegetation productivity across different land use types in the greater Kruger park region
	08:05	Sinden L , Scholes RJ, Archibald S <i>et al</i> .	Important metrics for savanna productivity
	08:20	Archibald S , Kirton A, Woodborne S <i>et al</i>	Tree stress in the pre-rain period – initial analysis of the costs of early-greening
	08:35	Higgins SI , Prior L & Hutley LB	The optimal growing season length in savannas
	08:50	Delgado-Cartay MD , Combrink H J, Higgins SI <i>et al</i>	Poster: Landscape and leaf-level phenological patterns of grasses and trees in an African savanna
	08:55	February EC, Combrink HJ , Williams S <i>et al</i>	Experimental manipulation of cues for leaf-phenological events in a savanna system
	09:10	Parrini F & Erasmus BFN	Poster: Spatio-temporal variation of phenology and rainfall in Kruger National Park, South Africa: consequences for predicting climate change influence on biodiversity.
	09:15	Kulmatiski A, Verweij RJ, Beard K, February E & Mazzacavallo M	Poster: A depth-controlled tracer technique measures vertical, horizontal and temporal patterns of water use by plants in a sub-tropical savanna
	09:20	Stevens N , & Swemmer AM	Poster: Comparison of <i>Colophospermum mopane</i> landscape distribution patterns at range edges and non-range edges.
	09:25	Thompson D	Poster: Is spring the new summer? Using citizen science to find out.
	09:30	Davis C , Stevens N, Archer E <i>et al</i>	Poster: Adapting to climate change in a diverse landscape: the Kruger-Canyons Biosphere Reserve
	09:35	Woodborne S , Hall G & Scholes RJ	Water, nutrients and productivity partitioning: an isotopic approach
	09:50	Ramoelo A , Cho M, Mathieu R <i>et al</i>	Hyperspectral remote sensing techniques for grass nutrient estimations in savannah ecosystems
	10:05	Ayres P , Siebert F & Siebert S	Poster: Assessing post-flood vegetation change along a section of the Sabie River, Kruger National Park
10:10	DISCUSSION		
10:20	Wrap Up		
10:40	Pienaar DJ	Thanks and Closure	

THANK YOU

The Andrew W. Mellon Foundation

The Andrew W. Mellon Foundation has been a generous supporter of SANParks Scientific Services for many years. Supporting projects like the Kruger River / Savanna Boundary and the Junior Scientist Programmes. This year the Foundation has kindly sponsored the meeting venue, the cost of printing the programme, venue marques and the Gala Dinner. The Andrew W. Mellon Foundation philosophy is, "to build, strengthen and sustain institutions and their core capacities, rather than be a source for narrowly defined projects. As such, they develop thoughtful, long term collaborations with grant recipients and invest sufficient funds for extended period to accomplish the purpose at hand and achieve meaningful results". Please visit <http://www.mellon.org> for more information.

SAEON

SAEON is a research facility that establishes and maintains nodes (environmental observatories, field stations or sites) linked by an information management network to serve as research and education platforms for long-term studies of ecosystems that will provide for incremental advances in our understanding of ecosystems and our ability to detect, predict and react to environmental change. Thank you to SAEON for sponsoring a venue marquee. Please visit <http://www.saeon.ac.za/> for more information.

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