

MINUTES

eThekwini Biodiversity Forum

27 November 2014

9h00 – 12h00

Paradise Valley Nature Reserve



IN ATTENDANCE

Adam Texeira	AT	Jean Senogles	JS	Reinhard Behrend	RB
Angelique Lazarus	AL	Jone Porter	JP	Reshnee Lalla	RL
Arnia van Vuuren	AvV	Kate Richardson	KR	Rob Crankshaw	RC
Barbara Wint	BW	Katy Roy	KR1	Robyn Phillips	RP
Barry Lang	BL	Khumbu Luthuli	KL	Roddy Ward	RW
Basheshile Thusi	BT	Kirstin Williams	KW	Stephanie Reynolds	SR
Ben Kohz	BK	Lee D'Eathe	LD	Survarna Parbhoo	SP
Bettina Behred	BB	Leigh Collingwood	LC	Terry Stewart	TS
Bheka Memela	BEM	Leigh Richards	LR	Theshnie Naidoo	TN
Bheka Nxele	BN	Lesly Frescura	LF	Tony Wint	TW
Bheki Mdletshe	BM	Lindiwe Msomi	LM	Viloshnie Reddy	VR
Brian Abrahams	BA	Lisa Guastella-Smith	LGS	Virginia Cameron	VC
Clive Walker	CW	Marion Spencer	MS	Wally Manny	WM
Cllr Billie Prinsloo	BP	Martin Clement	MC	Warren Friedman	WF
Denese Koch	DK	Mbali Khoza	MK	Wieske Wiese	WW
Derek Airey	DA	Mbali Mntungwa	MM	Wiseman Mhlongo	WM
Derrek Ruiters	DR	Mpume Luthuli	ML	Xolile Nkomo	XN
Di Higginson Keith	KHK	Natasha Govender	NG	Zama Mwelase	ZM
Dina van Niekerk	DvN	Natasha Govender2	NG2	Zodwa Msweli	ZM
Gerald Clarke	GC	Nidhi Nepaul	NN		
Glynn Alard	GA	Nomafu Dlamini	ND		
Jabulani Khoza	JK	Paolo Condotti	PC		

APOLOGIES

Cllr Geoff Pullan, Cllr Gillian Noyce, Jone Porter, Jean Lindsay, Jessica Cockburn, Teddy Govender, Angie Wilken, Duane Constance, Janet Gates, Richard Boon, Janet Gates, Roger Poole, Mathieu Rouget, Jessica Cockburn, Angie Wilken, Graham Cairns, Heather Cairns, Lilian Develing, Jean Rodel, Judy Mend and Christel Winston

1	WELCOME & INTRODUCTION	ACTION
1.1	Natasha Govender (NG) welcomed all and facilitated introductions.	
2.	PRESENTATIONS	
2.1	<i>The power of civic engagement in conservation and the eThekwini Conservancies Forum – KZN Conservancies Association: Rob Crankshaw</i>	

2.1.1	<p>Rob Crankshaw (RC) thanked NG for the opportunity to present at this Biodiversity Forum.</p> <p>RC described a conservancy as a voluntary association of environmentally conscious people who engage in the conservation of natural resources in a defined area. Members of the conservancies are ordinary members of communities who are usually not experts in the field of nature conservation but are passionate individuals who are interested in protecting the natural environment. Conservancies who are members of the KZN Conservancies Association (KZNCA) are registered with Ezemvelo KZN Wildlife. He stated that the purpose of the KZNCA is economic upliftment through conservation and the vision is to be a significant participant in provincial conservation planning and management through conservancies.</p> <p>RC raised concerns that the number of conservancies have been on a gradual decline over the last ten years due to the inability of conservancies to sustain themselves once the founding members have left the organization. This has compromised the role played by conservancies in environmental conservation and in some instances, conservancies are not taken seriously and not included in municipal planning processes. This is despite the significant role that they continue to play in the conservation of natural resources. He informed the meeting that KZNCA has over 60 member conservancies and are developing strategies to grow this number as conservancies are the key balancing force in Civic Engagement in Conservation.</p> <p>RC presented a brief overview of the KZNCA Business Plan and Strategy going forward in order to strengthen the organization and increase the number of member conservancies in KZN. These include:</p> <ul style="list-style-type: none"> • The name change from KZN Conservancies Association to Conservation KZN, • The formation of conservancy forums such as the eThekweni Conservancies Forum and the Midlands Conservancies Forum, • The hosting of the the AGM in May 2015 to elect the Board of Trustees and restructure the organization, and • Looking at partnering with local municipalities and other Conservation Trusts. <p>In closing, RC urged the Forum members to support the vision of the KZNCA and support their local conservancies.</p> <p>Contact details: Rob Crankshaw at rob.crankshaw@amamarketing.co.za</p>	
2.1.1.1	<p>WM suggested that conservancies form alliances with rates associations to make the conservancies stronger as partnering with government might create a conflict of interest.</p>	
2.1.1.2	<p>A comment was made about municipalities not engaging with conservancies and other civic organisations and not communicating effectively with the public. After some debate among the forum about the relationship between local government and conservancies, NG suggested that this is not the appropriate forum to be having this particular debate and it might be prudent for a separate meeting over tea time to discuss same. TP added that he disagrees with this statement as strong relationships between local government departments/individuals and conservancies have developed over the years to facilitate better communication (the Biodiversity Forum being a prime example of this). He further stressed the significant role played by conservancies in becoming the voice of communities in conservation and highlighted the challenge around formalising these relationships at an</p>	

	institutional level.	
2.1.1.3	NG referred to one of the slides on RC's presentation which spoke to the weakening voice of civic society. Using the example from many years ago about how civic society in the South Durban Basin fundamentally and structurally changed the framework for action at a National level in terms of air pollution standards and noted that the responsibility of protecting the natural environment cannot fall to one organisation i.e., local government. She reiterated RC's message for people to get involved.	
2.1.1.4	NG thanked RC once again for sharing his talk with the Forum and proceeded to introduce the next speaker.	
2.2	<i>Is small mammal diversity greater in more structurally complex than less structurally complex environments within an urban reserve? Angelique Lazarus – University of KwaZulu Natal</i>	
2.2.1	<p>NG reminded the meeting that in May 2014, Jessica Cockburn gave a talk on the UKZN – eThekweni Municipality Research Partnership. At that meeting, it was stated that some of the studies from that research partnership will be showcased at the forum and noted that this was one such study. NG introduced Angelique Lazarus; a student from University of KwaZulu Natal.</p> <p>Angelique Lazarus (AL) thanked NG for the opportunity to present her research to the Biodiversity Forum.</p> <p>AL opened her presentation by stating that urbanisation is a major threat to biodiversity and ecological processes and protected areas within rapidly urbanising areas aim to conserve urban biodiversity. She informed the meeting that her study was focused on the New Germany Nature Reserve and the aim of this study was to determine whether the relative abundance and species richness of small mammals would be greater in more structurally complex habitats than less structurally complex habitats within an urban reserve. The study also looked at the influence of seasonality and moon phase on abundance and diversity of small mammals at New Germany.</p> <p>As an introduction, AL stated that small mammals are considered to be good estimators of ecosystem health as they are sensitive to environmental disturbance. Small mammals are also referred to as ecosystem engineers as they link primary and secondary consumers via prey-predator interactions, they play a role in nutrient recycling, and their consumption of vegetation structures habitats. Rodents (rats and mice) comprise almost half of the total species richness of all mammals, not including shrews. Research indicates that the diversity and abundance of small mammals are strongly correlated to vegetation structure; therefore structural complexity is considered a driver of distribution and diversity of small mammals. AL stated that habitat heterogeneity influences predation risk, available microhabitats, and food availability.</p> <p>In terms of seasonality, AL informed the meeting of the influence this has on vegetation characteristics i.e., an increase in resources during the summer (wet season) and resource scarcity during the winter (dry season).</p> <p>She also informed the meeting that moon phase (full moon, waning moon, and new moon) is another important factor when looking at small mammal community structure as nocturnal illumination has been found to directly influence small mammals as it influences</p>	

the visibility of predators and predation risk.

AL outlined the methodology used as follows;

- Areas of grasslands and forest patches in the New Germany Nature Reserve were identified. Grids were laid at two sites containing grassland and two sites containing forest patches.
- Grids 25 x 25 m in size with Sherman traps were laid at 5 m intervals. Within forest patches equal numbers of Sherman traps were placed in trees to compensate for arboreal species.
- Traps were baited with peanut butter, oats and raisins. Trapping commenced for nine days per season and three nights per moon phase. Once rodents were captured morphological measurements were taken (length of fore-paw, hind-paw, ear, tail, head and body), specimens were weighed and sexed.
- Thereafter individuals were ear-tagged to allow for mark and recapture analysis and released at the point of capture.

AL shared her findings and observations as follows;

- Nineteen individuals from four species were captured. Rodent species captured were *Ottomys irroratus* (a specialist grassland species) and *Mastomys natalensis* (a generalist species).
- Shrew species captured were *Crocidura crocidura* (a generalist species) and *Crocidura flavescens* (a generalist species). All 19 individuals were captured in grassland sites i.e., no rodents were captured in forest patches.
- A high abundance of rodents were recorded during winter than in summer. This may have been attributed to rodents opting for the bait in traps due to food scarcity.
- The waning moon phase had the highest abundance of rodents and this could be due to low capture rates no statistical analyses were performed.

AL informed the meeting that based on her findings, the habitat heterogeneity hypothesis (forest versus grassland) is not supported by this study. She proposed that the location of the New Germany Nature Reserve between an industrial area and residential area may render it fairly isolated. As a result if there was a disturbance in the reserve that effected small mammal communities, recolonisation would be less feasible due to poor/lack of corridors for movement. She further elaborated that the results found in this study (low abundance and diversity of small mammals) may also be due to *Rattus norvegicus* - a large invasive species that has been observed in the reserve. *R. norvegicus* may be creating islands of fear within forest patches in New Germany nature reserve, resulting in a skewed representation of mammal diversity in the reserve. AL noted that this study was a preliminary study and is unable to fully explain the findings of this study without further research.

AL recommended further research looking at reserves that are spatially and temporally different containing areas of grassland and forest. She advised that future work should entail understanding the relationship between patch size and small mammal diversity and abundance. This would improve our understanding on the drivers of small mammal diversity within urban landscapes.

Contact details: Angélique Lazarus: angie.lazarus@gmail.com

2.2.2	KR queried whether AL was aware that a similar study was conducted before the 1980s at the New Germany Nature Reserve by the then University of Natal. AL responded by stating that she had made enquiries with the Nature Reserve Manager responsible for New Germany and was informed that no studies were conducted previously.	
2.2.3	KR also queried how the traps were placed in the forest and suggested that it is better to put traps on trees if targeting rodents. AL responded that traps were placed both in trees and on the ground to account for all rodent movement. In addition, AL informed the meeting that the methodology that she used was in keeping with that in the scientific literature.	
2.2.4	KR asked AL if she had cleaned the traps after each sampling event. AL answered in the affirmative.	
2.2.5	It was queried if rodents were interested in food sources other than those used as bait. AL responded that she relied on literature to guide her on what bait to use. KR further stated that the bait AL used is the standard for small mammal sampling.	
2.2.6	LGS asked if there is preferred diet for rodents. AL stated that <i>Ottomys irroratus</i> are specialists and they are very selective in what they eat but shrews change their diet when needed.	
3	Updates from various municipal departments	
3.1	Updates from the Durban Natural Science Museum (DNSM) – Kirstin Williams	
3.1.1	<p>DNSM Holiday Programme: Kirstin Williams (KW) reported that the DNSM Education Department will be running the Holiday Programme for schools from the 15th – 19th December 2014. The Holiday programme is packaged with activities for children aged 7 – 14 years and these include magic shows, movie time, art class and Christmas factory.</p> <p>DNSM Volunteer Programme: KW informed the meeting that the Volunteer Programme application will open on Friday 28th November until 30 January 2015. The applicants must have matric with Life Sciences or Biology and/or some qualification in conservation, travel and tourism, marketing or education. The successful volunteer will be working on different DNSM projects.</p> <p>The Night at the Museum: KW reported that the DNSM Sleepover “The Night at the Museum” is scheduled for the 13th February 2015. The children are allowed to spend the night sleeping in the Museum and partaking in various planned activities.</p> <p>Thola magazine: KW reported that the 2013/2014 edition of Thola (Volume 16), the popular magazine of the Durban Natural Science Museum, was awarded a Highly Commended Certificate by the South African Museums Association at their 78th National Conference held in East London 3 – 7 November 2014. She informed the meeting that hardcopies of the publication are available at the DNSM and that should anyone want an electronic copy this can be emailed to them (contact details below).</p> <p>For more information contact: Kirstin Williams at Kirstin.Williams@durban.gov.za</p>	

3.2	Updates from the Environmental Planning and Climate Protection Department (EPCPD)	
3.2.1	<p>EThekweni Municipality - UKZN KZN Sandstone Sourveld Research Partnership: Lisa Guastella-Smith (LGS) from the Climate Protection Branch of the EPCPD reported on the KZN Sandstone Sourveld Research Partnership with UKZN.</p> <p>LGS informed the meeting that the research partnership with UKZN is focused on KZN Sandstone Sourveld (KZNSS), an ecosystem which is classified as Endangered nationally and Critically Endangered provincially. She then gave the history of the research partnership and its objectives (more information on this can be found in the minutes of the previous Forum – August 2014). LGS informed the meeting that the eThekweni Municipality – UKZN Joint Research Partnership was initiated in May 2011 and ended in June 2014.</p> <p>LGS reported that a close out workshop has been held and will inform Phase 2 which will be launched together with the Reforestation Research with the new UKZN Vice Chancellor in 2015. The Phase 2 will begin in January 2015 until December 2017.</p> <p>For more information contact: Lisa Guastella-Smith on Lisa.Smith@durban.gov.za</p>	
3.2.1.1	Leigh Richards added that the DNSM is doing a lot of work in nature reserves looking at small mammals within KZNSS and noted that urban reserves are undersampled. She raised a need to talk to LGS to see how the DNSM can also partner with the project.	
3.2.1.2	RC queried around the communication plan for this research and how conservancies get involved. TP responded by stating that there is communication with individuals within conservancies but there is a need for a formal structure to engage conservancies because in as much as conservancies are not scientists, they collect species records that can be useful in research.	
3.2.1.3	MW suggested that neighboring communities are used to monitor the changes in ecosystems around them and report any changes. He also raised concerns around the use of terms such as reforestation and land use change.	
3.2.1.4	<p>Lesley Frescura raised concerns about the rezoning application adjacent to the New Germany Nature Reserve which was approved but for which there was no representative from the Nature Reserve at the meeting at which it was discussed. TP responded by stating that the application has come to the EPCPD and the comment was provided.</p> <p>Additional notes: After the meeting, BM queried with the Environmentalist in the Biodiversity Impact Assessment branch of EPCPD that was responsible for commenting on the rezoning application. It was found that EPCPD had no objection to the rezoning.</p>	
3.2.2	<p>Rezoning of acquired sites: Gerald Clarke from EPCPD updated the meeting on the progress on the rezoning of properties that the municipality has acquired for conservation purposes.</p> <p>GC started by explaining how the rezoning process is undertaken to address the concern raised in 3.2.1.4 above. GC stated that Land Use Planning look at the application and decide who should be notified and because it was adjacent to a nature reserve, it was circulated to EPCPD for comment.</p> <p>GC informed the meeting that since 2002, eThekweni Municipality has been acquiring land for conservation purposes and this land is managed by the Restoration Ecology Branch of EPCPD through the poverty alleviation Working on Fire and Working for Ecosystems</p>	

	<p>Programmes. The report has been sent to EXCO to rezone these properties to Environmental Conservation Reserve. GC also informed the meeting that once the approval is granted by EXCO, maps will updated to reflect these changes in zoning.</p> <p>NG suggested that next year there will be a presentation on sites acquired by the EPCPD for environmental conservation.</p>	
3.2.2.1	<p>WM raised concerns around the management of the acquired properties. NG responded that all sites that are purchased for conservation purposes by the EPCPD are managed by the poverty alleviation programmes Working on Fire and Working for Ecosystems as far as possible.</p>	
3.2.3	<p>Restoration Ecology Updates: Bheka Nxele (BN) gave an update on the large scale implementation programmes under the Restoration Ecology Branch of the EPCPD.</p> <p>BN reported that the Working on Fire team have completed controlled burns throughout the eThekweni Municipal Area and an update was provided at the last forum meeting. Please refer to those minutes for more information.</p> <p>He also reported that the Buffelsdraai Community Reforestation Project has been nominated for the Kamoso Award 2014. BN extended gratitude to the Energy Office for the completion of the installation of solar panels at the Buffelsdraai container offices and geysers in the ablution facilities.</p> <p>BN informed the meeting that the Working for Ecosystems (WfE) Programme is running smoothly and they have successfully developed Small, Micro and Medium Enterprises (SMMEs) in the areas the programme is working in.</p> <p>BN reported that a property in the Stockville area has been added to the WfE management sites after receiving a request from a concerned member of the public around Invasive Alien Plants (IAPs) and overgrown grass on this property. This property is owned by the eThekweni municipality and contains KZN Sandstone Sourveld grassland and hence is an important site for management.</p> <p>He reported that he is currently engaging with South African National Parks (SANParks) around getting the value add industries for IAP biomass. SanParks is currently harvesting gum trees and manufacturing coffins and school desks from the gum tree biomass.</p> <p>Contact details: Bheka Nxele at Bheka.Nxele@durban.gov.za</p>	
3.2.3.1	<p>WM queried what research was conducted at Buffelsdraai to understand what the vegetation was like in the area pre-sugarcane farming. NG responded that the EPCPD is currently working on the 1937 aerial images of Durban to better understand historical vegetation trends.</p> <p>Additional Note: After the meeting, BM made further enquiries with the Manager: Restoration Ecology Branch and he responded by stating that the Buffelsdraai Reforestation Project was initiated as a means to offset carbon dioxide emissions associated with the Durban component of the 2010 Fifa Soccer World Cup. As such, locally indigenous trees (from a 50 km radius) are being planted at the site. The focus of the project is primarily around a) climate change adaptation outcomes, b) benefits to local communities, and c) undertaking reforestation related research.</p> <p>There is no definitive evidence of what vegetation was on the site. While biogeography</p>	

	does hint at how the vegetation around Durban has changed during the last 10000 years, any attempts to recreate a specific vegetation type on land as transformed as that which is present at Buffelsdraai, is not feasible.	
3.2.3.2	It was raised that in addition to SANParks, there are many small contractors that can take gum trees and use them for value-add businesses e.g., furniture making.	
3.2.3.3	RW queried whether the determination of the times for controlled burns is done by the fire ecology specialists or by the fire department. GA responded and stated that various decision support tools are used when determining appropriate burning times, i.e., The Veld Assessment Tool. Prior to burning, an application is made to Fire and Emergency Services.	
3.2.3.4	NG asked GA how often does the controlled burning take place. GA responded and stated that burns are usually conducted between two and three years and as determined by the Veld Assessment Tool.	
3.2.3.5	RJ commended the work done by Working for Ecosystems teams but raised concerns around the on the ground management of the teams. He informed the meeting that he saw two groups working on sensitive environments with only slashes and plants were not treated appropriately. He stressed the need to improve the on-the-ground management of teams doing IAP control. BN noted the concern and cautioned that there are many teams that are working in EMA but not all are part of the Working for Ecosystem Programme.	
3.2.3.6	NG informed the meeting that statistics for all the large scale management programmes will be made available in the State of Biodiversity Report that is being finalised and which will be published at the end of December 2014.	
3.3	Updates from the Natural Resources Division – Jabulani Khoza	
3.3.1	Jabulani Khoza (JK) tendered Kenneth Mabila’s apology and provided updates on his behalf. JK reported that there were 2000 trees planted at schools and 600 trees planted in RDP housing projects in Inanda this year. Of those trees, 50% were fruit trees and 50% were indigenous trees. JK informed the meeting that NRD have no budget for EPWP projects this year. He also informed the meeting that the proposal to develop mountain bike trails at Westville is currently with EPCPD for comment.	
3.3.1.1	It was queried if there is a system to monitor whether the trees that are planted by the NRD survive. JK responded and stated that Education Officers do the monitoring of the trees planted and report on the survival rate.	
4.	General	
4.1	World Forest Congress: Wally Manny (WM) informed the meeting about the World Forest Congress that is coming to South Africa between the 7 th – 11 th September 2015. He raised concerns around the negative impacts caused by commercial forests on the natural environment and suggested that side events be staged to run parallel to the congress in which the voices of conservation minded individuals can be heard. He also informed the meeting that application for funding is being made to secure venues to host side events for showing conservation work done by various conservation agencies.	

	<p>WM distributed an information sheet for TimberWatch and explained the role of TimberWatch.</p> <p>Contact details: Wally Manny at plantnet@iafrica.com</p>	
4.2	<p>Following a discussion on alien plant eradication, Lee D’Eathe of the Palmiet River Watch, said he had noticed that individuals clearing alien vegetation often felled gum trees indiscriminately, irrespective of whether that particular species of gum was classified as a problem or not. WM added that a case could be argued to save even Category 1 Gum Trees, for example, where they formed part of a historical farmstead.</p>	
4.3	<p>Birdlife calendars: Arnia van Vuuren reminded the meeting that Birdlife calendars are now available and the money collected will be used to fund projects run by Birdlife.</p> <p>Contact details: Arnia van Vuuren: swavv@mweb.co.za</p>	
4.4	<p>LF raised concerns about fishing lines on the coast that are catching birds and added that Birdlife are looking for ways to mitigate against this threat to bird diversity. To address the problem, they visited a Toti resident who is collecting fishing lines along the coast. These fishing lines are then put in specific bins and collected by conservancies in the area.</p>	
4.5	<p>A concern was raised around the land for sale signs seen in open spaces and a query was raised on whether these are legitimate. NG informed the meeting that potential buyers are always advised to enquire with EPCPD before purchasing properties that are affected by D’MOSS and the information about the land for sale signs could be sent to EPCPD to investigate.</p> <p>Landowners who want to check if their properties are affected by DMOSS can view this on the eThekweni Municipality website by following this link and filling in the necessary details: http://citymaps.durban.gov.za/website/master/viewer.htm</p>	
4.6	<p>Reshnee Lalla informed the meeting that SANBI has two teams who will be working on emerging weeds in Durban targeting Formosa lilly and Pom Pom Weed. She also added that the information will also be posted on the SANBI website on http://www.invasives.org.za</p>	
5.	Close of meeting	
5.1	<p>NG thanked all for attending and closed the meeting. NG advised that the dates of the 2015 Biodiversity Forum meetings will be circulated with minutes. The next Biodiversity Forum will take place on 26th February 2015 at Paradise Valley Nature Reserve from 9 am to 12 pm.</p> <p>Upcoming Biodiversity Forum meetings for 2015</p> <p>26th February 2015 – 9am -12pm 28th May 2015 – 9am – 12pm 27th August 2015 – 9am – 12pm 26th November 2015 - 9am -12pm</p>	

