

MINUTES

EThekweni Biodiversity Forum
25 February 2016
9h00 – 12h00
Paradise Valley Nature Reserve



IN ATTENDANCE

Anele Zondi	AZ	Jabulani Khoza	JK	Nokuphila Buthelezi	NB
Angelique Lazarus	AL	Jean Senogles	JS	Nomafu Dlamini	ND
Basheshile Thusi	BT	Jemma Wright	JM	Nosipho Ndzimbomvu	NN
Bheka Nxele	BN	Jenny Loughlin	JL	Ntombifuthi Ntshangase	NN
Bheki Mdletshe	BM	Jone Porter	JP	Paolo Candotti	PC
Bongani Zungu	BZ	Justin Saunders	JS	Reshnee Lalla	RL
Carla Petersen	CP	Kate Richardson	KR	Richard Boon	RB
Chantal Taylor	CT	Kirstin Williams	KW	Richard Winn	RW
Clive Walker	CW	Lee D'Eathe	LD	Rob Jamieson	RJ
Elana Bregin	AB	Leigh Richards	LR	Rodney Bartholomew	RBa
Geoff Pullan	GP	Lesley Frescura	LF	Sfanele Ntuli	SN
Gerald Clarke	GC	Manisha Maganlal	MM	Terry Stewart	TS
Himansu Baijnath	HB	Natasha Govender	NG	Tony Wint	TW

APOLOGIES

Judy Mann, Kenneth Mabila, Angie Wilken, Jo Douwes, Gill Noyce, Fatima Moola, Arnia van Vuuren, Survana Parbhoo, Michelle Lotz, Adrian Armstrong, Preshen Banwari, Ed Granger, Roger Poole, Billie Prinsloo, David Moldenhauer, Nikara Mahadeo and George Victor

1	WELCOME & INTRODUCTION	ACTION
1.1	Natasha Govender (NG) welcomed all and facilitated introductions. Apologies were noted as above.	
2.	PRESENTATIONS	
2.1	<i>The assessment of the impacts of land uses on the present ecological state and water quality: A case study of the Palmiet River. Nosipho Ndzimbomvu</i>	
2.1.1	<p>NG introduced Nosipho Ndzimbomvu (NN) from the Natural Resources Division of Parks, Leisure and Cemeteries Department.</p> <p>NN gave a brief background on the importance of water as a resource and how the River Health Programme was formulated. She also informed the meeting of the various national legislations such as the Constitution, the National Water Act, various policies and strategies that are in place to protect the country's water resources.</p> <p>NN informed the meeting that the objectives of her study were to:</p> <ul style="list-style-type: none"> • Determine the present ecological status and water quality of the Palmiet River. • Identify various types of land use activities and assess their relative impacts on the Palmiet River. • Identify possible sources of pollution and degradation. • Determine resource quality objectives for the proper management of the river. <p>Study Area and site selection</p> <p>NN stated that her study focussed mainly on the Palmiet River catchment. The different land uses within the catchment are:</p> <ul style="list-style-type: none"> • High Income Residential area. • The Pinetown CBD and the industrial area. • The Palmiet Nature Reserve. • Informal Settlement. <p>Methodology</p> <p>NN informed the meeting that she used the Index of Habitat Integrity (IHI) and the Rapid Biological Monitoring System (SASS5) as part of her research methodology.</p> <p>For the IHI, her study included ground-based surveys and dividing the river into 5 km reaches.</p> <ul style="list-style-type: none"> • Reach A included High Income areas (Kloof), Pinetown CBD and New Germany industrial area. • Reach B include areas Cowies Hill, High Income Pinetown residential areas and a portion of Palmiet Nature Reserve. • Reach C included the bottom portion of the Palmiet Nature Reserve, Westville residential area and informal settlements. 	

	<ul style="list-style-type: none"> • Reach D include the informal settlements in Reservoir Hills. <p>She further explained that the IHI application uses rating criteria and provide weight impact estimations. The SASS5 uses SASS scores and ASPT (Average Score Per Taxon) classes to determine whether the river system is unimpaired or critically impaired.</p> <p>For the SASS5, sampling was conducted in January 2015 during the high flow and June during the low flows. There were eight monitoring sites along the stretch of the catchment.</p> <p>Results</p> <p>The results obtained from both Habitat Assessments and SASS5 including various parameters all show some deterioration in the water quality of the Palmiet River. Only two monitoring sites showed to be in natural condition both in high flow and low flow seasons (one below the Kloof area and one below Palmiet Nature Reserve). The results show the very low SASS scores (severely impaired) for the New Germany industrial and Pinetown CBD.</p> <p>Recommendations</p> <p>NN made the following recommendations for the improvement of water quality within the Palmiet river catchment:</p> <ul style="list-style-type: none"> • The development of an integrated water quality management system for the Palmiet River. • Riparian zones should be buffered throughout the catchment. • There is a need for environmental awareness campaigns with people living near the river, i.e. Adopt a River Programme. • Strengthening the enforcement of national water regulations to ensure wastewater from industries is pre-treated at required levels before it is disposed of. <p>NN closed by thanking all stakeholders who are doing Palmiet River monitoring including the members of the Palmiet River Watch.</p> <p>Contact details: Nosipho Ndzimbomvu can be contacted via email at Nosipho.Ndzimbomvu@durban.gov.za</p>	
2.1.1.1	HB (Snowy) thanked NN and queried whether this research will be published anywhere. NN responded and stated that the research was part of her Masters dissertation and she will look at publishing it.	
2.1.1.2	HB queried whether the sampling programme was done during the day or night. NN responded and stated that sampling was conducted in the morning, twice at all monitoring sites and she tried to stick to similar time ranges for all sampling periods.	
2.1.1.3	HB further queried whether NN appreciated the disadvantage of sampling in the mornings. NN agreed and stated that there are disadvantages but she had confidence that it did not affect her findings significantly.	
2.1.1.4	LD commended NN and thanked her for sharing the results of her study. He further added that the Palmiet River Watch had done a complete analysis of the Palmiet River and if anyone was interested, they can leave their contact details with him after the meeting.	

2.1.1.5	RBA noted that NN suggested that buffers be put in place and queried whether there is any policy or standard that is used to create river buffers in order to keep the natural areas intact. NN responded and stated that she is not aware of any policy around river buffers but agreed that it is something that should be considered.	
2.1.1.6	RJ thanked NN and added that throughout the Palmiet River catchment buffers have been largely reduced over time.	
2.1.1.7	NG thanked NN for sharing her findings with the Forum members.	
2.2	<i>The smaller mammals of KwaZulu-Natal: bridging the gap between museum collections, research & conservation planning: Dr Leigh Richards</i>	
2.2.1	<p>NG introduced Dr Leigh Richards (LR), who works as Curator of Mammals at the Durban Natural Science Museum of eThekweni Municipality to present on the smaller mammals of KwaZulu-Natal (KZN).</p> <p>LR thanked NG and informed the meeting that she and her team conduct collections for the museums with the aim of bridging the gap between museum collections, research and conservation planning.</p> <p>She began her presentation by explaining the difference between small and smaller mammals and why they are important. She explained that small mammals are a food source for predators, control insect populations, stimulate grass growth, pollinate and disperse seeds among other things. LR also stated that small mammals are ecological and biological monitors in that they are better indicators of ecosystem integrity at a local scale and that they are available in higher numbers and are easier to study.</p> <p>LR informed the meeting that her work is the review of The Smaller Mammals of KwaZulu Natal collections done by Peter J Taylor between 1989 and 1997 from 22 localities. She informed the meeting that there are 106 KZN small mammals species listed in the Smaller Mammals of KZN 1998 book and she gave a breakdown of these species.</p> <p>Objectives of the study</p> <p>LR informed the meeting that the aims of her study were to survey small mammals throughout KZN natural areas in order to compile new biogeographical, ecological and taxonomic information on the small mammals of the province.</p> <p>She further stated that the outcomes of the study were to</p> <ul style="list-style-type: none"> • Update the species list for the province, • Geo-reference data for the Red Data List Assessments, • Make available predictive potential distribution maps for each small mammal species, and • Provide a revised edition of The Smaller Mammals of KZN. <p>Protected areas in KZN</p> <p>LR informed the meeting that KZN has approximately 80 provincial reserves and P J Taylor surveyed 14 poorly surveyed reserves. She also informed the meeting that the museum collection contains data on small mammals from 25 protected areas and that many more</p>	

areas need to be surveyed.

She stated that there are approximately 43 natural areas within the eThekweni Municipal Area (EMA) and most of them are poorly surveyed or data on small mammal species are not readily available or verifiable. She also informed the meeting that as of 2011, the Durban Natural Science Museum collection contained data on small mammals from only seven municipal reserves.

Sampling

LR informed the meeting that 26 natural areas were sampled between 2011 and 2015. Of these, 18 were Protected Areas (PAs) and six were within EMA.

LR also informed the meeting that new species records were added for eight reserves. Of these reserves, new records were added to the collection from Treasure Beach Nature Reserve, Kenneth Stainbank Nature Reserve and Giba Gorge Environmental Precinct (GGEP).

Methods used

LR stated that they used Alternate Large Folding Aluminium and Small Folding Aluminium traps to ensure that maximum capture success is achieved for all size categories of small mammals. She further stated that they used pitfall arrays.

She further stated that they used the catch, mark and release method.

Findings

LR informed the meeting that in **GGEP** they found the following species:

- Mesic Four-Striped Grass Mouse
- Dark-Footed Forest Shrew
- Greater Musk Shrew
- Multimammate Mouse
- Southern African Vlei Rat

Of particular interest was the *Rhadbdomys dilectus* which was new species they recorded in GGEP.

LR further informed the meeting that at **Springside Nature Reserve**, they found the following species:

- Single-Striped Mouse
- Climbing Mouse
- Pygmy Mouse

Comparison of findings for GGEP and Springside Nature Reserve

LR informed the meeting that they decided to compare the small mammal species they found in GGEP and Springside Nature Reserve.

She reported that they found that seasonal changes had little effect on small mammal captures in Springside Nature Reserve while captures and trapping success were highly correlated with season for GGEP. The highest number of captures and trapping success in

	<p>GGEP were recorded in spring.</p> <p>She also reported that the small mammal species composition is more diverse in GGEP than in Springside Nature Reserve. The KZN Sandstone Sourveld grassland yielded the highest number of species for both GGEP and Springside Nature Reserve. She further informed the meeting that the wetland habitat in GGEP was more species diverse than that of Springside Nature Reserve.</p> <p>In closing, LR informed the meeting that they will be conducting further studies to determine if there are any historic connectedness between natural areas, i.e. GGEP, Tanglewood, Springside, Krantzkloof, Shongweni, Marianwood, Glenholme and Roosfontein. She also informed the meeting that Kirstin Williams will be conducting her study on insectivores at Springside Nature Reserve.</p> <p>She informed the meeting that the study was made possible by partnerships with the South African National Biodiversity Institute, Kloof Conservancy, BAT Interest Group of KwaZulu Natal, University of KwaZulu Natal, Centre for Rehabilitation of Wildlife, and the Environmental Planning and Climate Protection Department of eThekweni Municipality.</p> <p>LR thanked students, reserve managers, volunteers and the Ezemvelo KZN Wildlife Honorary officers for assistance during the surveys.</p> <p>Contact details: Dr Leigh Richards can be emailed at Leigh.Richards@durban.gov.za</p>	
2.2.2.1	<p>JP queried why LR decided to focus on the Protected Areas only and excluded areas not protected. LR responded and stated that they are not only focusing on PAs, but the study is aimed at addressing the small mammal species collection while assisting the nature reserves with data which will improve the management of those areas. She added that sometimes they survey natural corridors and ecological support areas when a request is made.</p>	
2.2.2.2	<p>JP stated that there was a public campaign about dead animals along the road and asked what happened to that campaign and what the public must do if they find dead animals. LR responded and stated that members of the public must call her team at the DNSM.</p>	
2.2.2.3	<p>JL queried whether LR had thought of surveying Palmiet Nature Reserve. LR responded and stated that each year they choose the natural areas to work in and sometimes they are asked by reserve managers.</p>	
2.2.2.4	<p>HB stated that there is a need for on-going liaison with other agencies especially around burning regimes as these would impact on species diversity. LR agreed and stated that she will make recommendations to the reserve managers.</p>	
2.2.2.5	<p>RBa queried whether LR considered predation a problem in her survey. LR agreed and stated that they had camera traps at night and but there were no dogs or cats seen but there are signs of domestic cats and feral cats in the nature reserves. She added that she had alerted the reserve managers about these animals.</p>	
2.2.2.4	<p>NG thanked LR for sharing her research with the Forum. She added that both studies presented at this meeting directly will inform the management of nature reserves.</p>	

3	Updates from various municipal departments	
3.1	Updates from the Durban Natural Science Museum (DNSM) – David Allan	
3.1.1	<p>Kirstin Williams (KW) provided the following updates from the DNSM.</p> <p>DNSM Volunteers: KM reported that new volunteers have just started and they are undergoing training.</p> <p>GO-WILD Mobile Museum: KW reported that if anyone is interested in booking the Mobile Museum, they are welcome to book it at NSM.Frontdesk@durban.gov.za or contact 031 311 2256.</p> <p>Night at the Museum: KW informed the meeting that the Night at the Museum is now fully booked and will be opened for booking for July 2016.</p> <p>Thola Magazine: KW informed the meeting that the next Thola Magazine publication will be out in May 2016. She thanked all contributors for their submissions.</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>Restoration Ecology Programmes: Bheka Nxele reported that WESSA has been appointed for the Working for Ecosystems Programme for the next three years ending in June 2018. He also informed the meeting that the programme has been extended to Shongweni and Ngonweni areas. There are now two new sites in KwaXimba and Redcliffe. BN further reported that the Working for Ecosystems Programme has Early Detection and Rapid Response component to deal with specific emerging weeds.</p> <p>Endangered Wildlife Trust Endangered Amphibians Programme: BN also reported that EPCPD has partnered with Endangered Wildlife Trust to manage selected wetlands within the EMA. These wetlands were chosen because they provide habitat to the <i>Pickersgilli</i> Reed Frog, a Critically Endangered frog species which is endemic to the coast of KZN.</p> <p>NEMBA & U Training Course: BN informed the meeting that in the previous financial year, EPCPD ran NEMBA & You course for conservancies as part of Working for Ecosystems Programme. He further informed the meeting that EPCPD is looking at doing one at the end of financial year subject to funds being available.</p> <p>Fire and Invasive Species Programme: BN introduced Bongani Zungu (BZ), a new Programme Manager for Fire and Invasive Species Programme (FISP) previously known as Working on Fire Programme. BZ reported that the appointment for the new service provider was concluded in November 2015 and they are looking at invasive alien plant control. BZ further reported that the FISP team is currently planning for the fire season by prioritising areas to be burnt and conducting veld condition assessments.</p> <p>100 Resilient Cities Programme: Manisha Maganlal gave a brief overview of the engagement processes that has taken place for the 100 RC Programme and thanked the conservancies for their participation in these processes. She informed the meeting that she brought along copies of the Preliminary Resilience Assessment booklet which gives an overview of Durban’s Resilience Journey from September 2013 to August 2015. MM informed the meeting that the Response Document is also available for download on the website. She also informed the meeting of the 100 Resilient Cities newsletter and that</p>	

	<p>anyone can subscribe to it. In closing, she stated that Phase II of the process will be to look at the systems analysis of the issues raised and that the Systems Analysis Workshop will be held in March 2016.</p> <p>For more information contact Bheka Nxele at Bheka.Nxele@durban.gov.za and Bongani Zungu at Bongani.Zungu@durban.gov.za</p>	
3.2.1.1	RJ stated that there is grassland portion in UKZN Westville that was burnt during the previous burning seasons and requested that it be included in the burning schedule. BZ stated that he will look into the schedule and include it on the veld condition assessments.	
3.3	Updates from the Natural Resources Division – Kenneth Mabila	
3.3.1	Roosfontein Nature Reserve Launch: Jabulani Khoza (JK) informed the meeting that the Roosfontein Nature Reserve has been officially proclaimed by the MEC and will be launched on the 5 th April 2016.	
3.3.2	Green City Awards: JK informed the meeting that Durban has entered the Green Municipality's Awards.	
3.3.3	Working for the Coast Programme: JK reported that Working for the Coast team is currently being trained and will begin working in April 2016.	
4.	General	
4.1	Frog Day at Ushaka Marine World: JP reported that the Ushaka Marine World will host the Frog Day celebration this leap year from 27 -29 February 2016. There will be activities for the children and environmentalists will present facts on frogs and how frogs can be conserved and protected.	
4.2	Tanglewood Farm Lead Day for Frog: JS reported that the Kloof Conservancy in partnership with Endangered Wildlife Trust's Threatened Amphibian Programme will be hosting a fun day including guided walks, frog hunting and other educational activities in Tanglewood Farm on Saturday the 27 th February 2016.	
5.	Close of meeting	
5.1	<p>NG thanked all for attending and closed the meeting</p> <p>The next Biodiversity Forum meeting will take place on 26th May 2016 at Paradise Valley Nature Reserve from 9 am to 12 pm.</p> <p>Thursday – 26th May 2016 – 9:00 – 12:00 Thursday – 25th August 2016 – 9:00 – 12:00 Thursday – 24th November 2016 – 9:00 – 12:00</p>	