



ELEPHANT RESEARCH

—A·P·N·R—

December 2008

by

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We wish you a very blessed Christmas filled with peace and the warm presence of loved ones.

This special year-end edition features Mac's Moods, the expansion of our programme into the northern regions of the Kruger National Park, our Grassroots Educational Programme, interesting news flashes and our regular contributions (Your Thoughts, Who's-Who, Fact File and Special Requests),

Mac's Moods



With the outset of the Transboundary Elephant Research Programme we were fortunate enough to collar a large bull named Mac on a Green Hunt in May 2002. Mac got his name from Tony McClellan who donated his first collar. Mac's home range exceeds 5 000 km² which includes an annual trek southwards from Shingwedzi in the Kruger National Park (KNP) to the Associated Private Nature Reserves (APNR). Mac stays within the Private Nature Reserves for his entire musth cycle and then returns to the north of Kruger when he drops out of musth. He represents one of a few remaining large tusked bulls in Africa, and his incredible journey has been continuously followed for more than five years by the BBC's Natural History Radio Unit which has featured Mac in a series on animal migrations named *World on the Move*. As part of the series, we were asked to follow him when he came into musth and to

periodically conduct live radio interviews and provide the BBC with sound recordings of our experience. The KNP kindly granted us permission to follow him day and night as he moved towards the APNR.

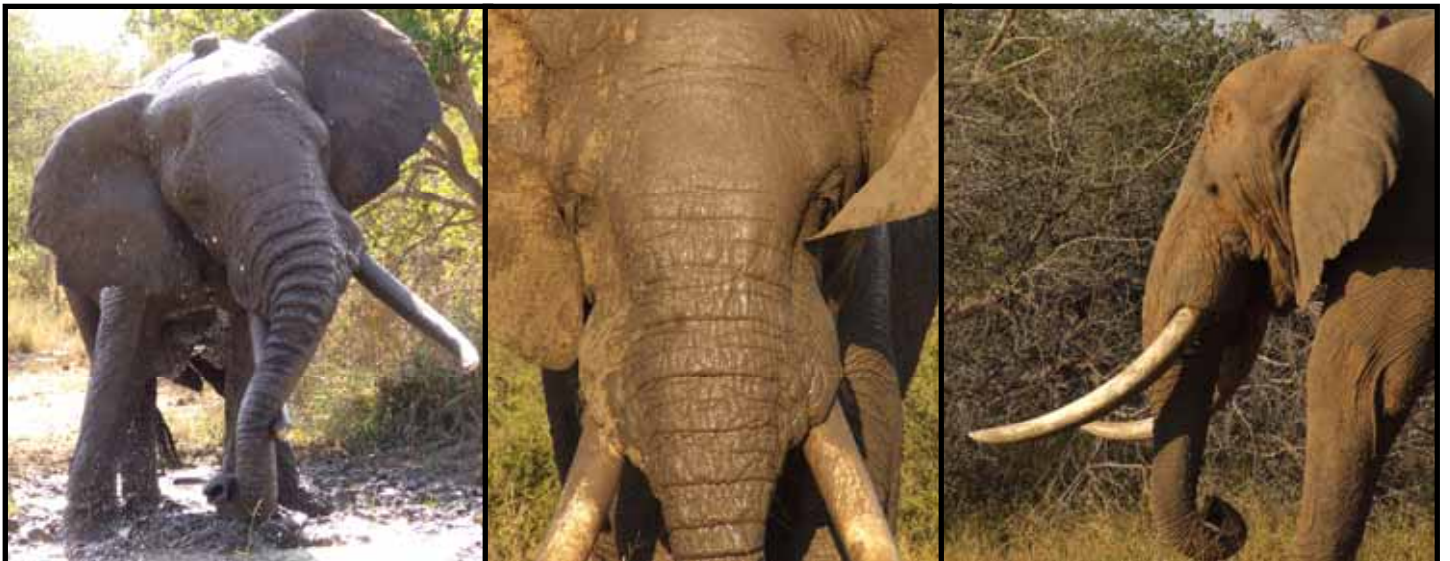


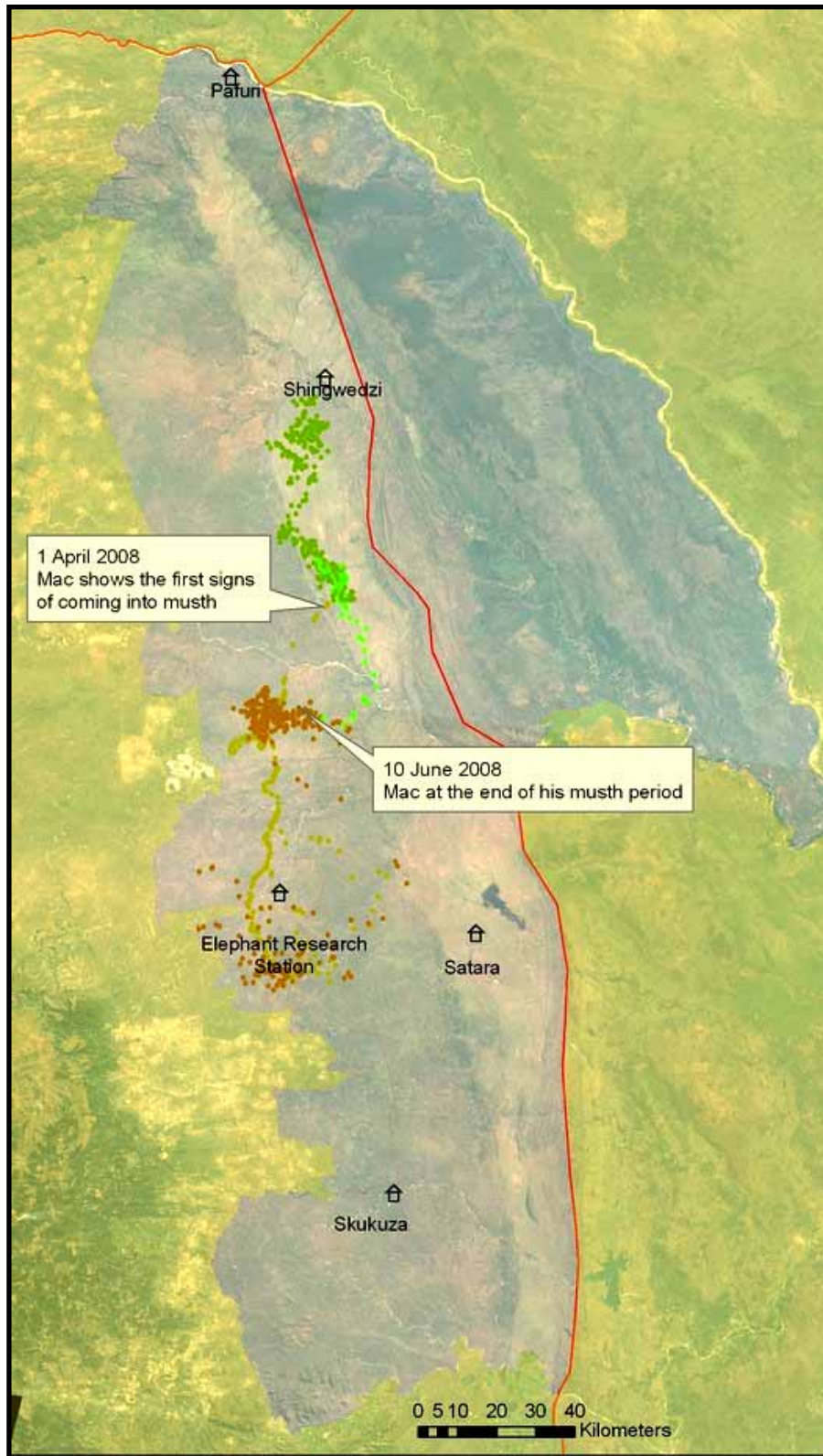
Words are not adequate to describe the time we spent in Mac's company. We hope that the pictures will speak for themselves. With the moon as company, we spent many long hours with him snoring nearby while his pungent musth odour filled the air. After he rested for extended periods we often had to rush to keep up with him as he took long strides to reach the females within the APNR on his way south. On hot days we watched him cake himself with mud and then transform his ebony body into a glowing monument after sand blasting himself with red-gold dust. At other times we spent the early morning hours with him when the rain fell and enjoyed the exhilarating feeling of being washed by the sky. Although we felt cold and stiff when the rising sun sent the clouds into retreat, we all enjoyed the sweet smell of rain mixed with African dust



Once he reached the APNR, we no longer

had his company to ourselves as he started spending extensive time with the various breeding herds that we have come to know over the years. These included females from the 'Rivers', 'Gems' and 'Constellations' herds. Mac seemed to become more elusive in the presence of breeding herds, and towards the end of his musth cycle we finally got one last look at him before he crossed back into the KNP to slowly head towards Shingwedzi. We hope to catch him next year as he returns to his breeding grounds.





Mac's movements from December 2007 until November 2008. Green markers indicate Mac's position during the wet season (November to March). Olive green markers denote the wet-dry transition period (April), brown markers indicate positions that were recorded during the dry season while light green markers show where Mac was during the dry-wet transitional period (October).

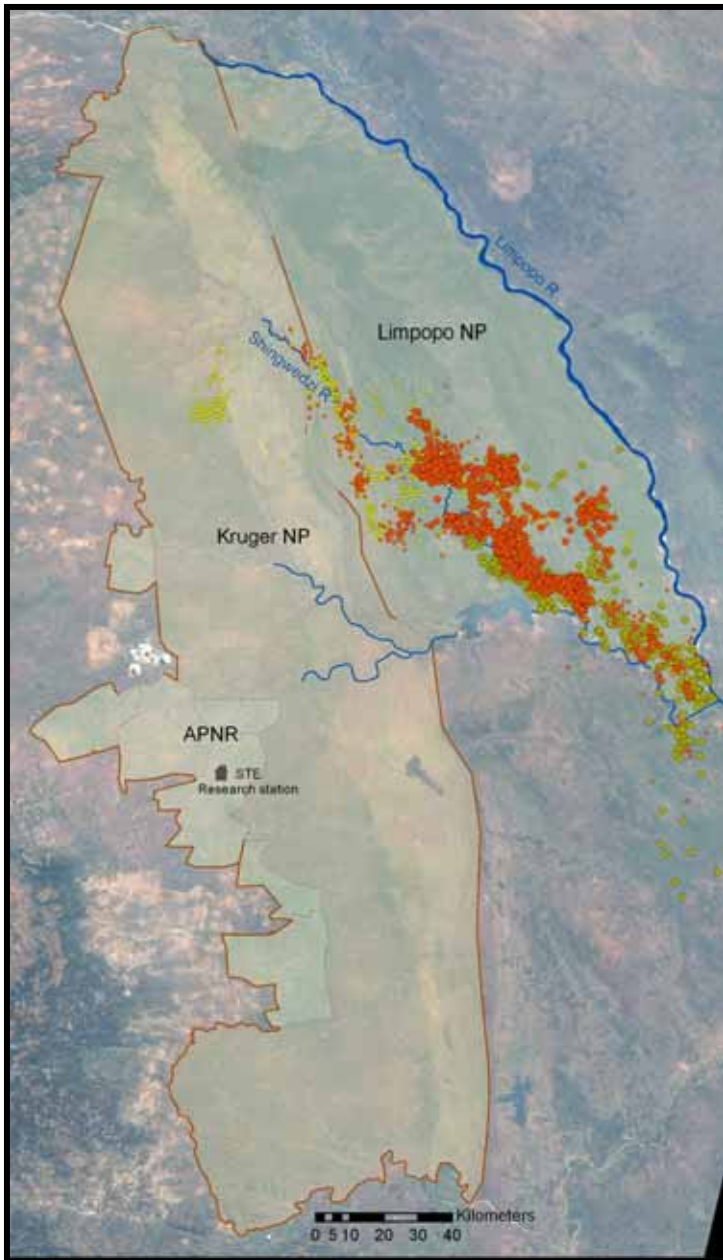
Pursuing Pafuri's Pachyderms



The Fever Trees glistened in the early morning light. As the sun's rays hit each individual tree's trunk it glowed orange like the microphyllis leaf bed of the almost ghostly forest. In awe we watched vervet monkeys catching the first morning light and tentatively navigate their way through the thorns and down the trunks to find *Acacia* gym.

Our guide, Walter Jubber excitedly told us that he saw some elephants approaching in the distance. In silence we watched them draw closer towards the vehicle. The setting seemed surreal. As the bulls came closer we could see their foreheads smudged with the yellow-green traces of the Fever Trees which they had rubbed up against in their wanderings through the forest. In unison our cameras clicked, not only in a feeble attempt to capture the magic of the moment, but also to collect the individual identification photographs of the elephants occupying this newly established study site. Walter, together with other Wilderness Safari Guides, is spear heading the collection of elephant identification photographs, and we plan to visit the study site every two months.

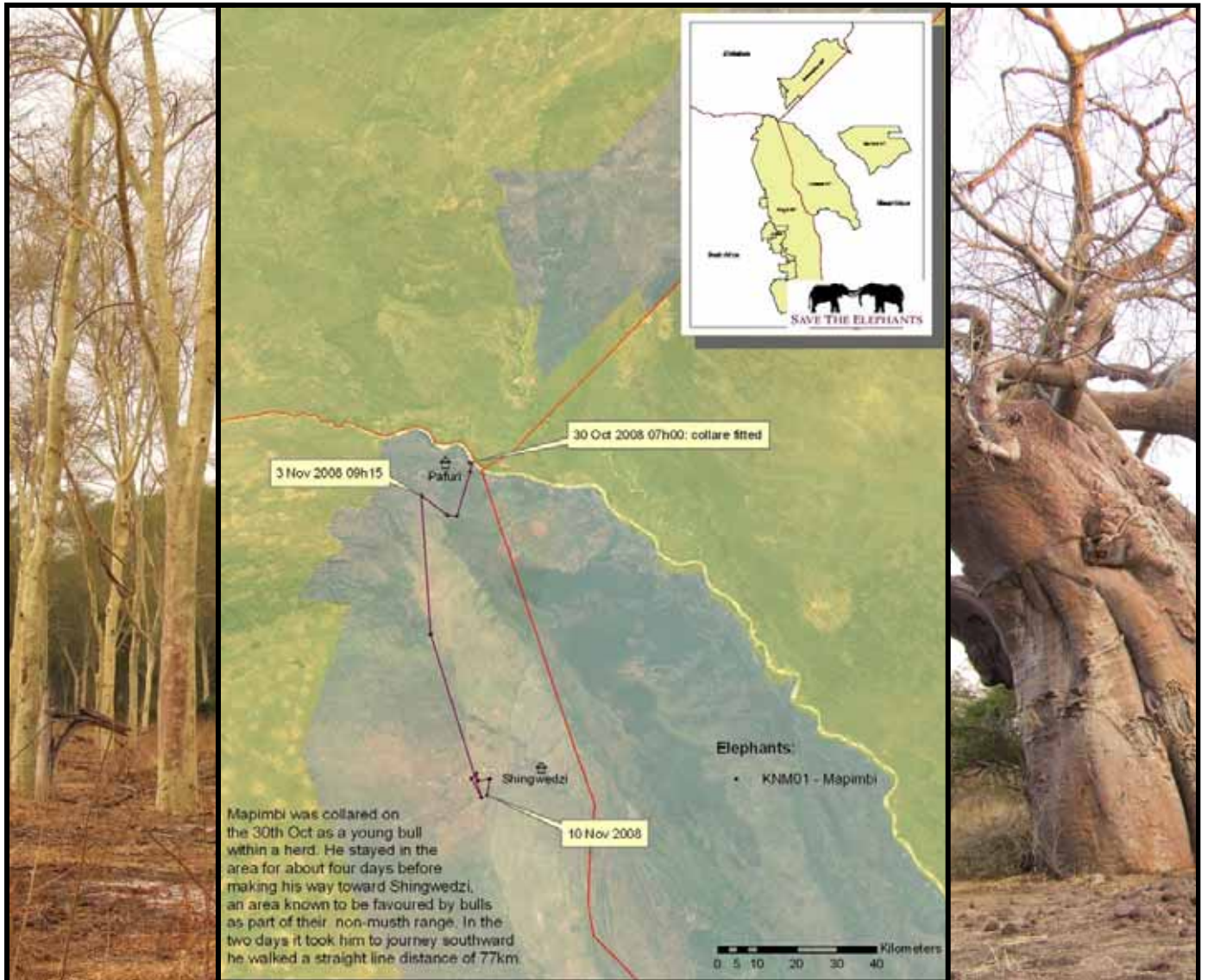
The Transboundary Elephant research Programme has 28 GPS-collars deployed in two focal areas: 22 GSM/GPS collars in the western KNP and APNR where cell phone reception is reasonable (Klaserie, Timbavati, Umbabat and Balule Private Nature Reserves) and eight satellite/GPS collars on the north-eastern Kruger-Limpopo National Park border where cell phone reception is largely non-existent. Three of the eight bulls that we collared in December 2006 on the eastern border of Kruger have ventured into Mozambique. Two of the bulls, Quinto (orange markers) and Tercievo (green markers) moved into Limpopo National Park shortly after being collared and have not returned (19th December 2006 and 22nd January 2007 respectively, with smaller markers indicating movement patterns pre 2008 in the map below).



With the establishment of our new study site we seek to place 12 collars on elephants and extend our research efforts into the far northern regions of the KNP to balance the findings and contribute more meaningfully to the complex issue of elephant movements in response to the expanding Kruger population. This specific aspect of the project will enable us to study dispersal patterns to the west (into the APNR), the east (into Limpopo NP) and also to the north of the KNP. The reason for adding the Makuleke Community area to our research sites is to include an area of natural seasonal dispersal and apparent migration from a formally protected area like Kruger into a community area like Chikwarakwara where hunting and other pressures exist. The seasonal movements of elephants within this region are well established, and a detailed understanding of the role of water and fenced boundaries on the movements of this regional population will provide valuable information to all stake holders. In addition, we hope that if any of the collared elephants move into Zimbabwe, the movement data will contribute towards the design of a corridor linking KNP with Gonarezhou National Park in Zimbabwe and the expansion of the Great Limpopo Transfrontier Park to include the Zimbabwean protected area.

At the end of October 2008, the first young bull that was collared within a breeding herd has subsequently moved south towards Shingwedzi (please refer to the map below). With the start of the rainy season, most of the remaining breeding herds that frequented the area started moving towards unknown destinations which we hope will become known over time. Have they crossed the Limpopo River and will they be back next year given the dangers that they may face whilst doing so? Which

familiar bulls will grace the Baobab- studded landscape with their presence over time? These are questions that we hope we will be answering in future.



Thank you

We would like to thank the following people and organisations for making this part of our project possible: The Makuleke Community, Dr. Hugo Bezuidenhout, Dr. Sam Ferreira and Dr. Freek Venter from SANParks for logistical support. Dr. Markus Hofmeyr is thanked for tirelessly and professionally offering his veterinary services during the collaring operation. Grant Knight is thanked as pilot. Chris Pearson from ConservAfrica is thanked for generating the funds to pay for the collar and the collaring operation. This project would not have been possible without the financial and logistical collaborative efforts of the Wilderness Safari Trust. Chris Roche, Russel Friedman and James Ramsay are thanked for all their enthusiasm and support. Last but not least, Walter and Callum, you are doing an amazing job collecting identification records in our absence. We appreciate your enthusiasm.

Your thoughts...

We would like to thank Ian Sharpe for his contribution and for faithfully collecting elephant photos despite adversity. The following elephant encounter has been shortened.

When living in the Lowveld bush one is certain to experience interaction with wild animals. Of course, elephant are sure to get one's adrenalin pumping. Our home is at the Hans Hoheisen Wildlife Research Station that lies within the Greater KNP area with no fences bar the small fence surrounding the house. On the 23 January 2008 I had a run in with an elephant bull which I would like to share with you.

With all the Eskom load shedding we were subjected to at this time, the timer managing our water pump was constantly out of sync. Our water supply was low and I decided to reset the timer at the main electricity DB in one of the outbuildings of the station. My daughter Robbyn came along and we took the dogs with for some exercise. On approaching the building where the DB was located we saw an elephant bull feeding some 50 metres from the door we needed to enter. Keeping the building between us and the elephant, we continued towards the door. The dogs rounded the corner of the building first and noticed the elephant that also did not miss their presence.

Lifting his head and raising his trunk to get a good whiff of the creatures invading his turf, the elephant turned towards us and took a few paces forward. Not wanting to tempt fate, the dogs were called and we retreated from the elephant, always keeping the building between us (as if that would help should he charge the dogs!).



Stopping some 30 metres from the back of the building, we looked to see what the elephant was planning to do. To our dismay he appeared around the corner of the building heading straight for us – totally on a mission! He continued heading our way, not with much haste, but more from being inquisitive, I would venture to guess. We turned on our heels and moved further down the road. The elephant kept heading our way and of course, photo's had to be taken for Michelle as he approached.

Elephant on a mission – rounding the corner of the building.

The situation became too close for comfort and our newly acquired 'dog' kept following us. At this point Robbyn ran on ahead, further down the road calling the dogs as she went as this was obviously what had intrigued Mr. Elephant. At this point he obviously felt a bit peckish and stopped to feed for a few minutes. We stopped, moved a bit closer and stood watching him from a distance thinking this was the end of his fun.

Surprise, surprise! The elephant turned back on the road and started striding meaningfully our way again. We kept our distance moving towards our yard, constantly checking the proximity of the other yard gates as we passed should the elephant decide to charge. After having the elephant follow us and stop twice more to feed, each time after about 50 metres, the safety of our gate was in sight. At this point he was feeding peacefully next to the road again and we entered the safety of the yard.

Shortly thereafter the dogs were heard barking at the gate. Looking towards the gate I saw the elephant standing there looking at the dogs. He had followed us some 400 metres home, for what reason only he will know. Obviously the water pump timer was not reset that day and we had to make do with what water was available!

WHO'S-WHO.....?

This regular feature will serve as an introduction to individual elephants with which we have become familiar in the APNR. Here we feature a bull named Frank which is the most placid bull we have yet to come across while in full musth....



Frank is a new comer to the APNR. We met him for the first time in June this year when he was in full musth and while he was associating with the 'Gems' breeding herd at Eileen's dam. Usually we are very cautious around bulls in musth, especially when they are associating with breeding herds as they may just perceive you as a treat to a female they could be guarding. It soon became apparent that Frank was oblivious to the comings and goings of people. We had never witnessed a prime bull in full musth with such a placid nature which really made us wonder just how placid he would be when not in musth!

Frank has a very characteristic tear in his right ear and an elongated square tear out of his left ear. He also has a good set of ivory. We would appreciate any photos or sightings of this animal. We are expecting to see him again in the APNR during his musth period which lasted from June through to August this year.

Quote:

'The greatness of a nation and its moral progress can be judged by the way in which its animals are treated.'

Mahatma Gandhi

Conservation and Community

by
Christine McCagh

Painted faces stare down at the sand, squinted eyes exaggerated by ochre stripes and white dots, small bodies hunched down over the lines in the ground as nine children scrutinize the only hint left of an animal that has passed this way.



"*Mani loyi a nga kandziya?* (Who left this spoor?)" Renick prompts the group.

At first silence, until "*Ndlophu?*" a tentative answer is offered. Renick is pleased, "*Exactly. Kahle ngopfu* (Very good)" The competent field guide squats down amongst the children and describes the other clues the elephant has left behind for the keen observer: direction (the triangular end of the spoor points the way forward) and speed (slow if the scuff mark is toward the front of the spoor, and fast if the scuff mark is at the back of the spoor). Eyes gleaming with excitement, the children look eagerly around for the next story camouflaged by its very nature, revealing itself only to those who recognise its language.

This is one of the great lessons the Hluvukani children are here to learn; to read Nature and understand her systems, her structure and all those who participate in her intricate web of life. This includes the children's place within the environment, and similarly – although perhaps less obviously - the great significance the natural environment has in their lives.

This year has been a special year for the Elephant Research's Educational Programme because the children are from the Kunvelala ("to encourage hope") Community Project. The project was initiated in 2008 by Harry and Smiling Ubisi in their rural village Hluvukani, set at the foothills of the Klein Drakensberg in Mpumalunga. The project uses soccer as a vehicle to inspire under-privileged, local children to create better opportunities for themselves. Soccer offers a chance for the children to socialise in a healthy environment (as opposed the alternative gang support system) with positive role models. What's more, Kunvelala encourages the children's families to participate in the running of the programme by requesting parents or guardians to donate their time or skills to better the lives of the children. This community based ethic provides a larger support system for those families affected by HIV/AIDS.



The goal of Transboundary Elephant Research and the Kunvelala Community Project is to convey the message that the target audience of the two projects (the natural environment and the local community) cannot exist without the support of the other, that is, that conservation can not survive without custodians to manage and protect it, and the community cannot subsist without natural resources and the vital job opportunities that these conservation areas provide. Thus the children of the Kunvelala Community Project participated in this year's Elephant Research Educational Programme. Ongoing funding was kindly provided by the Wildlife and Environmental Society of South Africa (WESSA).

Tys, Distance, Eron, Bright, Right, Twice, Headman, Ronnie and Lucky spent three days learning about the importance of their relationship with the environment from Renick (Tanda Tula field guide), Kgaolo (one of the Environmental Educational officers at Timbavati Head Quarters), Bridgette (South African Wildlife College field guide), Harry (founder of Kunvelala Community Project), and Michelle and Christine (Elephant researchers). Kgaolo led group discussions on how the ecosystem functions as a result of all components working together in a complimentary process. He explained that reserves such as the Associated Private Nature Reserves are essential to preserve and enlarge these functioning ecosystems. Furthermore, the children were made aware that they are the future custodians of these reserves and play a special role in maintaining them. The children were encouraged to explore the idea that their families could not live sustainably off the environment if everyone was allowed to harvest meat and wood from the bush. A delicate balance needs to be struck between the resources that we require and our willingness to nurture and conserve our natural environment for future generations.



Renick led the children on bush walks to immerse the young soccer players in the wonder and beauty of the bush, explaining how nature is full of hints and clues about events unfolding in the wilderness. He taught that if you know what to look for, the bush provides everything from food to medicine to toothbrushes to toilet paper. He described various types of animal behaviour when game was sighted and explained the importance of practical knowledge when it comes to survival or finding your way in the bush.



On day two the children were taken to the Elephant Research Office at Tanda Tula. During the game drive, the natural world revealed more surprises to the group; a small lion pride, rhino, a leguaan and leopard tortoises..... The participants listened attentively to a theoretical teaching on why and how we follow the movements of elephants. They were given the opportunity to feel the weight of an elephant collar. After explaining how our research project was able to track elephant

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movements via the collars they wore (“Have you seen those steadily moving stars at night? They’re called satellites and they speak to our computers to tell us where the elephants are.”), the children were shown the animated computer maps of the collared elephants’ past movements. Excitedly, the group chose to search for Classic (a large collared bull) in the Klaserie as part of their activities for the day. It did not take us long to track him down. Michelle introduced the young group to Classic, and the children were awed by his majestic presence. For Distance, Bright, Lucky, and Tys it was extra special as this was their first-ever elephant sighting. The boys were amazed as one young, single tusked bull trumpeted his alarm at the approaching vehicle. The size of Classic and the trumpeting of the inexperienced bull left an indelible impression on the children. Amidst peels of laughter they tried to imitate the sound of the trumpeting elephant on the way back to the Bush School.



The boys’ sense of wonder and excitement was heightened when the day ended with the traditional (and lively!) dancing of Loderick and his Ringetani Community group. Initially, the boys were taken completely unawares and merely stared in disbelief at the flamboyant red costumes contrasting strongly with the verdant green undergrowth in the fading light. The pounding drums, the singing women and the dancing men soon made the children shed their inhibitions and they began to move their bodies to the rich and energetic African music while a soft drizzle kept steaming bodies from overheating.

The boys may have come from under-privileged homes which frequently mean that school life is compromised. It was however, encouraging to see that these boys displayed a wisdom and understanding of our Conservation and Community message that belied their educational background. Although it was only a three day adventure the bonds that were forged between teachers and students (roles that were constantly interchanging between the older and younger generation) across cultural differences and language barriers, were heartfelt and enduring.



Thank you

On behalf of Elephant Research and Kunvelala Community Project, we would like to thank WESSA for providing the funds to make this event possible. Charles de Villiers, thank you for making the bush school available for our use. Thank you Renick for not only your field guide skills but your patience and genuine interest in the children's learning. Also, thank you Kgaolo and Bridgette for your enthusiasm and inspiration that was transferred on to the children. Harry constantly kept a watchful eye over all the proceedings (including the cooking pots!). Alex is thanked for all his repairs to the chalets, beds and for building two lofts. Thembisele and Elita are thanked for ensuring that the children got to sleep under crispy clean sheets that Pat and Eileen donated. Thank you for all those that donated equipment on previous occasions (Ingwelala, Motswari, Ntsiri, Tanda Tula and Zebenine) as we put all donations to good use in our newly repaired huts. Last but not least, we would like to thank the managers and front line staff members of Tanda Tula for never failing to be supportive. We are proud to be part of this community.

FACT-FILE: Rumble in the jungle*

- **Calls** of elephants range from higher frequency screams, trumpets, bellows and roars (322-570 Hz), down to lower frequency rumbles or growls (18-28 Hz).
- Humans hear a frequency range of 20-20 000 Hz while elephants communicate in the range of 14-24 Hz with high **sound** pressure levels of 85-90 decibels.
- Human conversation usually averages 65 decibels, hence elephants make low but relatively loud **sounds**.
- Very low frequency **sounds travels further than high frequency sound of the same pressure levels and is** generally not affected by obstructions such as trees.
- Female elephants are the most **vocal** with a repertoire of different audible low frequency sounds which have been classified as the greeting rumble, the contact call and its answer, the let's go rumble, the cow chorus, the post mating call and the mating pandemonium call.
- When calm, elephants emit only low frequency **growls** and rumbles but they can trumpet, bellow and scream loudly when alarmed or excited.
- Dislike, apprehension or threat is often **expressed** when rapping the end of the trunk on the ground while snorting at the time of impact.

*Spinage, C. 1994. *Elephants*. T & A D Poyser Natural History, London.

NEWS FLASHES

- We collared seven animals in total in 2008. All these collaring operations involved recollaring existing study animals except for the young bull which was collared for the first time in northern KNP.
- We are very grateful to the following people and organisations that have contributed towards the purchasing of new collars: Joubert De Lange, Lonnie Strickland, Tony McClellan, the Wasteman group and WESSA.
- We would like to thank the following people and organisations in particular for their ongoing support: Intel, Brian and Claire Makare, Peter Smelting, Tanda Tula Safari Lodge, Toyota and WESSA.

Happy filming days with Joubert de Lange from Intel



- In March of this year we retrieved Snap's collar which had torn off while he was in Great Letaba Ranch. We are very grateful to Micho Ferreira for his assistance in this regard.



Jake Wall installing the software

We would like to thank Jake Wall, the GIS analyst from Save the Elephants who came to South Africa to install the Google Earth Tracking links of our collared elephant's onto the computers of all the Wardens of the APNR (Timbavati, Klaserie, an Umbabat representative and Balule Private Nature Reserve). We hope that the information will be of use to the Wardens.

- In June we took 18 children from Global Community Rising on three independent Elephant Tracking days. The children enjoyed seeing elephants and learning all about the conservation issues that surround them. We would like to thank Jeanette Colbert and Philos Mpapele for their efforts to better the lives of these children through music, art, dance and a greater concern for the environment.



Steve informing the kids about the elephant tracking day

SPECIAL REQUESTS

We will be unable to meet the objectives of this study without your input and support. We therefore have the following requests and appeals to make...

: ELEPHANT IDENTIFICATION KIT:

If you are keen to assist in collecting elephant ear patterns or if you have taken any elephant photos and would like to make these available, we would be most appreciative. Please contact us at (015) 7930369 or email us at michelephant@worldonline.co.za

: NEWSLETTER:

If you would like to contribute to the newsletter in any way please contact us, especially if you have come to know specific elephants over the years and have some interesting stories to tell. Your stories will appear in the section entitled 'Your Thoughts'.

: ELEPHANT MORTALITIES:

We are putting together a map of all natural mortalities of elephants within the region. If you have ANY historic information of elephant deaths that have occurred on your property we would greatly appreciate it if you could provide us with the information.

: RAINFALL DATA:

We want to investigate patterns in rainfall variability within the APNR and are looking for reliable records from as many different locations as possible. In particular we are looking for daily rainfall data. Our thanks to all those who have supplied us with rainfall data. Please let us know if anybody else is able to make such data available.

: GRASS ROOTS EDUCATIONAL PROGRAMME:

We would like three more mattresses for the teacher's chalet. If any of the landowners or share-block owners has an additional gas geyser, we would like to install it at one of the outdoor showers. We appreciate all the donations we have received thus far.

: DONATIONS AND CONTRIBUTIONS:

We are very grateful to all supporters who have submitted photographs and made financial contributions towards the project. Like the four legs of an elephant which hold up the entire bulk of the animal, Save the Elephants has four philosophies on which all its activities are based. These include Research, Community, Protection and Communication. Hence if you would like to make a financial contribution towards the Conservation (Elephant Research) and Community (Kunvelala) Project, you can deposit money into the following account:

Transboundary Elephant Research Programme

Account number 033356165

Standard Bank

Hoedspruit, Branch Code 052752

IBAN: SBZAZAJJ

Please email us at michelephant@worldonline.co.za so that we can send you our registered charity number if you wish to make a tax deductible donation.