



ELEPHANT RESEARCH

– A · P · N · R –

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*This special Christmas edition will be longer than previous **Elephant News** editions. We are delighted to include contributions by APNR occupants in ‘Your thoughts’.*

COLLARING ELEPHANTS IN THE KLASERIE

We commenced our search for Benjamin a week before we were due to fit the collars. The days were long, hot and dusty and the sightings of elephant bulls infrequent. Breeding herds were plentiful and we regularly found them seeking refuge from the heat and dryness in the reedbeds of the Klaserie River. We knew that if we were to fly along this green artery we would be sure to find a family unit which we could collar. But where could we find Benjamin for Stefan Breuer?

Stefan, one of the Klaserie landowners, has shown a great interest in elephants

and their ecology from the outset of the Elephant Research Programme. In 2003 he made a substantial donation toward the project and in August of this year offered to donate a satellite collar to assist us in achieving our research objectives. Tony McClellan, who donated collars for Mac in 2002 as well as Classic and Diney’s collars in May 2004, has once again kindly donated an additional collar for a cow. A third collar was paid for by a number of smaller donations.

In early November Stefan and his family were given the opportunity to participate in a Collaring Safari conducted by the International Wildlife Health Institute (IWHI) in the Klaserie. Stefan also made a

donation for the privilege of participating in the collaring operation. This financial contribution would go directly towards the management of the Klaserie Private Nature Reserve.



Benjamin (Photo: Stefan Breuer)

The excitement was quite tangible when, at 6h00 on Tuesday morning 2nd November 2004, Stefan and his family, Colin Rowles and three of the Klaserie field rangers and Joel Hancock from Limpopo Provincial Nature Conservation met at Makumu in Klaserie to await the helicopter. Steve Henley and I set off from Timbavati with Dr. Cobus Raath and his veterinarian team to join the others in Klaserie. Cobus Raath, wildlife veterinarian for IWHI, offered to conduct the three elephant collaring operations free of charge as a show of support for the Elephant Research Programme in the Associated Private Nature Reserves. Being a project of the UK based charity, Save The Elephants; the Elephant Research Programme is dependent on donations for the collars as well as for the costs of the collaring operations. True to IWHI's

commitment to support the development and funding of research projects that assist in the care and management of wildlife, Cobus will be conducting all future elephant collaring operations free of charge whilst making a financial contribution towards the management of the APNR. This will be achieved by delivering an enjoyable and rewarding experience for participating sponsors.

When the helicopter took off in search of Benjamin, the bull we had earlier identified, Cobus gave a brief description of the procedures involved in a collaring operation. The tension was mounting.



The feisty cow with Colin Rowles and Steve Henley hard at work (Photo: Michelle Henley)

Flying over the dry landscape, scouring the territory for Benjamin, we came across a small breeding herd of elephants and decided to take the opportunity to dart the matriarch. The cow, who proved to be particularly feisty, would be the second cow to be fitted with a collar as part of the

research programme. She fiercely resisted the intervention of the veterinary team, and after darting her we had to work quickly to collar her while she remained upright on her knees in the river bed. After the antidote was administered she moved off slowly, feeling and testing the unfamiliar object around her neck.

The search for Benjamin was then resumed. To the delight of Stefan, the message came through from the pilot that Benjamin had been found. The darting procedures were repeated, this time with relative ease. Benjamin slowly fell onto side on the road. Stefan's wife, Birgit and their children Alexander, Melanie and Christina assisted us in measuring the tusks, shoulder height, back length and feet circumferences of the sleeping giant. The pungent smell of musth hung heavy in the air and added to the sense of awe and strength one gets when so close to a bull. After the collar had been fitted and blood samples collected for DNA analyses, Stefan delivered the antidote.

The sleeping giant rocked himself to his feet and without looking back over his shoulder, ambled off into the bush to be swallowed up by the shimmering heat waves in the distance.



Stefan administering the antidote under the supervision of Dr. Raath (Photo: Michelle Henley)

The last collaring operation also took place on Dundee not far from where Benjamin was collared. Elephant Alex was much younger than Benjamin and was so named by Stefan's son who sat entranced, watching the whole procedure. Unaware that he would be the sixth elephant to be collared for the Elephant Research Programme, Elephant Alex moved off with his satellite collar which will provide us with valuable information on the range behaviour of elephants within the APNR.

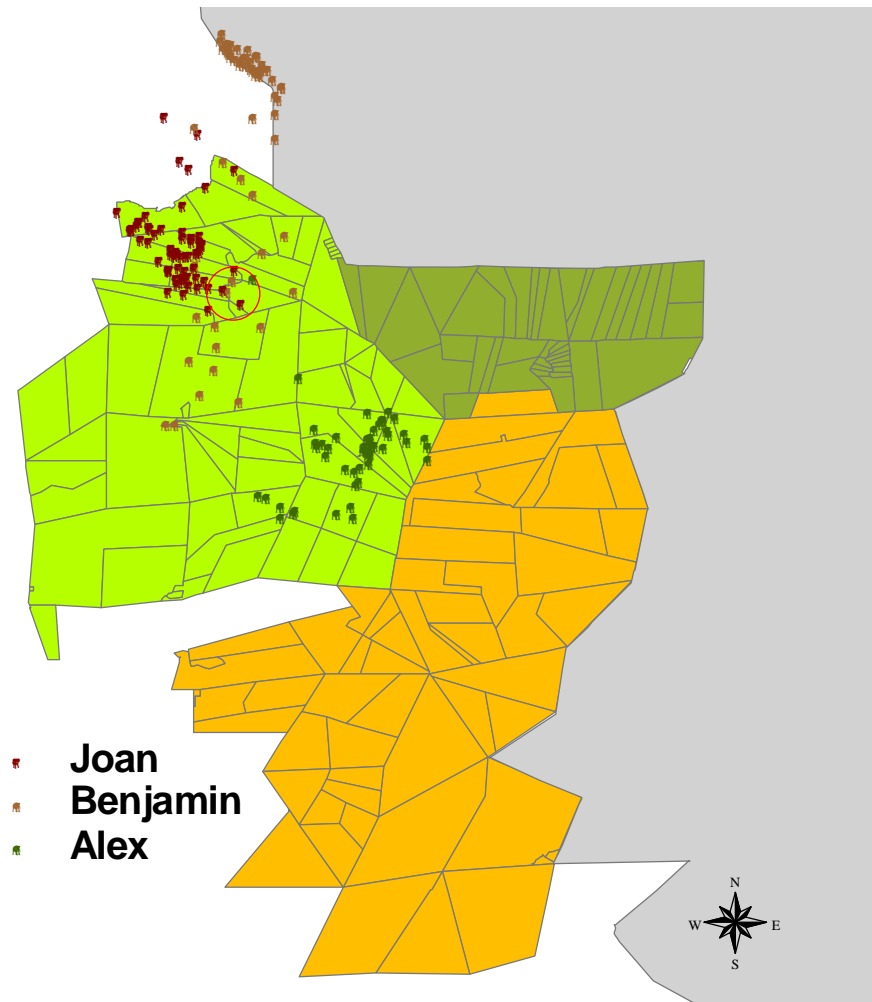
Where are the collared elephants now?

The 3rd of November we set out to establish whether the collared cow had reunited with her calf and family. We were surprised to catch up with her looking very relaxed with her calf at her side at Phalaborwa Mining Company (PMC). The herd is at present slowly making their way south again, and appear to be following the Olifants River course very closely.

After having paced the Kruger National Park fence for more than a week, Benjamin has also moved north since the collaring and is at present on PMC.

Elephant Alex has been reunited with a bull group and has moved south since the collaring operation.

Map of collared elephants



The movement of three of the recently collared elephants. The red circle indicates the collaring location.

Request

This project is dependent on donations and sponsorships. Although Save The Elephants and Tanda Tula Safari Camp have supported this project both financially and logistically, we are still dependent on donations for the duration of the project. As we plan to have 30 elephants satellite collared by 2007, we are in need of funds to manufacture more satellite collars. We would welcome any landowner or company interested in donating a satellite collar. Donations can be made to 'Elephant Research APNR', account number 033356165, Standard Bank, Hoedspruit, Branch Code 052752. Please feel free to contact us at (015) 7930369 or email us at michelephant@worldonline.co.za if you require further information about the project.

Acknowledgements

We would like to thank Stefan Breuer for not only his financial support of the project but also for his enthusiasm and photographs of elephants which he always supplies after a visit to the bush. Birgit, Alexander, Melanie and Christina are thanked for assisting with taking the required measurements of the elephants.

Tony McClellan is thanked for his continued support of the project and for providing the funds for Mac, Classic, Diney and the latest cow's collars. We are very grateful for your contribution.

Dr. Cobus Raath, these operations would not have been possible without your support and the involvement of the IWHI. We look forward to your participation in future collaring events.

We appreciate the participation and support given by Colin Rowles and his competent field rangers. We are grateful for your involvement in the project.

Joel Hancock is thanked for supplying the permits for the collaring operations and for assessing the procedures.

Tim Paxton is thanked for kindly granting us permission and accompanying us to the collared cow on PMC property the day after the collaring operation.

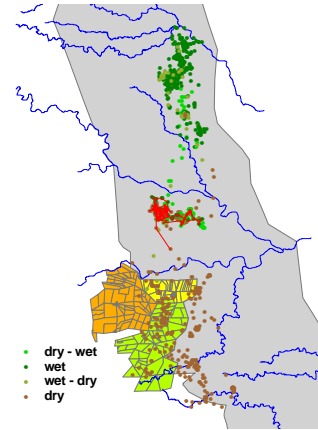
We would like to thank Tanda Tula Safari Camp for providing accommodation for the veterinarian team involved in the collaring operations, and ongoing support for the project.

Where are the other collared elephants?

Mac has slowly started moving north towards Shingwedzi in the Kruger National Park after spending his musth cycle with us in the APNR.



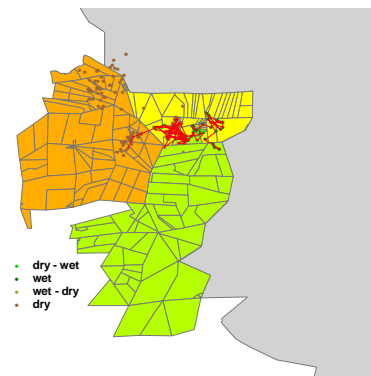
Photo Michelle Henley



Classic has remained in and around Ingwelala and Ntsiri in the Umbabat for his non-musth period.



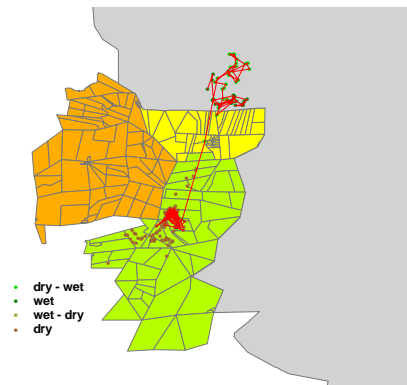
Photo Michelle Henley



Diney has remained in the Kruger National Park after shooting up north when the first rains fell.



Photo Michelle Henley



Your thoughts...

The following letters have been transcribed without alteration.

A Shangaan's perspective

by Tsiwelene (Timbavati)

Over 40 decades ago some of the Shangaan people made their living through hunting game. It was not easy for their children to get a proper education. The only thing that was on their mind was to study the behaviour and tracks of different animals around them.

The following beliefs arose from the Shangaan's close association with the elephants around them:

- * If a person dreamt of elephants in a good mood it was considered a sign from the ancestors. That particular person would experience good luck.
- * When an elephant chased you or showed signs of aggressive behaviour, it was a sign of bad luck.
- * When a cow chased you and raised her forefoot to show you her breast it was a sign of bad luck and one of your family members would probably die.

We consider elephants as the beautiful and calm creatures of this planet. Let us fight against poaching of elephant and save the elephant.

Quote

Shangaan proverb: An elephant's tusks will never be heavier than its owner (where there is a problem, there is a solution).

An experienced guide's perspective

by Rudi Goerke (Klaserie)

This is how I became conscious about elephant awareness and how it influenced my life to a point where I will not live in an environment without the presence of elephants: period! Awareness has taught me to just be, rather than doing. I don't mean inactivity but rather receptive and dynamic alertness, the feeling of sensations and impressions.

I live in the Klaserie where almost each day I interact with elephants and they interact with me. When I first got into this industry, my first reactions were fear because if you are not lucky to interact with them regularly, fear will overwhelm as it did me. Gradually I became more accustomed to them, first within a vehicle and then later on foot.

Further in my career, I was fortunate to take clients into Tembe Elephant Park and the experiences there were overwhelming, terrifying, but also satisfying. I interacted with big tuskers known to be very temperamental but they had a grace of their own, and that's when I started to feel connected with these magnificent animals.

On another occasion in Hluhluwe Umfolozi Game Reserve I had four American clients driving in a double cab Nissan going through a riverbed. I noticed another private vehicle in front of us, reversing down the road, turning around and driving past me. I

wondered what was going on and what popped up around the corner was an old bull of approximately 45 years of age. He was moving at a steady pace down the road towards us. We were the only vehicle, seeing that the others all left. I turned the vehicle off and told the guest to relax. They looked at me with big eyes, as big as saucers. The bull walked straight up to the vehicle and stood smack bang in front of us and sniffed the grill. I suppose he smelt the moisture coming from the radiator and air conditioner. He then dumped about a foot of his trunk on the bonnet and stood dead still, staring at us. I remember one guest trying desperately to connect with his maker, so I told them to relax again. There was a continual clicking sound to my left as one of my passengers were trying to close his window, but unfortunately the ignition was off so his attempts were fruitless. The bull moved to the left side of the vehicle and stopped at the passenger window. He stood there sniffing the passenger door and then moved off. During the sighting my American co-pilot didn't even look at the bull, he was looking at me through the entire happening. I looked back and the other two were dead quiet and stunned. I asked the client next to me why he was looking at me the whole time. He replied quietly that he had heard that whenever he feels he is in trouble he must look at his guide. That is when I realised and confirmed to myself that elephants definitely feel the fear that you are projecting towards them. That is why they act towards humans the way they do. Fear breeds anger, anger breeds hate and hate breeds suffering.

What you resist will persist, a universal fact that should be taken note of. I didn't lose all

my fear of elephants, but by limiting my thoughts of fear for them and using the fear energy to enhance the respect I have for them, I had many invaluable experiences.

"Listen to the voices of nature for it holds treasures for you." -Huron-

Recently I was driving down one of roads to the lodges on our property, when a small *Grevia* branch got stuck under my Land Rover, as they often do. I got out to dislodge the branch. I heard a slight rustle in the bush and saw a bull walk out of the bush about six meters ahead of me. Again my body wanted to go back to the vehicle but my spirit told me to feel the fear, digest it and nurture it. I stood very still. He walked up to me, stopped in front of me and looked at me. I looked into those amazing eyes and something happened. I felt peace come over me, total relaxation. We stood there staring at each other for about five minutes, in total silence. He turned and walked off; I removed the branch and drove off. It was one of the most profound moments in my life.

What a wonderful interaction, as if it was predestined. Don't get me wrong, I have respect for these animals second to none. I always make sure they see me and never approach them. I always wait for them to come to me, giving them the benefit of the doubt. I often find myself having a full on conversation with them, but always with my arms folded, this seems to relax them.

"How we show respect for other living things, they respond with respect for us."
-Arapaho-

They are in our hands. Let us respect and consider them to have as much right as us to live out their lives as we do! I wonder what would happen if the tables were turned. I am sure that culling wouldn't have been an option. I am fortunate to be part of Michelle and Stephen's Elephant research Programme. It is a worthy cause and one that will have a major influence on our attitudes, intuition,

and feelings and drive to help these amazing animals to live out their lives. I've also come to realise that the only predictable thing about wild animals is that they are unpredictable.

"Man did not create the web of life; he is but a strand in it. Whatever man does to the web, he does to himself." -Chief Seattle-

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 focus on an elephant bull named Alpha...



Photo Steve Henley (Klaserie)

Alpha was first sighted on the 21st of November 2004 on the Ross properties in the Klaserie. Although Alpha has smooth ears he is easy to recognise because of his thick ivory and his broken off left tusk. When sighted he was associating with Alex, the recently collared bull and two other bulls named Knobs and Character. As we would like to keep track of this large bull we would appreciate it if you could report any sightings of Alpha to the research office.

FACT-FILE: Elephant ears

Elephant ears can be described as thermal windows because they are effectively used to assist with thermoregulation.

African elephants will start flapping their **ears** at 23°C and at this ambient temperature heat gain from the environment is equivalent to heat loss from the body with the onset of **ear flapping**.

The surface area of the **ears** increases the radiating potential of the animal by as much as 13 -18%.

Heat loss from the **ears** reaches a maximum at a frequency of 25 flaps per minute.

The **ears** can weigh up to 20 kg each.

Blood-flow rate in the **ears** varies between 5-12 litres per minute.

In this study we use the unique pattern of venation, nicks, tears and holes in **elephant ears** to identify individuals.

When temperatures are very high and water scarce, elephants can draw fluid from their stomachs by sticking their trunks into their mouths and then use this liquid to wet behind their **ears** to further promote cooling.

What do bees, wire, chillies and rocks have in common?

Bees, wire, chillies and rocks have one thing in common..... they all represent methods of minimising the risk of elephant damage to aesthetically important trees species.

METHODS OF PROTECTION

Wiring of trees

To place wire netting on trees will cost approximately R20 per tree (excluding labour). This technique has been applied very successfully to prevent the bark-stripping of *Acacia* spp. in East Africa. The wire is almost invisible, especially on dark-stemmed species like knob thorns. Bird wire (13mm mesh, 1.8m tall) is wrapped around the tree trunk about 50cm off the ground to a height of approximately 230cm. On average 1.25m of wire is used per tree. The ends of the netting are stapled on the tree trunk with 25mm wire fencing staples.

Rock packing

Rocks are packed around the base of trees to create an uncomfortable and unstable surface for elephants to tread on. This will potentially prevent them from pushing over a tree. The width of the packed rocks should extend further than 1.5m from the base of the tree. Gaps between the rocks should be smaller than the width of an elephant's foot. Large, irregular rocks should be preferentially used.

Chilli pepper

Dr. Loki Osborn is working with six tamed elephants in Zimbabwe and is using a mixture of chilli and grease which is spread onto tree trunks at tusk height to deter elephants. In Asia fiery rope barriers (ropes soaked in chilli and engine oil) are strung around crops or chillies are burnt with elephant dung to prevent crop raiding.

Bees and trees

In East Africa it has been demonstrated that the aggressive African bee can deter elephants from damaging the vegetation and trees which house their hives. It is argued that bees can be employed profitably to protect not only selected trees but also specific areas from elephant damage (Vollrath & Douglas-Hamilton 2002).

THE IMPORTANCE OF PROTECTING TREES

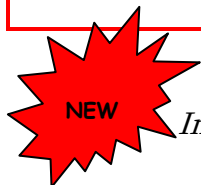
- Various large trees around camps and lodges are of aesthetic importance to landowners and managers. Protecting these individuals would ensure the maintenance of the aesthetic features of the landscape.
- Protecting numerous trees within a relatively small area would create localised woodland refugia that would maintain the structural diversity of the landscape and prevent biodiversity loss at a larger scale.
- Woodland refugia may function as important seed reserves for future recolonisation of other areas.

ACKNOWLEDGEMENTS

We would like to thank Paul de Luca, Nick and Timothy Hancock, Koos Malan, Neil Malan, Carl van der Berg for their interest and/or financial support for this part of the project. If you would like to make a contribution to this study (financial or material) or find out more about it – give us a call.

OUR NEXT NEWSLETTER.....

*In the next issue of **Elephant News** we will look at elephant conservation elsewhere in Africa and how our programme slots into the bigger picture.*



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 the collection of 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 so that we can make an arrangement. If you are interested in ordering an identification kit, email us as soon as possible.

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.

ELEPHANT MORTALITIES:

We are trying to piece together a map of all natural mortalities of elephants within the region. If you have ANY historic information of elephant deaths that 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 as such are looking for reliable records from as many different locations as possible. In particular we are looking for daily rainfall data. We would like to thank all the people that have supplied us with rainfall data and would ask if there is anybody else who would be prepared to make such data available.

DONATIONS AND SPONSORSHIPS:

The following people and organisations are thanked for their logistical support:

We would like to acknowledge the wardens, Errol Pietersen, Scott Ronaldson and Colin Rowles, for their logistic support of the project. Save The Elephants and David and Marlene McCay from Tanda Tula Safari Camp are thanked for their financial and logistical support of the project as well as their enthusiasm for elephant conservation. Paul & Rose White and Michèle Pietersen are thanked for never failing to provide assistance when ever it was needed. Giles King and other staff members at Tanda Tula Safari Camp are thanked for their support. A very special word of thanks to Mandy Alting for keeping the books of the Elephant Research Programme.

The following people are thanked for their financial support:

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We appreciate all the photographs and ear patterns collected from the following people:

Andrew & Mette Rossaak; Cathy Greyling; Chris Hall; Colin Rowles; Dale Jackson; Frankie Berndt; Gustav Roux; George Piel; Hannes Zowitsky; Joe Brady; John & Keeley Clack; Brian & Claire Makare; John Nicholson; Keith Jenkins; Les Penfold; Martin Stone; Neil Malan; Patrick O' Brian; Rodney Topham; Rudi Goerke; Sidney Rebe; Stefan Breuer; Theresa McDonald and Yuval Erlich.