

Elephants *for* Africa



Conservation through research and education

Elephant Tales Newsletter Issue 24



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Welcome to EfA - Jess Isden



Elephants for Africa is currently based in the Boteti River region of the Makgadikgadi Pans National Park. We are focusing on increasing our understanding of male elephant behaviour and our new community project, launched in June, aims to increase coexistence between farmers and wildlife.

We are now coming to the end of the dry season, and temperatures have soared in the past two months. Following a wet season that was significantly below average rainfall, this dry season has been a long struggle for many; both the wildlife and the farmers are now desperate for the rains to arrive. Despite this, we have been kept extremely busy in the last six months and have made significant progress towards our long-term goals.

Here you will find updates on the research currently being conducted inside the national park, and will be introduced to the members of our field team. Founded by Dr Kate Evans in 2007, EfA is currently a dynamic mix of researchers, students and volunteers.

The team in the field is led by me, Dr Jess Isden. I am the project manager and I divide my time between the scientific and community projects. I have especially enjoyed getting to know the children of Khumaga Primary School's Environmental Club. Our community project is being delivered by Community Officer, Mankind Molosiwa.

Mankind is a farmer who has experienced the devastating effects that elephants can have on crops and infrastructure. His passion for both farming and wildlife makes him the ideal person to lead our human-elephant conflict mitigation workshops.

James Stevens, our PhD student, is about to embark on his third and final data collection season in Botswana. He will be gathering important information on elephant crop-raiding behaviour.

Masters' student Connie Allen is focusing on the social behaviour of males at the river. Finally our two volunteer research assistants, Helen Shaw and Aaron Kerr, are almost halfway through their year-long commitment to EfA, and are making huge progress with our camera-trap survey as well as finding time to appreciate the smaller critters of the Makgadikgadi.

If you would like to find out more about our work visit our website, find us on facebook or look out for our research vehicle in the national park and say hello!



Community Conservation in Action - Jess Isden



In June, we launched a new human-elephant conflict mitigation programme. This aims to empower local farmers in the village of Khumaga with the tools and knowledge that is necessary to reduce crop-raiding incidents. Integral to our programme was the appointment of community officer, Mankind Molosiwa. Mankind is himself a farmer and a former wildlife officer, which makes him the ideal person to help us deliver an effective programme.

The foundations for this project were based upon work done by James Stevens. Mankind's role over the first few months was to help us assess each individual farmer's needs and summarise our main actions going forward.

It became clear that many farmers lacked the basic understanding of elephants and how to keep themselves and their property safe when living alongside these enormous creatures. Therefore there is an urgent need to provide accessible information to farmers.

Whilst our education is free and open to everyone, we work closely with ten farmers who are all keen to conserve the wildlife that their country is famous for, but at the same time must produce enough on their farms to support their families. Many of them are female, because it is often the men who move away to search for alternative employment opportunities.

Some are keen young entrepreneurs, who are not satisfied with following the traditional ways of life

and are looking for new opportunities to earn a living. For example, Tatani has taught herself how to keep bees, and now supplements her income from crops with honey sales. Many are semi-retired, having returned to the family farm after working in other jobs, such as mining, construction and business. Our oldest farmer is a spritely 81 year old!

Our mission over the last six months has been to develop a relationship with these farmers, and to listen to their thoughts and experiences about rural farming here. Having Mankind on board has greatly accelerated that process, and in September we held our first conflict mitigation workshop, in partnership with the Department of Wildlife and National Parks (DWNP).



Community Conservation continued...



This two-day workshop was well attended. The farmers learned about how capsaicin (the 'heat' within chilli pepper) can be used as a harmless deterrent against elephants, who have a sense of smell one thousand times stronger than us.

Practical demonstrations included setting up a double wire rail around the field, which chilli-soaked rags can be hung on. The smell of chilli deters elephants from approaching the field.

Mankind has followed up on this with a series of mini-workshops. These are held at individual farmers' fields, with small numbers of neighbouring farmers so that discussions can flow freely and there is plenty of time for questions.

So far more than forty farmers have attended these informal mini-workshops, and demand is continually growing.

Over the next season we hope to test new ideas for conflict mitigation, including many that the farmers themselves have devised but have so far not had the support or materials to implement.

Working together as a community, we hope that EfA and the farmers can soon share our success stories, and continue to empower local people with the knowledge they need to coexist with wildlife.

**These images show the farmers protecting themselves from the burning effects of chilli peppers*



Project Update - James Stevens



I have just started the third year of my PhD studies, investigating human-elephant conflict in the Boteti region. Having just returned to Botswana for my final field season, it was a shock coming from the UK winter to full-on Botswana summer; I'm struggling with the heat already!

In November, Botswana's State of the Nation Address reported that in 2015 the country had suffered drought and major crop failures. It amazes me that people are able to farm in sandy soil, but to then farm during a drought just demonstrates the resilience of some of these crops and the farmers themselves. Mankind's field was a perfect example and when visiting in February you could have mistaken his field for being watered on a daily basis. It is through hard work and applying simple techniques that fields in this region are able to reach this stage. We hope that as EfA's Community Officer, Mankind is able to pass on this information to other farmers in the region.

The predicted rainfall this year is not looking promising, with possibly a second year of drought. Hopefully the local farmers will still try ploughing their field, having seen the success of other farmers last year. I will be attending crop-raiding events because they may demonstrate the demographics of elephants involved in crop-raiding and could identify any patterns to the raids.

I will also be exploring a new avenue of research this year which I am excited about. Having now spent two years walking around in circles tracking elephant movement in fields, I am hoping to investigate these movement patterns both inside fields and on the way to fields. I had previously

tracked elephant movement through the fields to determine how much damage was being caused but found that I was not recording as much damage as I would have expected.

It is important to know whether they are walking randomly through the field or maybe targeting certain areas in the field and possibly the crops. This is the same for tracking elephant movement towards the field; are they coming across the field randomly or targeting it? If we know why the elephants are selecting a potentially dangerous foraging strategy for little gains it would help us to understand why elephants are leaving the safety of national parks in search of food.

I am also really excited to be helping with our new Community Education Project. This provides farmers in the region with knowledge about mitigation strategies and farming practices, assisting with these strategies and becoming involved in the local school's Environment Club.



Conservation in the Classroom - Jess Isden



Khumaga Primary School is near to our research camp. The EfA team have linked with the school to provide a monthly class with their Environmental Club, which is attended by almost fifty 7-11yr old pupils. We want to introduce the children and teachers to the principles of wild animal ecology, and to offer the chance to experience wildlife in a positive way.

Sadly, often the only interactions these communities have with wildlife are negative: scary encounters, raiding crops or damaging infrastructure. We aim to provide every pupil with at least one day trip into the national park. Despite being on their doorstep, many villagers have never been given the chance to visit.

We are providing a series of educational games and activities to help encourage positive attitudes towards conservation. These classes began in June this year, and initially gave us the opportunity to find out what the pupils already knew. They are enthusiastic about sharing their experiences of elephants with us: "elephants are the largest land mammal" they are all keen to tell me. One nine-year old pupil told me that "elephants can eat everything on a farm, even the goats!"

Our third class coincided with World Elephant Day. This seemed like a good opportunity to address the most common question we are asked: "how can you keep an elephant away from your fields and cattle posts?" One little boy then responds: "can you take all the elephants back to England and keep them there?"

It was time to leave the classroom and learn about some more practical solutions! With the kids we made the short, dusty walk along the river bank from the school to the DWNP compound. Here, chilli pepper is grown in three large shade-net enclosures, and the harvested chilli is dried and crushed. Elephants dislike chilli pepper, and once crushed it can be used to make bricks for burning and can be smeared onto rags to hang on fences around the farm.

The pupils were given a guided tour of the growing plots and drying area. They then had some hands-on experience in making their own chilli brick. The crushed chilli is combined with dried dung and oil, which is packed into a bucket and tipped out to dry in the sun.

With a light breeze blowing through the compound, soon everyone is sneezing and coughing, providing a good, if somewhat uncomfortable, example of how effective chilli dust can be! "Imagine if your nose was one thousand times more sensitive, do you think you might turn and go the other way?" I ask. Vigorous nods all round suggest that the message has been delivered.

After the demonstration we discuss whether the Environmental Club would like to grow their own chilli at the school and teach other pupils and parents about its use. Whilst the teachers are mildly worried about chili ending up in the school dinners, the suggestion is met with enthusiasm. We look forward to sharing the experiences of the school as they build their own chilli pepper plot in 2016.

The Importance of Social Resources in Male Elephant Societies - Connie Allen



A major focus of EfA's research is to further our understanding of male African elephant social dynamics. Whilst there is bountiful wisdom concerning the sociality of female breeding herds, bull society is a less understood world.

The riverbanks of the Boteti River in the national park are an ideal location to study such questions. We think that the river acts as not only an important physical resource for elephants, but also as a social resource. The park's predominantly male population congregates in large numbers at certain 'hotspots' along the river, to interact with each other, test relationships and form new bonds.

I joined the EfA team in October to study the social interactions that are occurring at the river as part of my MSc with the University of Bristol. Whilst the structure of bull society is no doubt highly complex, my project will begin to tease apart and find patterns in terms of ages that interact, and the nature of such interactions.

The study will help EfA gain insight into many questions such as whether younger males try to associate with older elephants to gain ecological knowledge; whether older elephants show tolerance or are aggressive towards these younger followers; and whether the elephants use the river as a location for gaining new social partners. The research is fascinating, and I have quickly become enthralled by the intricacy of bull elephant society.

Methods of the project involve sitting at the riverfront and following a focal elephant within a certain age category, monitoring all interactions and behaviours from time of arrival to time of departure, as well as recording the age composition of the group the focal elephant arrives and leaves with.

We use a video camera to capture this individual's behaviour, so that we can later analyse it in more detail. How long does each one spend engaged in certain types of activities, who are the focal elephant's neighbours, and how synchronized are particular behaviours?

Tracking a single elephant with the video camera whilst he is in the midst of play-fighting in the river with six other bulls can be a challenge.

It is a peculiar sensation, as well as extremely humbling, to sit as an outsider watching such an impressive, socially complex animal, trying to grasp some understanding of what is going on in their world.

All in all I feel extremely fortunate to be here studying such an iconic and valuable species. Not only because it is endangered and has an uncertain future, but also because it is famed for exceptional social intelligence.

Camera Traps to Explore Elephant Highway Use - Helen Shaw

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In today's technology-driven world, data on wild animals can be collected on a near-continuous and non-invasive way like never before. We are using eight motion-sensing camera-traps, which were kindly donated to us by Memphis Zoo. Our cameras are situated in eight different locations throughout the park and have been recording animal movements since 2013. Part of my role as a long-term research assistant is to help collate and analyse this unique dataset.

After 18 years being dry, the water returned to the Boteti River in 2009. This saw an influx of wildlife back into the national park. The camera-traps are now helping us to understand the extent of these animal movements, particularly when it comes to species frequencies and activity patterns.

We are particularly interested in what animals make use of elephant highways (well-trodden tracks that navigate through the bush). Elephants use these highways to reach the river, where they can drink and socialise, but who else takes advantage of these clear open paths, and who avoids them?

EfA have a large collection of camera-trap images from which such investigations are possible. The project I am working on aims to determine the frequency that different species use these highways, and to look for patterns. Do certain species mainly use the tracks at night, and others during the day? Is there a mix of species or is it predominantly predators that make use of established tracks?

The camera-trap project will also look more specifically at elephant patterns, how different sizes or certain groups make use of highways. There are many factors that may be influencing the use of highways, such as the season, time of day, food resources nearby and shelter.

With regard to elephant group dynamics, the ages of who another elephant is travelling with could give us clues as to how knowledge is transferred between individuals. Younger bulls may follow the older more experienced bulls along such paths and thereby learn navigation routes.

I hope that my contribution to data analysis with EfA can be used to help build up a picture of what is happening in this ecosystem. This information can also be used to interpret and support other elephant populations and ecosystems. I also hope that this information can be useful in wildlife and national park management, which will enable effective management strategies to be put in place. My target for the forthcoming months will be to start analysing the data and answering some of the fundamental questions regarding how highways are used in the Boteti River area.



Fundraising News - Kate Evans



Some of our creative supporters have gone out of their way to put their talents towards supporting our work and we would particularly like to highlight the dedication and efforts of Susan Jane Lees and the Memphis Zoo.

Susan is a wildlife artist of extraordinary talent; she has been working tirelessly on her *In the Footsteps of Elephants* exhibition since visiting our camp in 2011.

Thanks to the support of the *Nature in Art Gallery and Museum* in Gloucestershire, we had a wonderful launch evening on the 11th September and the exhibition was open for wildlife and art enthusiasts for three weeks.

Kate hosted an EleFun day at the museum for children to learn about tracking and identifying elephants, as well as getting expert tuition from Susan on drawing elephants.

50% of the proceeds were donated to EfA and over £3300.00 was raised. This has already purchased a boat which will enable our research team to travel across the Boteti River that separates the research camp from the village of Khumaga, where much of our outreach work is based.

Until now we have had to pay to take the ferry, or the kind Department of Wildlife and National Parks have given us lifts when they cross. We are currently waiting for the boat to be delivered to camp where it will be put into service immediately.



There are some original paintings still available to purchase so please get in touch via info@elephantsforafrica.org for more information.

The Memphis Zoo in America hosted its 4th annual *Art for Elephants* fundraiser where many local artists donated pieces for auction. After presentations from Kate Evans and elephant keepers Amanda Hadicke and Thomas Ried, the auction was open and the bids kept coming until the final call, which raised over \$5000.00.

During the event one of the artists, Josh Strydom, was available to explain the processes he undertook to turn elephant dung into his two beautiful pieces that told fables from his homeland of Zimbabwe.

A huge thank you to Amanda and the Memphis Zoo team who put so much effort into making this event a great day for everyone and a wonderful fundraising awareness event for the charity.



Appreciating the Large and Small - Aaron Kerr



Working as a research assistant who exclusively studies elephants, it can be easy to lose sight of the biodiversity that is ever present within the park. I have been here for 5 months through some extremely hot weather conditions and have seen a drastic transformation. The river, once high and mighty when I first arrived, has now dwindled to a slow trickle. The vegetation has been through a shift; once lush and bountiful greenery has rescinded to a withered yellow, thirsty for water and rain.

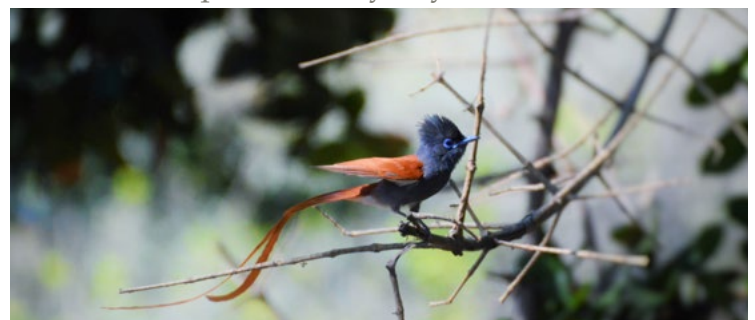
The animal numbers have also fluctuated greatly during these few months. Some of the larger species disappeared for a large period of time to suddenly return; and smaller animals, such as birds and insects, have started to arrive in their droves in the anticipation of rain. The wet season sparks the beginning of the breeding season for many species, but for now everything is waiting for the rains to arrive.

Since the work that we conduct in the Makgadikgadi revolves around understanding more about the behaviour of elephants in the park, at times it can be tough to remember the roles that are played throughout the eco-system and the depth of biodiversity that is on display each day. As we seek out elephants it can be hard to take a moment and truly comprehend the majesty that is nature at work.

As time has gone on, the image of a zebra trotting across the road, a giraffe leisurely stooping to eat, or a pied kingfisher torpedoing through the surface of the river to grab a snack, are the kinds of things that can, over time, degrade as they become mundane and regular events.

Since we have begun utilising video technology as a method of research, it has given us all the chance to stop and watch what is happening in the park rather than passing by in the moving vehicle as we drive our routes. For instance, what may seem to be an innocuous tree or bush can sometimes harbour birds, reptiles or mammals hiding there, which otherwise may have gone unnoticed. These are the unsung species of a park that may not get the same recognition as the larger animals that conspicuously roam the land.

The biodiversity that is seen in this park on a day to day basis is utterly astounding. Sometimes you just have to stop and watch to truly appreciate what nature accomplishes every day.





How to Donate:

Should you wish to make a donation, you can do this online through BT's MyDonate page:

<https://mydonate.bt.com/charities/elephantsforafrica>

Or you can pay directly to our bank account, please contact us for details.

We accept cheques made payable to:

Elephants for Africa

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Our facebook page

If you enjoy regular updates from the field, please 'like' our page:

<https://www.facebook.com/elephantsforafrica>

Recycle Mobile Phones

If you have recently purchased a new phone or a PDA, remember to recycle your old ones by sending them to us at the above address.

Donation Wish List:

- £10 - will supply a farmer with the protective clothing they need to work with chilli pepper
- £20 - A pair of children's binoculars
- £45 - Delivery of a class to Environmental Club
- £50 - Teacher visit to the National Park
- £100 - Take ten pupils in to the park for one day
- £250 - Installation of a nature garden at a local primary school
- £200 - Delivery of a workshop to a community
- £250 - Camera trap for monitoring biodiversity
- £400 - Equipment box for Environmental Club
- £2000 - Production of 'Living With' workshop video to donate to the communities

Special Thanks to:

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