

ANNUAL REPORT 2007/2008

**15 Years of
SAVE THE ELEPHANTS**



SAVE THE ELEPHANTS

Letter from the Founder



Photo credit, above and cover: Michael Nichols, National Geographic Magazine

After a rocky start to 2008 with intense political unrest following the Kenya elections, the country calmed down and the work of Save the Elephants in Northern Kenya has continued uninterrupted. In the last year we have seen exceptional media coverage for the elephants of Samburu and Buffalo Springs with an article in National Geographic and a three part BBC television series. Our Samburu field team has helped writers, photographers and a camera team access extraordinary elephant behaviour of well protected elephants exhibiting a full range of elephant emotions not dominated by fear, as is usual elsewhere. This coverage will help bring the elephants' way of life and their problems to a wide international audience, an essential element of raising consciousness.

In total contrast the Mali elephants eke out their existence in the arid Sahel, where we tagged nine elephants that have already gone half way round their annual migration as we go to press. They are governed by the seasons on when to move and where to find food and water for survival. Megabytes of new information now bring promise of better planning for their survival to the Malian Directorate of Nature Conservation. Our radio tracking expertise is also being shared with colleagues working on other species in northern Kenya, under the JRS project, and our results from the four regions of Africa of elephants in desert, forest, bushveld and savannah are being analysed with help from Oxford University.

Our close collaboration with the Kenya Wildlife Service is contributing to their new elephant strategy and to monitoring the illegal killing of elephants (MIKE). Sadly this is our last year of Onesmas Kahindi's involvement. We wish Onesmas well in the future career path he has chosen, after his outstanding work of the last nine years with STE, especially on MIKE. The data he collected now allows us to analyse the shifting threats of ivory poachers from year to year. The threat from the ivory trade has renewed across Africa with an increase in the price of ivory. Prospects are worsening as traders' interest has been sparked by the CITES decision to allow the selling of Southern African ivory stockpiles. It is crucial that the 9 year moratorium on trade agreed to follow this sale is effectively upheld.

In the pages that follow, our scientists and field staff have once again told the stories of all our activities, from elephant bee deterrents to sophisticated tracking, from geofencing to the analysis of ranging behaviour, DNA and hormones. Our senior scientists have continued to produce a series of high level scientific publications. In education we are supporting students from PhD level to primary schools, with a bulk of students at secondary level in Kenyan schools. I am enormously grateful for all these efforts and for the courage so often shown in the field by our field team.

We have always been interested in elephant choices and decision making and this year I experienced a choice made by one elephant, Diana, of the Royals. In January she chased me on foot, caught me with her trunk and threw me to the ground. As I stared up at her chest from under her legs I was acutely aware that my life depended on the decision she would make next. Luckily for me, the lady changed her mind or perhaps never was intending any serious harm. After gently (for an elephant) cuffing me with her front legs she left me totally unscathed. If she meant it as a threat display it was an unforgettable lesson, but, if it was an active change of choice, then all I can say is I am grateful for that.

We remain grateful as guests of the Samburu and Isiolo county councils in our core study area, and for support from the Kenya Wildlife Service. Finally, I thank with deepest sincerity, our donors for their crucial support in a world that is constantly changing and challenging for elephants, their environment, and the people with whom they live. We urgently need your support while there is still time to build a stable future for all of these living beings.

Samburu, August 31st. 2008

Iain Douglas-Hamilton

Chairman's Report



This last year has seen much hard work as well as high drama. Of the latter we had perhaps more than the typical share for STE.

As to some of our hard work, let's take for example our long term monitoring of the Samburu elephant population, that continues to be the keystone of all of STE's efforts in Kenya.

Interestingly, a recent collaring operation in Marsabit, way north of Samburu, demonstrated active links between the two populations. We had suspected as much, indeed made it the basis of our original proposal to study the Marsabit elephants, and are therefore delighted that the study - so generously funded by the late Paul van Vlissingen of the Africa Parks Foundation - was able to show this crucial inter-connectivity. Whilst this existing link is important for the health of both elephant populations, as it allows not only gene flow between them but also immigration, it is vital for the Marsabit elephants, which are under

great threat. One Marsabit bull made the trip south in two and a half days, all 200 km of it, presumably to introduce himself to the illustrious females of Samburu. The return trip, three days later, took him 14 days - perhaps a sign of success of his sojourn?

Jake Wall and David Daballen, together with a team from National Geographic tried to emulate the Marsabit bull's fast streak, but took twice as long, in an epic journey. This shows the tremendous stamina of a bull elephant on a mission, and the significance elephants can give to migratory excursions.

This year National Geographic was an important visitor to our Samburu camp, as was the BBC, both preparing stories on STE and its many interactions with the Ewaso elephants. During one of these visits when out with the writer David Quammen, Iain must have somehow (impromptu and unscripted) annoyed Diana, one of the 'Royal' family, who then set out to school him on the appropriate level of deference due her and her kin. To great effect, apparently. We must all be exceedingly grateful to Diana that she deigned to show right regal restraint and most noble consideration.

Another highlight of the year was the Mali operation, which, despite several dramatic incidences and events, proved highly successful thanks to superb preparation and excellent logistics.

Last but not least, we are very happy to finally have started on the journey to integrate our Samburu/Laikipia elephant database with data from other animals with the long term view of a comprehensive conservation strategy for the wider Ewaso Watershed Ecosystem. Towards this end we are generously supported by a grant from the JRS Biodiversity Foundation and, again, by Michael Joseph and Safaricom as well as, of course, our long-standing partners the Kenyan Wildlife Services. In this context I want to also thank the Mpala Research Centre and its stimulating director Dr Margaret Kinnaird for unwavering support in this goal, which will be key for the sustainable management of this important African ecosystem.

Enough now from me. It would be best if you read for yourself the various reports in this annual review, to fully appreciate the enormous scope of our operations, and the value they bring to elephant research and conservation.

Oxford, August 26th. 2008

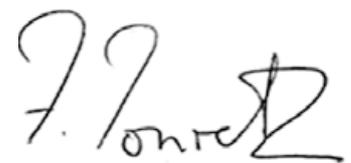


Photo credit: Michael Nichols, National Geographic Magazine



Photo credit: Michael Nichols, National Geographic Magazine

Long Term Monitoring (LTM)

Long Term Monitoring (LTM) of known individuals is conducted mainly in three National Reserves in Northern Kenya. Samburu, Buffalo Springs and Shaba, and less frequently in the adjacent community conservation areas.

Some of these elephants, including both bulls and family groups, have large ranges and may disappear from our records for months or years. However, as soon as they reappear within the LTM area, we become aware of their presence and are able to update our records of them.

For example, Rommel is one of our infamous bulls, who once destroyed one of our field research cars. He recently reappeared after four and a half years outside the LTM area. The few previous times that he has been sighted in the Reserves have been after the rains when he is in musth and sexually active. Clearly, Rommel has chosen Samburu as one of his places to look for mates. When he was first sighted coming back into the Reserve Rommel had both of his tusks. On the day that Rommel returned, Saba and Daniel Lentipo witnessed him fighting with Beethoven, another large bull also in musth, who lost. Rommel must have cracked his tusk in the fight or later that night in a second flight with a bull called Kahawa, as by the following morning he had lost one of his tusks.

The second big surprise was a female who was collared two years ago in Sera, in one of the extremely wild northern community conservation areas. As a result none of us really

knew this female personally, but we were familiar with her movements on our tracking system.

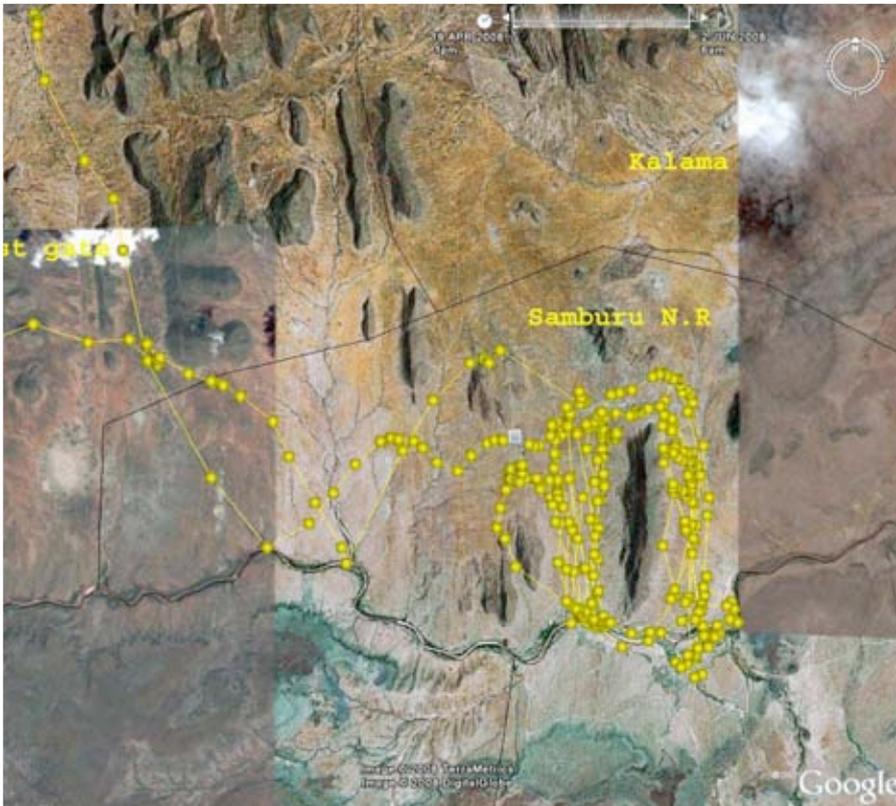
In May this year, we watched Sera coming slowly into the Reserve, after several days of remaining on the edge of it. She finally made it into the central part near Koitogor. Gilbert Sabinga watched Sera enter the reserve on our tracking system and kept us updated by radio on an hourly basis until we found her with a group. They were quite nervous so we kept our distance as we were very keen to observe her for a while. Much to our surprise, Sera was with a well known sporadic family called the Cheeses! Gouda was clearly visible and there were many more in the thickets.

Ian Craig from Lewa and Dr Henrik Rasmussen were both involved in putting the collar on Sera and couldn't believe it when they heard that we had found her again. We are very lucky to be able to gather information on all collared individuals whenever they pass through the reserve, no matter how long they have stayed away.

That is why we like to think of the Reserves as being like a net catching all the individuals who use this ecosystem. If doesn't matter how long they have been away for, so long as they pass through from time to time the LTM team will catch them!

Long Term Monitoring is conducted in three reserves: Samburu, Buffalo Springs and Shaba, and monitors over 950 known elephants

David Daballen and Gilbert Sabinga



Sera coming into Samburu for the first time ever since she was collared



Rommel in full musth, fresh from a fight where he lost his right tusk



Juliet of the Shakespeare ladies, one of our more aggressive matriarchs

Tracking Animals for Conservation

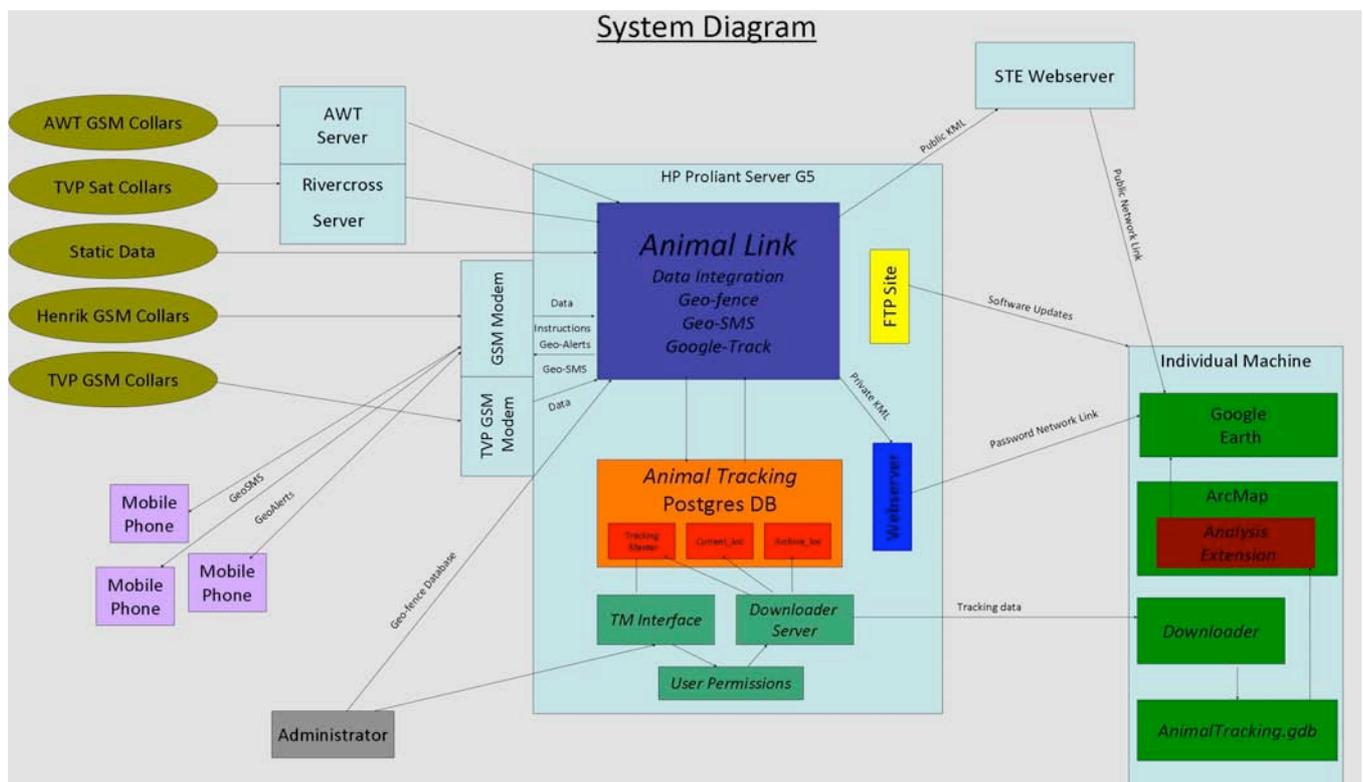
This past year has seen great progress with the STE Animal Tracking database system. A new server was purchased and is housed at Safaricom House in Nairobi with good power supplies and internet. Software developed by Jake Wall, based on the former Tembolink program (written by David Gachuche), has introduced several new capabilities including Geofencing and GeoSMS technology as well as incorporating several new collar types. This has only been possible through the generous donation of ESRI (Economic and Social Research Institute) software. The new software allows the use of cell phones to receive alerts and to query locations from the server using simple text messaging. When used in conjunction with a handheld GPS, the system allows real-time tracking of elephants while operating in the field.

The database has now been expanded to include elephants from across Africa including Mali, South Africa, Gabon,

Congo and Kenya. Currently the database is housing 1.7 million data points collected over the last 10 years of GPS tracking.

Google Earth tracking continues to be useful due to it's ease of use. Daily updates on the status of the collared elephants are produced by Gilbert from the research camp in Samburu. Many collaborators across Kenya are now using our Google tracking system and this was also recently introduced to the Associated Private Nature Reserves (APNR) and Kruger National Park staff in South Africa.

Rivercross, led by David Gachuche, continues to maintain and further develop the 'Downloader' software which allows users to download entire datasets remotely. The STE Analyst extension for ArcGIS written by Jake then provides filtering and analysis tools which make working with the tracking data much simpler.



Jake Wall

Elephants and Bees Project



Resilience looking towards bee sounds



Women constructing beehive fence



Monitoring hive occupation rates

This last year has seen some exciting discoveries and developments in our unique elephants and bees project based in Samburu-Laikipia district in Northern Kenya. The project is exploring the potential of using African honeybees as a natural eco-deterrent for crop-raiding elephants. Early results have been extremely promising.

In October 2007 our published work “*African elephants run from the sound of disturbed bees*” received an extraordinary amount of attention from the world press with most of the main UK and US newspapers carrying the story. As a DPhil researcher for STE, I was interviewed on Discovery Channel and BBC News 24 as well as a dozen radio programmes. The concept of using tiny little bees to deter large elephants has certainly captured people’s imagination and now STE’s scientific evidence is building. Bees could be a new tool in the box of deterrents, also being socially and economically viable to rural African farmers.

The project had an enjoyable boost in February 2008 with a collaborative visit from Dr Joseph Soltis from Disney’s Bioacoustic Team. Joseph and I spent a month with the Samburu elephants recording hours of data trying to understand how elephants communicate about the threat of bees. It was an eventful and exciting month with most of the expensive sound recording equipment surviving despite

having one super-sensitive microphone kicked around like a football by an over enthusiastic young bull elephant.

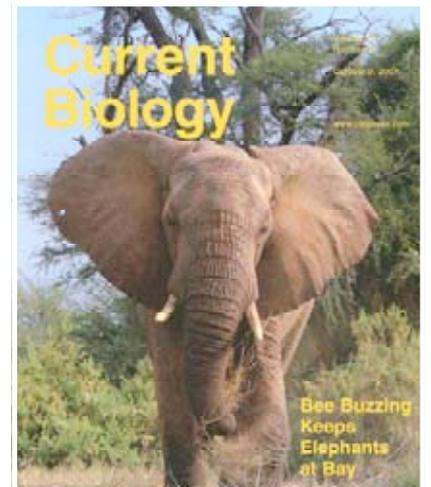
The research is now maturing and a large scale experimental trial is underway testing the use of beehive fences around fields of farmer’s crops. Our collar tracking data has shown that a lot of our Samburu study elephants migrate south towards Meru National Park and the Attan Swamps. At the heart of this migration route lies the rural community of Ngare Mara. The people of Ngare Mara are extremely poor and are trying to grow maize, potatoes and beans to provide a stable diet. These crop fields are regularly raided by elephants migrating through the area which cause serious damage to the crops and endanger people’s lives. In turn, this has led to some elephant fatalities due to increasing conflict. This community has become the focus of the large scale trial of the beehive fence project by Save the Elephants to see if it can help deter elephants and provide an income to the community through the sale of honey and bee products.

If you would like any more information about the Elephants and Bees project or if you are able to help sponsor some of the research expenses please email lucy@savetheelephants.org.

Lucy King

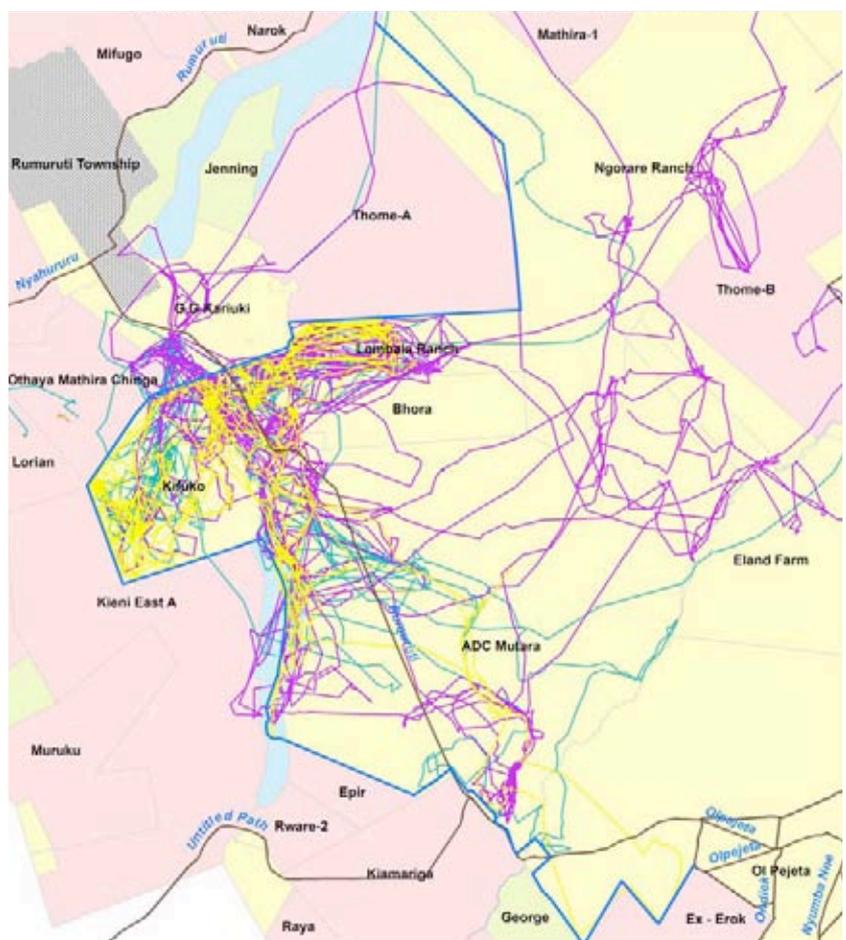


Photo: Lucy King with Joseph Soltis (Disney), Iain Douglas-Hamilton, Fritz Vollrath and STE staff. Right: Current Biology cover:



King, L.E., Douglas-Hamilton, I, Vollrath, F. (2007) African elephants run from the sound of disturbed bees. Current Biology 17, P832-P833, October 9th.

Geofencing



Top left: The new Laikipia fence

Bottom left: Kimani in front of the Laikipia fence

Right: Bright blue line shows the new fence line in Laikipia which has clearly affected elephant movements, shown in yellow, purple and blue

Electric fencing can act as a deterrent to crop raiding elephants, but elephants have shown ingenious tactics to cross them. STE is developing geofencing which enables us to program the GPS positions of a virtual fence line into the tracking collars of crop raiding elephants. When an elephant passes through a designated no-go zone an SMS text message can be sent to local wildlife enforcement officers or registered farmers who can drive the elephant away from crops & community farms, thereby reducing conflict, damage and fatalities. Since most raids take place in the dead of night when people are asleep, a little forewarning allows the communities to take action and drive off the raiders.

This year STE made new advances with geofencing technology. We have developed our own in-house system that allows us to customize geofences and the type of alert messages we receive. Ten elephants are actively being geofenced with the aim of expanding this to include several newly identified crop-raiders in Laikipia. In addition, Barnerd, in collaboration with the Laikipia Wildlife Forum (LWF), has made accurate maps around Ol Jogi ranch and along the new Southern Laikipia elephant boundary. The latter is intended to prevent elephants from entering the

small holdings. The new maps are being incorporated into the geofence system.

In this mapping the type, number of wire strands, date of construction, height of each fence and the location of every pole was recorded.

Save the Elephants is eager to explore solutions to Human Elephant Conflict in the Samburu-Laikipia Ecosystem by looking at the effect of the new fence lines in relation to elephant movements. In 2007, Save the Elephants developed a virtual elephant fence around Ol Pejeta and Ol Jogi. The fence was placed around, and coincides with, the actual boundary fence on the properties. When a collared elephant passes through it, a SMS message is sent to the management teams. A repeat offender, a bull named Kimani, learnt quickly that the unwelcome reception he experienced each time he tried to leave Ol Pejeta made the tempting crops a no-go-zone.

In as much as the fence line is keeping elephants away from the farms, the movements of five elephants (Ukuta, Genghis Khan, Morani, Ol Ari Nyiro and Mpala) shows the possible impact to the habitat in which they are confined.

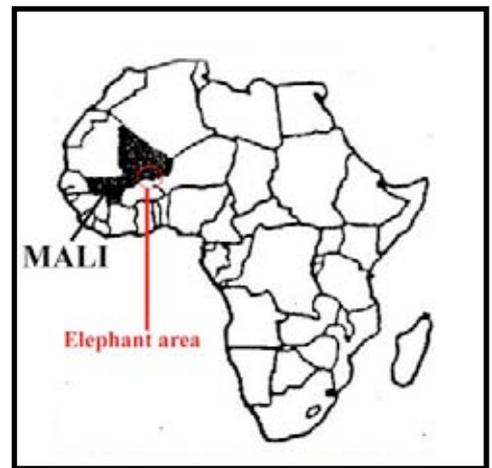
Barnerd Lesowapir and Jake Wall

Mali Activities 2008

With four separate trips to the Gourma this year STE is increasing its link to the Mali elephants.



National Geographic filming the onset of the sand storm which triggered the southward migration of the Mali elephants.



Above: Henrik Rasmussen attaching a collar to elephant "Salif Keita", named after the famous Malian musician

Human Footprint

February/March saw the continuation of the "Human Footprint" project that is mapping the the extent of human activities in part of the elephant range in Mali. This project started in 2007 funded by the National Geographic Expeditions Council. STE will continue to monitor the development of settlements and the spread of human habitations in key elephant habitat areas in future years. This year the field component was run by Mike Deutsch who spent nearly a month in the Gourma collecting data with the help of the Chef d'Antenne for the local wildlife and forest officer, Mr. El Mehdi Doumbia. The spatial data from 2007 and 2008 has now been collected into a central data server which will form the base for looking at changes in future years. The data will also serve to develop habitat suitability models which can in turn be used to help guide land managers and policy makers.

Collaring Operations

In March/April STE returned to Mali with the aim of deploying new Televilt Satellite tracking collars. This operation was led by Dr. Iain Douglas-Hamilton and Dr. Henrik Rasmussen and included David Daballen, Dr. Bertrand Chardonnet, Andrew Francombe, Chyulu Smith, Mike Deutsch and myself. The team experienced numerous adventures including a forced landing in the plane but were

ultimately successful and managed to deploy nine collars which are now uploading hourly positions every eight hours.

National Geographic Television

In April National Geographic Television worked in collaboration with STE to film the Mali elephants at the height of the dry season while they were concentrated at Banzena. Mike Deutsch accompanied the film crew, including videographer Bob Poole and producer James Byrne, to the Gourma for four weeks of soaring temperatures and sandstorms. I returned with a different crew in June to film aerials using a helicopter and the latest "Cineflex" high-definition camera. By tracking the movements of the elephant groups in real time by satellite, I detected the critical night march of the year. Armed with this information and with a bit of luck I was able to guide the crew to film a group of 150 elephants streaking through the Porte des Elephants just after dawn. The beautiful footage of the passage of the elephants through this critical gap was the first time it has ever been filmed. Filming will continue throughout June 2009, with the final film set to be released in 2010 on NGTV.

The Rescue of Bahati



Above: Bahati and three infants caught in a mud hole seeking water on their journey south to Banzena.

Top right: One of three infant elephants that were rescued from a mud hole. Two died of thirst and exhaustion.

Right: Bahati gets to her feet after three days in a mud hole. She would then streak over 70 km's to find water and her family at Banzena.

While operating near Teze, the STE team was informed by the “Direction Nationale de la Conservation de la Nature” (DNCN) of four elephants stuck in mud near Inhajar. STE mobilized a vehicle and the airplane to find the distressed animals. Mike Deutsch was first on the scene and faced a desperate situation. According to the local Touareg, a family group had been moving from Fintrou in the north down to Banzena where they stopped opportunistically at some shallow wells (“puissards”) dug by the herdsmen for water at Inhajar. These wells are dug in great numbers to water livestock at times when the water table drops below the ground surface. A female and three infants had fallen into a hole and were hopelessly stuck and remained in this desperate state for three days without food or water. By the time we arrived, one of the infants was already dead and the other three had no hope of getting out of the mire without help.

Bertrand, Andrew and I arrived with the plane and landed on as flat a piece of ground as Mike had been able to find. When we arrived the female was actively protecting herself by swinging her trunk at anyone who approached. She would periodically raise her front legs in an effort to shift herself and we were able to get a tow strap underneath her armpits and attach her to two Toyota trucks. Once free of the mud, she instantly got to her feet but was unsteady and exhausted. Mr. Tomboura, the regional director for the DNCN from Timbuktu, insisted that the team sedate the female in order to work safely on pulling out the remaining infant elephants. Once darted, the female appeared to regain some of her strength and started to walk away briskly. El Mehdi, Andrew, Bertrand and Tomboura all followed after her on foot while Mike and I stayed with the two vehicles.

Within a minute of departing all we could see from the vantage point of the vehicles were people running and diving for cover as the female charged. She stopped just short of El Mehdi who fell over a log while attempting to fire a warning shot in the air. In the process his thumb was severed by the bayonet on his rifle which left a protruding bone. He was remarkably stoic and insisted on continuing after the drugged female who had now disappeared into

thick bush. Tomboura intervened and ordered El Mehdi to the hospital and Andrew promptly evacuated him with the plane.

Bertrand and I searched in vain for a further 40 minutes trying to pick up the trail in the sand and drove madly in ever-greater circles from where the drugged female had left the scene. Finally, Andrew called on the radio to say that he was airborne and would have a look from above. Once confident we had found her, Andrew bee-lined for Douentza to get El Mehdi some much needed medical attention.

The female’s breathing was stable and she had landed in a good position with her trunk extended so we decided to take an extra five minutes to put a tracking collar onto her. Once finished, Bertrand quickly administered the anti-dote and within two minutes she was back on her feet. We later saw from the tracking data that she traveled 83 km’s over 36 hours to Banzena, to water and continued life.

We returned to the well to finish pulling out the last of the infants. This was done quickly but the poor elephant could not muster the strength to stand. We stayed for a while and tried to feed both infants water and give them food in the hope they might regain their strength. We decided there was a chance the female might return if we left the area and so I paid some children to continue to feed the infants water. Bertrand and I had a five hour drive back to camp and there was a heavy dust storm developing which cut our stay short. The following morning a recce flight revealed that both infants were no longer where they had been pulled out showing that they had regained their strength. I learned months later from El Mehdi that one eventually died in the vicinity but the other disappeared and we can only hope for the best.

The female was later called Bahati – a Kiswahili word meaning lucky – because she was truly lucky and is an example of the tough and determined individuals that make up the Mali elephant population. We are now following her movements every day using Google Earth.

Jake Wall

Ewaso Tracking Project

The primary objective of the Ewaso Tracking Project is integration of GPS-GSM tracking information as key components for wildlife and conservation management. The partners are Save the Elephants (STE), Mpala Research Centre (MRC), Princeton University, Oxford University, Ewaso Lion Project, Laikipia Predator Project, Samburu-Laikipia Wild Dog Project and the Laikipia Wildlife Forum. The project commenced in January 2008 and is funded by the JRS Biodiversity Foundation. As the lead partner in the project, STE set up an office at Mpala Research Centre in Laikipia from where things are managed.

Other key stake holders and project beneficiaries include the local communities through management of wildlife and resolving human conflicts, capacity building in GIS-analysis and development of tracking soft and hardware. The project also benefits local wildlife management and conservation efforts as well as local County Councils that are the custodians of the land occupied by people and wildlife. To the global community, the project offers a forum for sharing insights on the value of modern tracking technology and analysis for wildlife conservation worldwide, novel research insights and high impact publicity for conservation.

Through the project, STE has committed to harmonizing existing spatial data layers generated or acquired by the partners by way of creating a shared geo-database. In addition to provision of a harmonized geodatabase STE is compiling available maps held by partners and other researchers in the ecosystem jointly with MRC. These activities are ongoing. The project is supporting development of GSM collars for other species, namely wild

dogs, cheetahs, lions, hyenas, Grevy's zebra and livestock. From the Laikipia office, we monitor the movements of the tracked animals. As part of information sharing, STE is sending bi-monthly reports of movements of tracked animals to both the partners and the owners of properties in which elephants roam. We are hoping to develop a web based means of data sharing with the international community in the second phase of the project commencing January 2009. The project has integrated well with the data sharing needs of Ewaso Conservation Group, a consortium of government agencies, non-governmental development organisations and researchers working in the Ewaso ecosystem.

In July 2008, Save the Elephants and the JRS Biodiversity Foundation that supports our Ewaso Tracking Project convened a three day meeting in Zanzibar for grantees and board members. I represented Save the Elephants. While the meeting was not primarily to review progress reports, STE took the opportunity to highlight the activities of ETP. The main focus of the meeting was how data gathered by grantees would be shared and the various applications of Bioinformatics.

The cross cutting issues that emerged between all grantees included relatively low levels of IT literacy amongst biologists and the poor infrastructure hampering data sharing in developing countries. The JRS board members agreed on the need to fund projects with an emphasis on the above issues in the developing countries. The meeting will be followed by a workshop on Bioinformatics in June 2009.



GIS Training session led by Festus Ihwagi



Grevy's Zebra with radio tracking collar

Photo credit: Stephen Cheg

Festus Ihwagi

Northern Kenya Movements, DNA and Male Mating Strategies

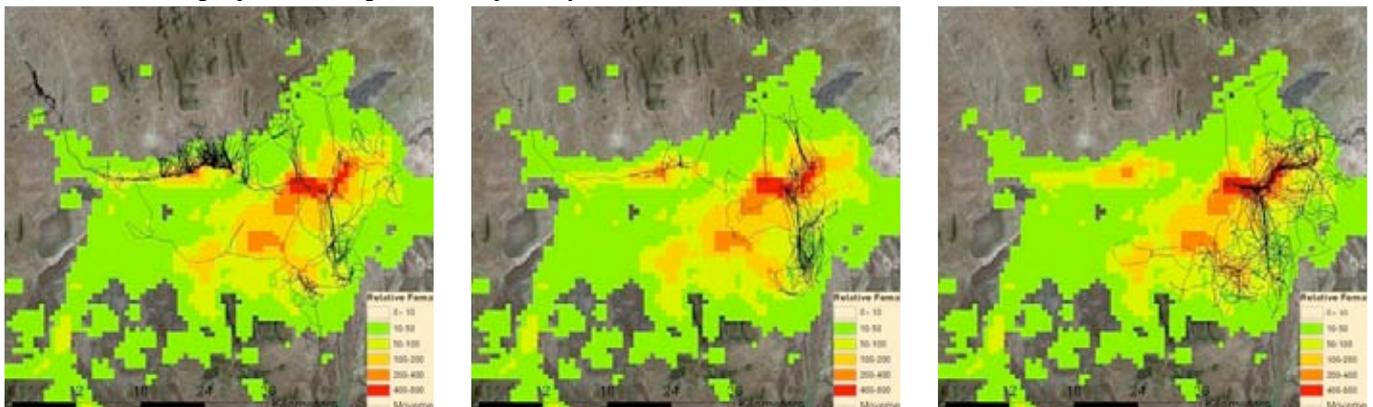
During the past year I have been involved with two Save the Elephants projects, namely the GPS tracking of elephants in Marsabit, which was initialised in 2005, and the deployment of satellite tracking collars in Mali.

The GPS tracking project in Marsabit is now, after two and a half years approaching its final stage. The project has managed to record a stream of high resolution tracking data continuously without a gap. This has been done despite setbacks in terms of malfunctioning equipment and the illegal killing of two collared elephants. The tracking data from Mrs Kamau, Shadrack and Sera has provided novel extensions to the known range of the Marsabit elephants and proved that this population must be viewed as the northern most extension of the Samburu population rather than an isolated population. Much analysis still needs to be done, but the high degree of repetition in observed movement patterns suggests that the general patterns of movements have now been captured in the tracking data. The analysis of the existing 100,000 positions gathered over the two years will provide a sound understanding and reference point of the ranging behaviour of these elephants. The deployed collars will provide data for the next few years, in which time the tracking database will be adequate for further analysis. The currently deployed collars will hopefully continue to provide data for at least another year or two. At that time the tracking database should be adequate for the necessary analysis. Hence there are no current plans for further collar deployment.

I have also worked on detailed genetic studies of reproductive success in males. Age specific mating tactics and paternity success

are fundamental factors influencing lifetime reproductive decisions of individual males. Obtaining information on paternity success is pivotal in understanding the evolutionary forces shaping morphology and life history as well as the short term optimization processes affecting behaviour and the often reversible shifts between alternative reproductive tactics. Furthermore, the degree to which individual males can monopolize breeding, the reproductive skew, impacts both population genetic and behaviour and should be considered when developing conservation and management strategies for threatened species. Species where only a few males contribute to reproduction may be disproportionately impacted by anthropogenic actions affecting reproductively dominant individuals.

We tested predictions, based on behaviour and life history traits, of age and tactic related reproductive success in male African elephants using genetic analysis of paternity success in a wild population of individually known elephants. Contrary to many other mammal species where male reproductive success peaks during early adulthood, the highest reproductive success was found in the oldest males in the dominant tactic of musth. However, reproduction was not monopolized by a few individuals and the reproductive skew was comparable to many other mammalian breeding systems. These results indicate that human predation that targets older bulls may have substantial behavioural and genetic effects on elephant populations. These results are therefore critical to the current debate on methods for managing this species.



The 40 year old bull Esidai has distinctively different ranges depending on his reproductive status. When inactive and associating with other males he ranges in areas with few females (left) During reproductively active periods he mainly range in areas of high female density (centre and right) but focus specifically on very high density areas when in the aggressive state of musth (right).

Henrik Barner Rasmussen

Monitoring the Illegal Killing of Elephants in Samburu & Laikipia



Onesmas and Wilson looking at one of Mungu's tusks



Dead adult female with tusks in Ngare Ndare Forest

Over the last 18 months our activities were hampered by chronic insecurity in parts of the MIKE site. Illegal small arms have proliferated in Northern Kenya, with an increase in the number of tribal conflicts about pastureland for livestock, especially between Samburu and Pokot herdsman. Wildlife poaching for bush meat and ivory was also serious in the Samburu-Laikipia elephant range, especially in the southwestern and northern parts of Samburu District, central region of Isiolo and northwestern portion of Laikipia District.

Due to the insecurity our MIKE project team was therefore not able to cover the entire area and the total number of dead elephants found within the MIKE site declined.

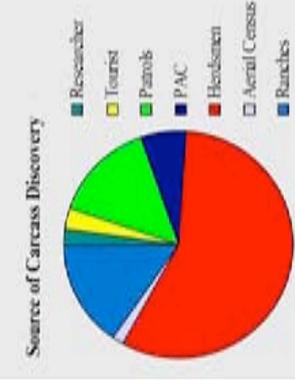
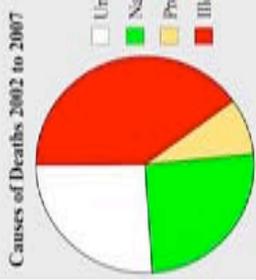
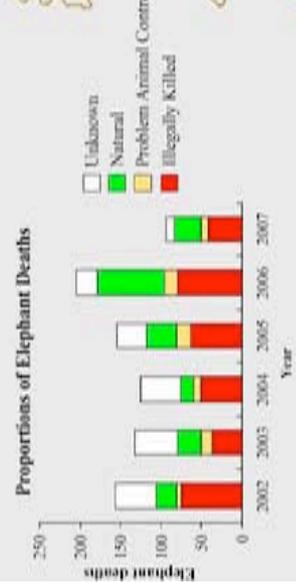
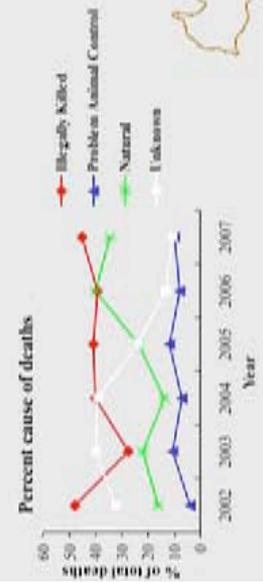
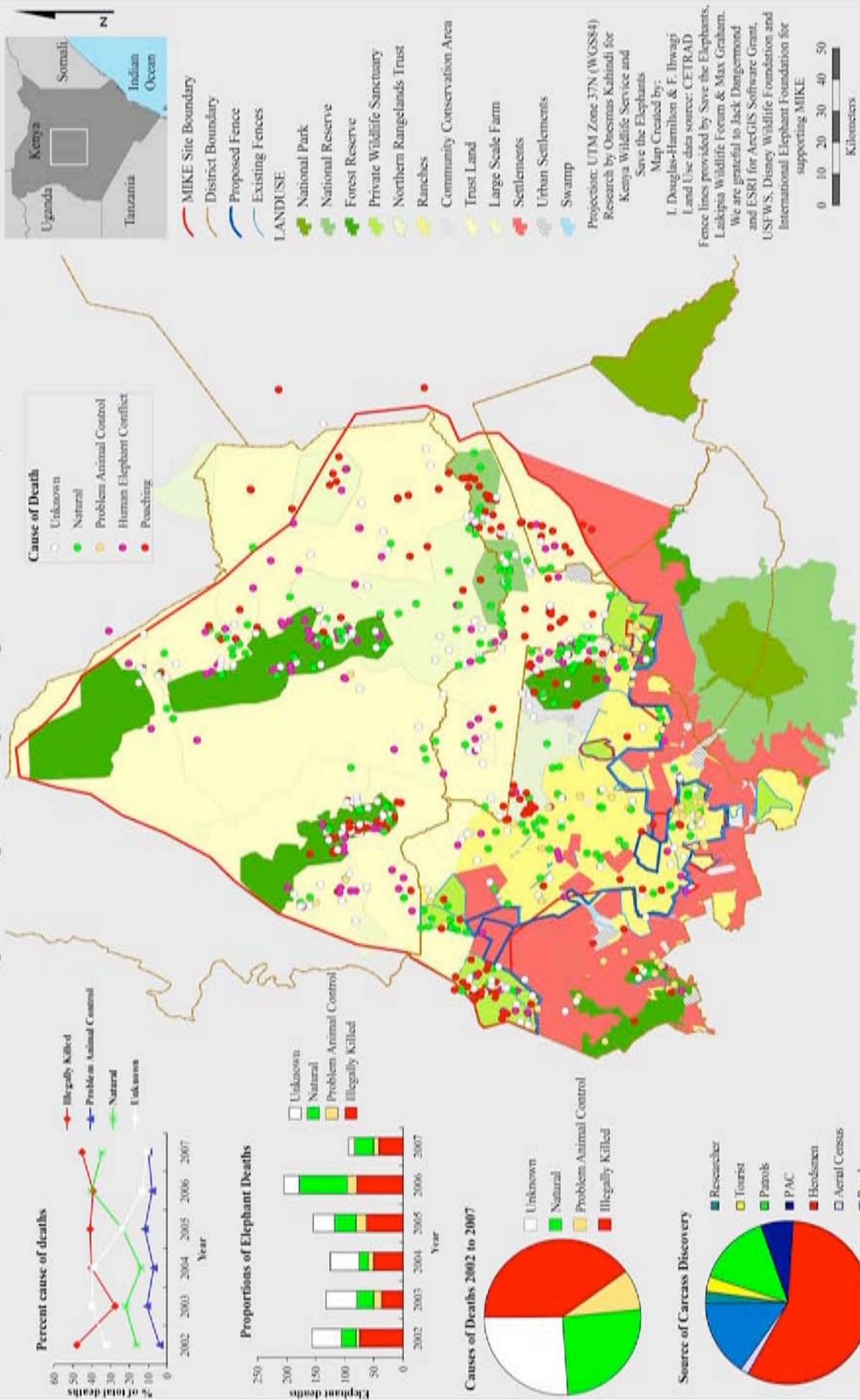
Some of the elephant victims included a bull called 'Mungu', well known for his gigantic tusks, and for being the largest bull in the national reserves. Another bull, 'Picasso' also died of bullet wounds, and yet more that were not identified. These animals were found in the community conservation areas neighbouring the Reserves. Community scouts and Kenya Wildlife Service personnel nevertheless recovered the tusks before the poachers. A surge in ivory poaching was also detected in Koiya Group Ranch situated in northern Laikipia where information from the community discovered 14 carcasses of recently killed elephants. These carcasses were first discovered by herdsmen, who remain the main source of information about dead elephants for the project. STE facilitated the KWS verification of these deaths. In addition, between April and August 2008, there were over 50 additional reports from reliable sources of ivory poaching, that have yet to be verified on the ground in Kom, Kipsing, Kirisia, Isiolo and along the Isiolo Marsabit highway currently under construction by the Chinese Government.

Despite recent difficulties and funding shortfalls we have accumulated a unique data set on mortality over the last six years that has verified over 1,200 elephant deaths in collaboration with KWS. This is the largest number of carcasses identified for any MIKE site in Africa, probably on account of the participatory local information network. We have detected great variation in the extent of ivory poaching in different areas. The safe havens of the National Reserves, private wildlife sanctuaries and community conservation areas show a relatively low proportion of "illegally killed" as a mortality cause. Elsewhere the proportion is much higher, and in certain places there have been flare-ups in ivory poaching. After detection these have so far always been suppressed by the KWS. However, the price of ivory is increasing, and our monitoring has shown across the MIKE site since 2002 a steady increase in the proportion of illegally killed animals within the sample of all dead elephants. This trend is worrying and indicates a need for MIKE efforts to be redoubled in the next few years.

In the next few years we hope to help the 18 community wildlife conservation areas under the stewardship of the Northern Rangelands Trust to continue monitoring the illegal killing of elephants in conjunction with Kenya Wildlife Service, the Laikipia Wildlife Forum and private land owners. NRT has requested STE to provide MIKE training to community scouts and rangers as necessary based on the experiences of the last seven years. Our immediate plans are to analyse the data we have acquired and to share the lessons we have learnt on MIKE.

Onesmas Kahindi

Monitoring the Illegal Killing of Elephants - MIKE (2002 - 2007)



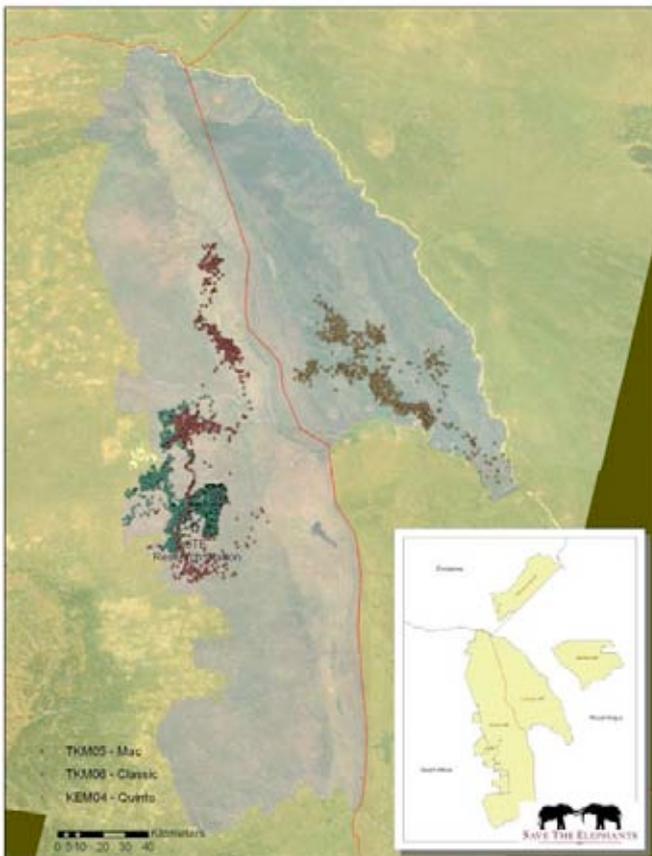
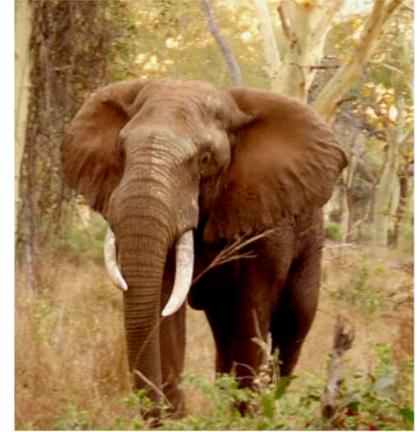
The Samburu-Laikipia MIKE site is one of 55 in Africa. This map shows the distribution of elephant carcasses found from 2002 to 2007. Causes of death are indicated by different colors. The majority of dead elephants were first found by herdsmen. STE has assisted Kenya Wildlife Service in building up a participatory information network that includes Kenya Wildlife Service stations, community conservancies, private ranches, private individuals and herdsmen. Despite the large number of dead elephants detected, the elephant population of approximately 5400 in 2002 is currently holding its own and slowly increasing.

SAVE THE ELEPHANTS
CETRAD

Projector: UTM Zone 37N (WGS84)
Research by Omesmas Kahindi for Kenya Wildlife Service and Save the Elephants
Map Created by:
I. Douglas-Hamilton & F. Ihwagi
Land Use data source: CETRAD
Fence lines provided by Save the Elephants, Laikipia Wildlife Forum & Max Graham.
We are grateful to Jack Dangemond and ESRI for ArcGIS Software Grant, USFWS, Disney Wildlife Foundation and International Elephant Foundation for supporting MIKE



The Transboundary Elephant Research Programme South Africa



The distribution of three adult bulls currently being tracked by STE in southern Africa. Mac (maroon) was the first bull to be collared by the Transboundary Programme and his annual movements between his non-musth range in northern Kruger NP and his musth range in private nature reserves (APNR) have been monitored since May 2002. Classic (turquoise), first collared in May 2004 is possibly the largest bulls resident within the private reserves. Quinto (brown), one of seven bulls collared in north-eastern Kruger NP in December 2006, moved into Limpopo NP, Mozambique once gaps in the fence separating the two protected areas were opened. He and another bull, Mbiri, have now settled within Mozambique.

The Transboundary Elephant Research Programme, in the Associated Private Nature Reserves (APNR), covers a consolidated conservation area of 1,800 km². These reserves became part of a larger protected area in 1993 when the

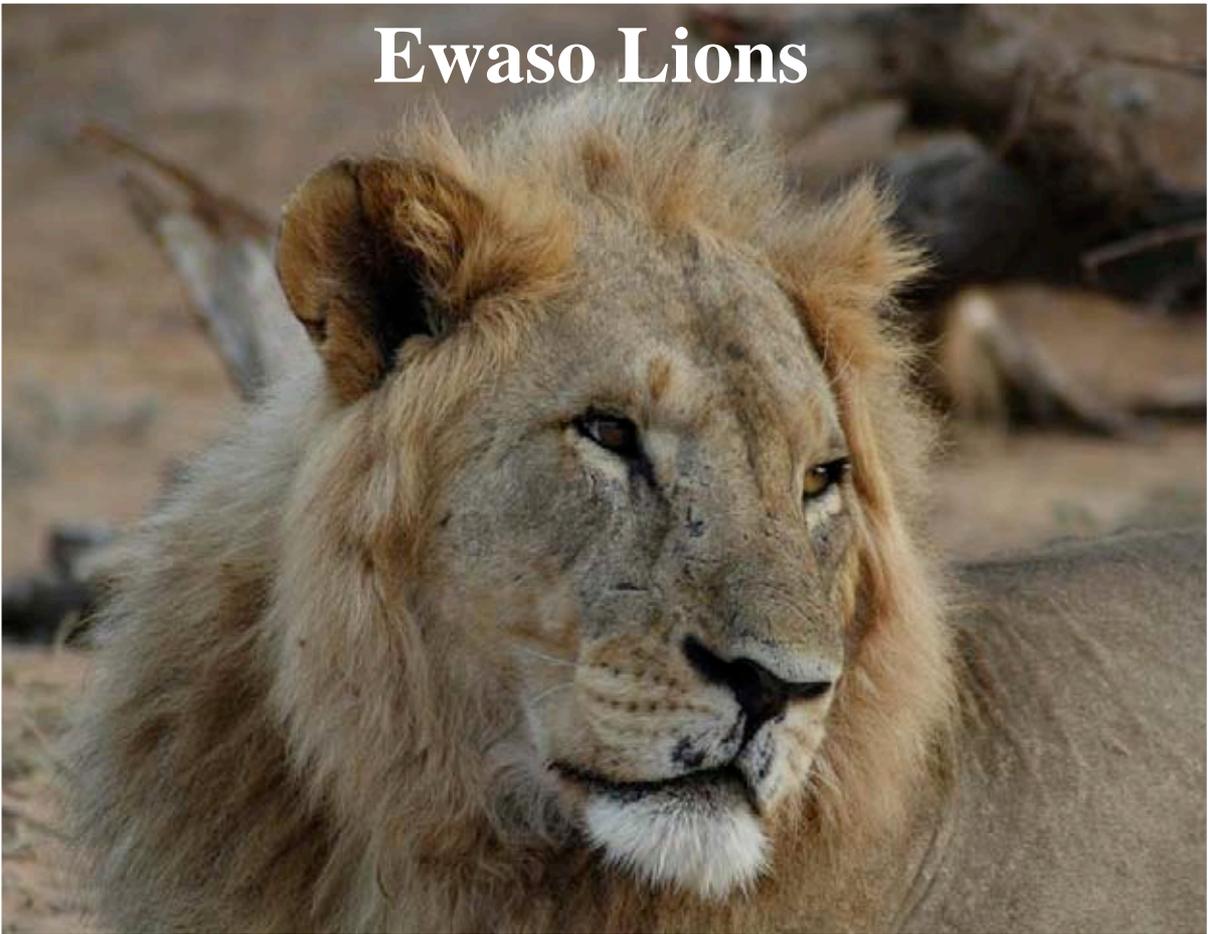
fences separating them from the 20,000 km² Kruger National Park were removed. In addition, the fences between the Kruger National Park and the 10,000 km² Limpopo National Park in Mozambique have also been removed since the formation of the Great Limpopo Transfrontier Park. With this expansion of elephants' former range has come a steady increase in elephant numbers to over 13,000 since culling operations ceased in the Kruger National Park in 1995.

The Save the Elephants' project in Southern Africa has been running for just over five years and in keeping with the expansion of the conservation area, we have expanded our research efforts. Over this time more than 1000 elephants have been individually identified and 30 elephants have been fitted with GPS-GMS collars within the APNR. Eight GPS satellite collars were deployed on the eastern border of the Kruger National Park to establish whether elephants are recolonising former war-torn areas in Mozambique that they may have initially left for safety reasons. Recently, we have also incorporated a study in the north of the Kruger National Park within the Pafuri region where we plan to deploy more collars and where we have started an individual ID study. Pafuri may function as an important key resource area for elephants moving from Gonarezhou in Zimbabwe into South Africa. We are now able to look at what drives transboundary elephant movements to the north (Pafuri), the east (Limpopo National Park) and the west (APNR) of core conservation areas such as the Kruger National Park. The possible drivers of elephant movements could include nutritional, social or safety benefits. In addition, past management practices such as the erection or removal of fences could also influence movement patterns.

Within South Africa there has been concern over the importance and consequence of a loss of tall trees due to increasing elephant populations. The Transboundary Elephant Research Programme presently monitors over 2500 large trees on an annual basis to determine the level of impact by elephants and we also test the efficacy of mitigation methods such as the wire netting of tree trunks to prevent bark-stripping by elephants. Our research efforts are limited to two key species that are favoured by elephants and which include *Sclerocarya birrea* and *Acacia nigrescens*.

Steve and Michelle Henley

Ewaso Lions



I started my D.Phil in Zoology in October 2007 with the University of Oxford, England. I am working closely under STE's Chairman Professor Fritz Vollrath who is supervising my study. I spent 2 months at Oxford towards the end of last year to design my project and take key computing and statistics classes whereupon I returned to Kenya in December to start data collection.

The focus of my studies are the lions of the Ewaso ecosystem in Northern Kenya where I am comparing lion populations in the protected areas (Samburu, Buffalo Springs and Shaba National Reserves) to lions in the surrounding community conservancies (West Gate and Kalama). My research entails undertaking a lion census within the area, looking at movements of lions between the protected areas and surrounding landscape and investigating conflict between humans and lions.

I began fieldwork in January this year and spent the first four months in the reserve identifying and monitoring the current

resident lions. In June, I moved to West Gate Community Conservancy where I networked with the community, worked closely with scouts in the area and attempted to find new lions. Lions here were hard to locate as they are not habituated to vehicles and generally are very nervous. However, I was fortunate to have four sightings to date of wild lions in this community area to add to my lion database.

I am also part of the STE's JRS Biodiversity Foundation grant and the Ewaso Tracking Project, by tracking lions in the Ewaso landscape. I am hoping to deploy the first lion collar in the community area over the next few months and am always excited to learn about further lion movements in the area.

I am grateful for a Sidney Byers scholarship from the Wildlife Conservation Network and a Charlotte Fellowship from the African Wildlife Foundation, and am hugely fortunate to be assisted by various zoos in the US who fund my fieldwork.

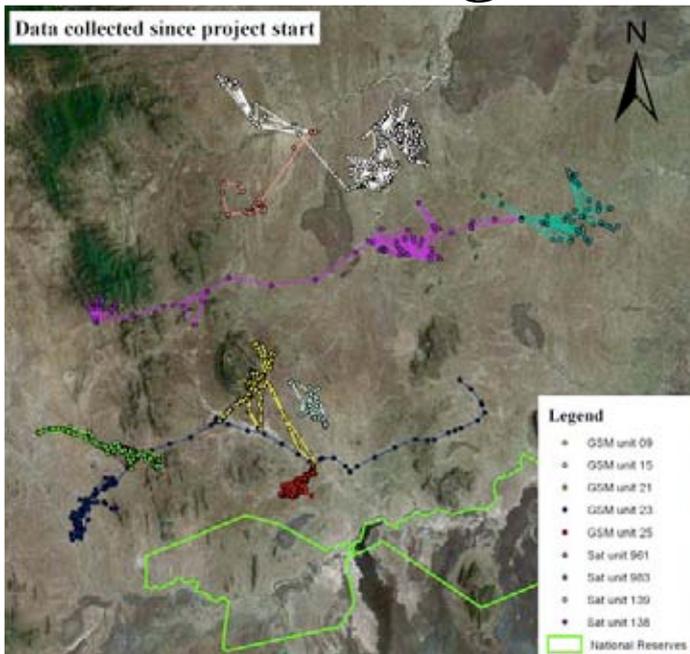


*Main image above: Lnychurai.
Far left: Shivani Bhalla collecting
Lion scat
Left: Naibor*

Shivani Bhalla



GPS Tracking of Livestock in Samburu



Above: Samburu warrior scouts and David deploying a satellite collar in Sera. Below: Successfully collared cow



It is important to understand the interactions between human activities and wildlife in order to develop sustainable land use plans. To evaluate the technical feasibility and amount of information obtainable from GPS tracking of livestock (initially cattle) we devised a pilot project on GPS tracking of livestock. This project, supported by the GLOBE foundation, and in collaboration with the Northern Rangelands Trust and Purdue University, is intended to help us look at livestock movement patterns, wildlife-livestock interaction (especially elephants and Grevy zebra,) and potential disease transmission. It has also been interesting to look at the relationship between rangelands utilization, degradation and/or rehabilitation in relation to livestock movement. A further aim of the project was to assess new types of collars and to use them within our existing data collection framework.

Our most recently targeted area was West gate area and Kalama Conservancies, however due to a drought, most of the cattle in Samburu District were in Sera about 120km North-east from their normal bomas. Some cattle still graze in this area, and although challenging it was decided to deploy a limited number of collars in the area. David Daballen and his team headed to the West-Gate area on July 22nd aiming to deploy at least two collars in the immediate area. Luckily one of the scouts' cattle herds were coming to drink that day, and it was decided to deploy the collars within that herd.

By mid-day the cattle had settled at a small seasonal river bed. Our main challenge was explaining why the cattle needed to be tagged, however people were extremely receptive once they realised it was an excellent device to track stolen cattle. After many questions the herdsmen were content and we were able to proceed.

The first collar of the day was deployed at Lempaute (near Loijuk swamp) where there is high concentration of Grevy zebras. Through this exercise we are expecting to review

interactions between cattle, Grevy zebras, and even the elephants as we have had reports from some of the scouts that a collared elephant had been sighted in that area the same morning.

After gathering all possible information on temporary cattle bomas, David returned to Ngutu O'ngiron where he employed a community scout by the name of Lokorukoru together with Lenangetai who searched for the owner of the cattle that needed to be collared. The initial Mzee (old man) that we approached refused, for unknown reasons, to have his cattle tagged. Unperturbed we continued to the second village where the elder was more receptive to the idea; unfortunately a long wait ensued as the cattle would not return until the evening.

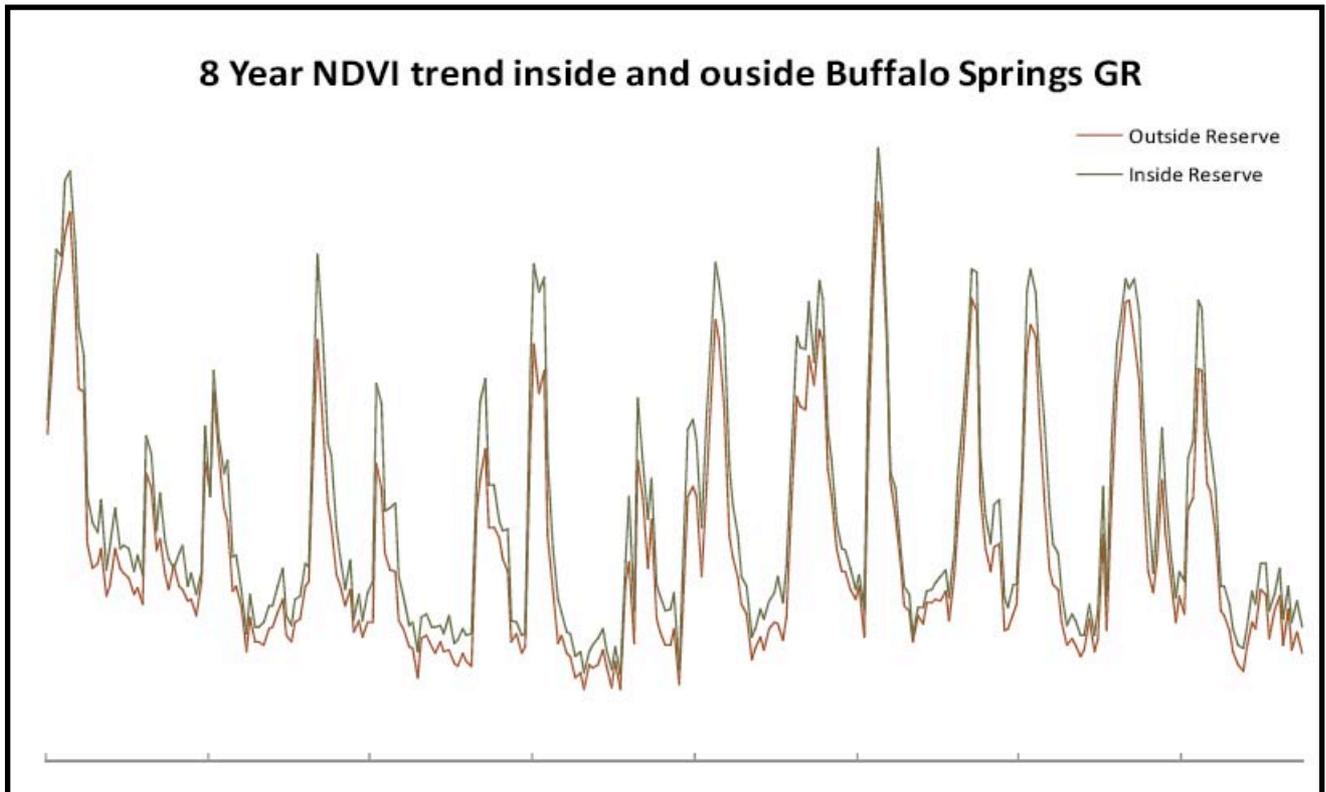
We had no choice except to wait until past seven o'clock in the evening and were faced with the arduous task of tagging the cattle in total darkness! Villagers gathered around excited by this unusual display, many asked questions and came to understand the work that we were doing.

We have now deployed nine GSM collars and four Satellite collars, and a map of the data collected by August 2008 can be seen above. Collaring cattle has posed entirely different challenges to elephants, and has been a fascinating experience for our team. Particularly, in liaising with the community, and ensuring that collars are not removed.

A larger data set will be available in a few months time which will enable us to analyse our results and discover encounter rates and the degree of separation between cow herds, and we can then determine transmission rates of diseases.. The detailed information on distances covered associated with different activities such as foraging and trips to watering points can provide highly valuable data on cow energetic. Analysis of the data could also provide insight into optimization of movements and in turn provide tools to increase milk yield and meat production.

Henrik Rasmussen and David Daballen

“SEARS” - Spatial Economics and Remote Sensing of Elephant Resources



This project focuses on modeling the interaction between spatial variation in resources and the spatio-temporal variation in elephant densities and movements. Remote sensing data is used to provide information on the density of vegetation, climate and terrain. A total of 4 weeks was spent in the Samburu-Buffalo Springs game reserves for field measurements in late 2008, as a follow up on the fieldwork in early 2008. Part of the fieldwork consisted re-assessing the 4 long-term vegetation plots set up in 2000, and accumulating information on vegetation densities along the reserve boundaries. Initial results show distinct differences in vegetation densities inside and outside the Buffalo Springs Game Reserve

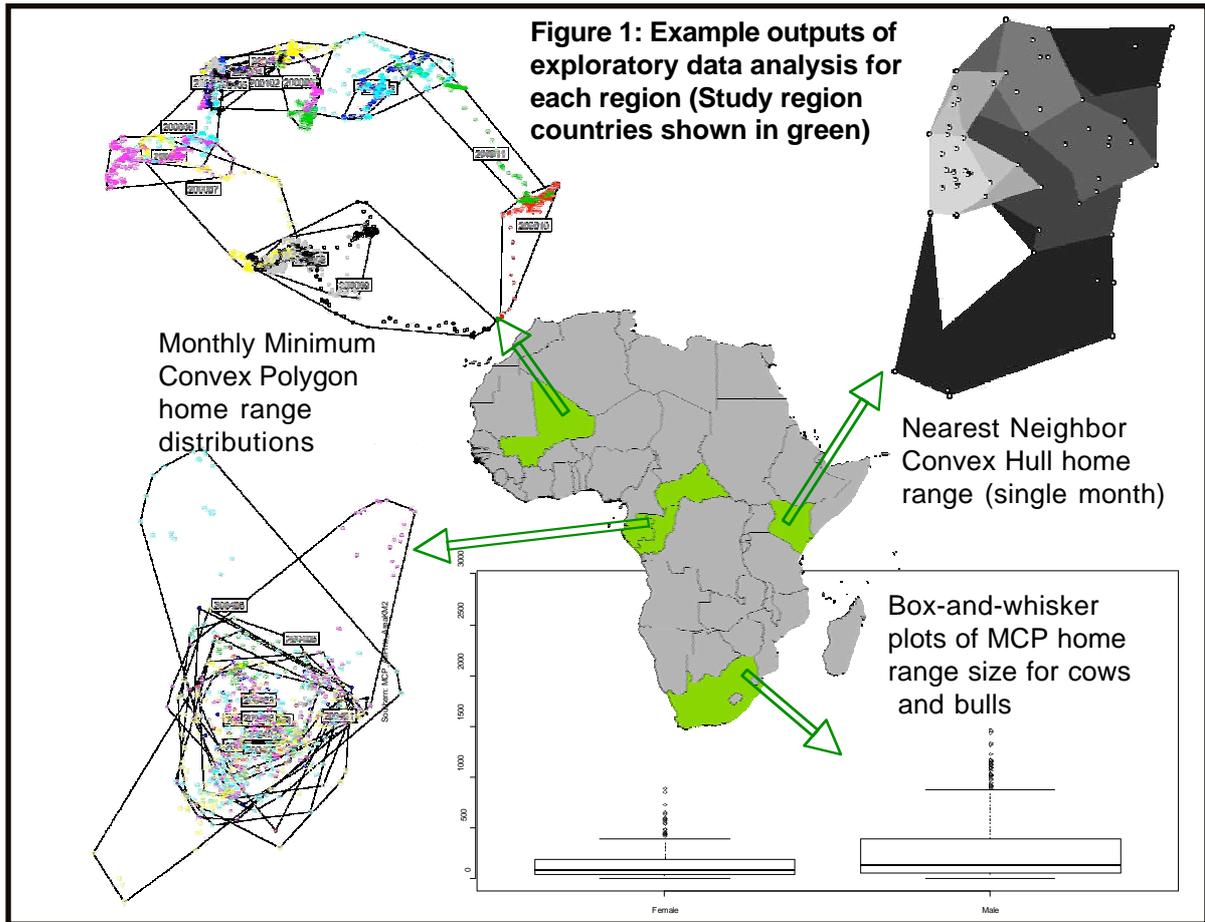
Over the past months SEARS attracted 4 visiting scientist to work in Oxford on the project: Michelle and Steve Henley, Samantha Strindberg and Stephen Blake were hired to work

here on a pan-African elephant tracking paper. The project was kicked off by a mini workshop in early August consisting of Iain Douglas-Hamilton, Fritz Vollrath, Jelle Ferwerda, Jake Wall, Samantha Strindberg and Stephen Blake. The project is currently in the final stages of data aggregation, and moving into the full statistical analysis and modeling phase, to be completed by the end of the year.

Over the past year progress has been made on the analysis of tracking variables. This resulted in a full set of track-statistics such as daily, weekly displacements and accumulated distances traveled for all elephants in the STE database, and general hourly information such as distance moved, orientation of travel, changes in orientation. This data is currently being combined with field measurements on climate to determine the relation between climate and diurnal, monthly and annual movement patterns.

Jelle G Ferwerda and Fritz Vollrath

Pan African Elephant Telemetry Project



In August 2008, Fritz Vollrath with Iain Douglas-Hamilton, convened a workshop at the University of Oxford with the aim of centralising, harmonising, and analysing the GPS telemetry data from elephants collared by STE and partners in four regions of Africa (Mali, Kenya, the Congo Basin, and South Africa). A multi-disciplinary team was assembled from among STE's staff and collaborators, including Jake Wall (STE tracking database manager), Jelle Ferwerda (ecology and remote sensing specialist), Samantha Strindberg (statistician with the Wildlife Conservation Society), Steve and Michelle Henley (elephant biologists from the Kruger ecosystem), and Stephen Blake (Forest elephant specialist). The ultimate goal of the exercise is to publish high quality science that leads to effective conservation of the African elephant through policy and strategic management. Elephants are influenced by both their ecological requirements and by the potential negative impact of human disturbance. Teasing apart the drivers behind elephant distribution and movement is important to understanding which factors are key in determining ranging patterns and access to resources. This provides the information required for developing appropriate policy and conservation management actions. STE and partners have multi-year GPS tracking data comprising over 1,300,000 records for over 170 elephants ranging from desert to rainforest. This project is unique in both scale and vision, as it has at its foundation this unique dataset that comes from the range of ecological and human influence across which elephants were collared.

Achievements made during the August workshop include: (a) The creation of a unified elephant telemetry database required to achieve a harmonised analysis. To do this software tools developed by Jake Wall for STE were used, including a data downloader and filter that facilitates data retrieval and standardization in near real time, as well as import into ArcGIS or Google Earth. (b) Calculation of movement variables and collation of geographic covariate data. Once a clean dataset had been obtained several mean monthly movement variables using hourly data were generated, such as displacement, heading, home range area (Minimum Convex Polygon, Nearest Neighbour Convex Hull and distance between monthly home range centroids). Covariate data such as mean monthly rainfall, temperature, NDVI score, vegetation cover (relative bare ground, herb, and tree cover), hilliness, elevation and human footprint variables (protected areas, roads, settlements, etc) was produced. (c) Preliminary data exploration that included developing a plan for the various analyses. The movement variables were contrasted regionally and by looking at the differences between bulls and cows, and will also be analyzed considering the influence of the covariates. A suite of scientific publications is envisioned from these statistical analyses that aim to explain the variation in elephant movement patterns across and within the four regions of Africa starting with a central comparative paper we plan to submit in 2009.

Steve Blake and Samantha Strindberg

Internships 2008



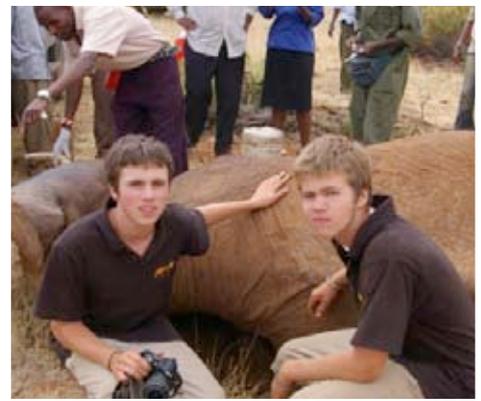
Benjamin Loloju is part of our scholarship programme and spends his school holidays in our research camp, revising and helping with camp duties

During July and August 2008, the three of us, Henry, Peter and Oliver, stayed at the Save the Elephants camp in Samburu where we were able to contribute to several of the ongoing projects being undertaken by STE.

One of our main objectives was to carry out an audit of the MIKE data collected by Onesmas Kahindi over the past six years. Also during our time here, we partook in multiple mammal censuses in different areas of Samburu National Reserve, collecting data on the number and type of mammals that were seen. All the old records containing valuable information from both the mammal censuses and the Long Term Monitoring Database were transferred into a computerized form.

Also, the elephant identification system was updated. The name of any resident or migratory elephants for whom there was not a complete set of identification images was recorded, and a list compiled. This can be taken out into the field so that if these elephants are seen, the appropriate pictures can be taken in an effort to bring the system up to date.

We were also involved in the darting and treatment of an elephant suffering from a bad leg injury, whose condition has subsequently improved. We also helped David Daballen fit GPS collars onto cattle. The data collected from these collars will be used to examine the interaction between wildlife and livestock, and the affects of livestock on the



Henry and Oliver Klingenstein spent six weeks in Samburu cleaning data and updating our elephant ID photo files



Peter Tomiak spent two months working at STE cleaning data and working on our Long Term Monitoring programme

landscape they inhabit. In addition we assisted Lucy King with her exciting project involving the use of bees as a deterrent to crop raiding elephants. Along with Lucy and several local inhabitants, we helped build bee hives and erected the fences on which they are attached.

One of the most rewarding experiences for us during our time in Samburu was seeing the reaction of the pupils from the nearby Westgate school whom we accompanied on a safari drive in the National Reserve. Their appreciation was evident when we came across lions, which, despite living so close to the reserve, many students had never seen before. Later on in our stay, Save The Elephants and Elephant Watch formed a joint football team, and we challenged the school to a game of football. Although we lost (despite most of our team being at least double the age of the students) it was a great occasion, and fun for both the players and crowd.

During our time in Samburu we had many fantastic experiences and are delighted to have been able to contribute to the efforts of such an important organisation. We met many wonderful people and would especially like to thank Iain and Oria Douglas-Hamilton as well as David Daballen, Chris Leadismo, Daniel Lentipo, Lucy King, Euan and Annie McDonald, Alice Leslie, and all the other members of the Save the Elephants team for making our time here so enjoyable.

Peter Tomiak, Henry and Oliver Klingenstein

Save the Elephants & Elephant Watch Safaris' Education Programme



Above: Sabina, Lucy and Stella outside Theresa's Girls secondary school

Top right: Anthony is in his second year of studying medicine at Nairobi University

Bottom right: Mohamed our highest scoring student who attends Nkubu High School

2008 has been an unpredictable and lively year, to say the least, what with the political events in Kenya surrounding the elections, student unrest in the schools, yet was finally topped by the magnificent performance of our Kenyan runners at Beijing and the success of our STE/EWS Education Programme.

Many thanks for the collective support of all our donors, STE/EWS staff, students, teachers and members of the Samburu County Council and Reserve for their hard work and support. With the arrival of Euan Macdonald, the Education programme has had an impressive year-long flow of activities which reflect the distinctive role that the Programme has amongst the communities who live in the Elephant range of Northern Kenya.

Arnold Rapango, who previously worked at the Lewa Education Trust, took up the position of STE/EWS Education Officer at the beginning of August 2007 and together with the help and guidance of Oria Douglas-Hamilton is turning the programme into an increasingly important project.

Students' Reports

The first idea of sponsoring students with secondary education scholarships was started ten years ago at STE when two researchers and a friend sponsored three students. Since then there has been a steady intake of students and today STE/EWS Scholarship Programme has 35 pupils enrolled in some of the best secondary schools in Kenya and five of them will sit for their final exams in October. So far,

12 have already completed their secondary education. Out of these, five are working in wildlife conservation projects, three have been accepted into higher studies and four have returned home. This year, we were able to select four new students in February to join the programme. They had all done well in their primary school exams and are now in good schools in Meru and Nairobi. We are also very happy to have been able to offer a scholarship in February to a young boy from a Nairobi slum, as our "Peace Child" sponsored by a lady and her sons who had been staying at Elephant Watch camp. He is doing very well in his new school and new life.

Academic Standards

Last year, we took the decision to change our direction in the student selection process and decided to promote students who could best handle the secondary education curriculum, and enter them into good schools only. Because of the huge increases in the cost of living within all sectors, our scholarships have increased. Our aim continues to be to give bright children from impoverished backgrounds a chance in life through education. The students are becoming increasingly aware that an individual's future depends on how well he/she performs in their studies at school. These students are aiming to be a catalyst for change in their communities and families. This explains why in the recent months, a high proportion of STE/EWS students have made a big improvement in their academic work and we are proud to say that several of our students are performing with A and B+ grades - which is excellent.

Schools

A wave of strikes and destruction suddenly hit many schools throughout Kenya in July, when students resorted to arson to break up the term early by causing a lot of disruption. Students were sent home by the thousands and among them, two of ours who were affected by these strikes in their respective schools. We managed to get them back home without too much trouble. All of our students have always been disciplined and respectful and did not participate in the strikes. However, the destroyed schools will have to be repaired and rebuilt, paid for by parents, regardless of who they are. School visits, functions as well as academic and prize giving days have been attended by both Daniel and Arnold which has been a great support to the students since their homes are far from the schools and they really enjoy having someone visit them. It helps share ideas and suggestions that eventually can assist them achieve greater goals in their academic work.

West Gate School Project

The West Gate primary school has been very lucky to have Mr Euan Macdonald offer his services as an English and Maths teacher on a voluntary basis. Since his arrival, the school has received several donations from well wishers and friends, most of them originating from Elephant Watch, to purchase solar power equipment, desks, 100 mattresses and mosquito nets, stationary and sports equipment for the children, as well as technical advice on buildings and improvements. All of this has had a huge impact on the

school and for most of the children it has changed their lives. Their hunger to learn is being nourished as they can now study after dark in their classrooms which are now lit by solar electric lights. We hope to receive more support in the coming months and to see better results in the final exams at the end of this year

Donors

It has been a great pleasure to join hands with many new donors this year who have entered the Education Programme fully committed to supporting specific students for four years. This has also allowed us to improve some of the the schools bordering the Samburu National Reserve.

The Way Ahead

The Education programme represents one of the key ways in which STE and EWS make education a priority to enable young people to get qualifications which will eventually have positive effects for the community in Samburu. This can be achieved with the support of all the stakeholders in the education sector. The STE/EWS Education Programme must not only focus on scholarships and schools. It must reflect an approach where specific values and sustainable development issues are promoted through education, and where both parents and teachers are encouraged to contribute to the development of the student. We must also establish more partnerships with schools and the Ministry of Education in order to achieve one of our main goals of further promoting girl-child education.

Arnold Rapango and Oria Douglas-Hamilton

West Gate Primary School Field Trip

As part of our Education Programme we organise field trips into the Reserves for students in the schools surrounding our research areas. We hope that through such activities we broaden their horizons and foster an interest in wildlife and conservation.

In July 2008 we took students from West-Gate Primary School on a field trip around Samburu National Reserve. After collecting the enthusiastic students, we left early for the central part of the reserve where wildlife is most concentrated. After a short while we discovered a group of cheetahs which had killed an impala. The students were naturally very excited as they had never seen cheetahs before.

After a full day of looking at wildlife, including Impala, Elephant, Gerenuk, Zebra and Lion, we took the pupils back to our research camp.

The children were fascinated to learn about elephants and could hardly believe their ears when we told them about our satellite tracking systems. This was a very special day for all of us at Save the Elephants and perhaps the trip is best summed up by some of the children themselves.....

Leado Lmense - *“I woke up before even the cock crows. I stood still and waited for the car and our English teacher, Euan Macdonald. Within a fraction of a second I heard the sound of a car crossing the dry riverbed and I was happy as the daughter of a king walking around the palace! I kept thanking my tour guide, Daniel Lentipo.”*

Edward Lekodei - *“When I saw the lioness for the first time my heart was pounding, boom boom boom, I could not have believed or hoped that I would see this in my life, I could have called Mr Daniel to race away in the car! Hulllaaaaaaaa! Lord give me long days to see the paradise surviving.”*



Children from Westgate School in STE vehicle on their way into the reserve

Daniel Lentipo

STE Media Coverage



Photocredit, Sam Gracey

BBC Film Series

On the 16th of October 2007, The BBC Film Crew arrived in Samburu National Reserve for the first leg of a three part shoot with Save the Elephants to make a series of films entitled “The Secret Life of Elephants.”

On the day that the film crew arrived, one of the females from the “Winds” family gave birth to a new baby at night. The following morning, STE’s field team found Harmattan, the matriarch of the Winds, with her new born baby. She was named Breeze and became the star of the show. The BBC and STE watched and filmed her daily, to see her growing up happy, healthy and very playful as the daughter of the matriarch.

On 8th of November 2007, another incident occurred where one of our well known study females called Columbine from the “Flowers” family died, leaving her two orphan calves mourning the death of their mother. They spent the whole day by their mother’s side, confused as to where they should go or which group they should join. After following the calves for several days we found that they had joined the rest of the Flowers’ family members.

The BBC returned again on the 23rd of January 2008, following the story of baby Breeze and the two orphan calves, and again in May just after the rains for the peak breeding season. The most exciting moment was when the infamous bull Rommel came back into the reserves after an absence of four years. He was fighting with another musth bull, Beethoven, and once again kept us on our toes. The BBC looked at how STE tracks elephants’ movement using our new radio tracking technology GSM, GPS and Satellite Collars that are broadcast through Google Earth. We hope that the release of this film will expose the beauty of Samburu National Reserve and promote the work of conservation and the quality research that Save the Elephants is producing.

Chris Leadismo

National Geographic Magazine

In February 2007, the well-known National Geographic Society cameraman Nick Nichols and his assistant Nathan Williamson visited Samburu and Buffalo Springs National Reserves to photograph the area’s elephants.

Fortunately Iain was on hand to show them around and help familiarise them with the terrain and the 1000 plus elephants that utilise this beautiful habitat. As a result of STE’s individual recognition system and over a decade of constant monitoring, we are in a unique position to be able to keep track of most of the individuals and family units within this population. With about 68 families, as well as individual bulls and bachelor herds broken down into several categories such as residents, sporadic migrants and migrants, we were able to help the National Geographic photographers in a very special way.



I was honoured when Iain chose me to help the National Geographic Team and although I had never worked with photographers before, I was in a great position to be able to help Nick and Nathan, due to my long-term involvement with these elephants. Despite some initial nerves, I was always sure of one thing – that I knew the elephant families very well and if it was elephants they were after I could help them find and understand them!

We chose to work with the elephant families that I knew best and most of our time was spent with the Royals. The fact that one of the family members has a radio collar made this a very successful choice as we were able to track and find them on a daily basis. The results speak for themselves and Nick and Nathan managed to get some fantastic photos that are featured in a major article in National Geographic Magazine’s September 2008 issue.

It was an amazing experience for me to work with Nick and Nathan, and despite the gruelling hours, which made this a tough assignment, I thoroughly enjoyed myself. Over the months we all became firm friends and I really hope that one day they will come back to visit us in Samburu.

Daniel Lentipo

Discovery Channel Documentary

Save the Elephants was invited to be a key contributor for a Darlow Smithson production for the Discovery Channel this year focusing on human-elephant conflict in Kenya. We were glad to be brought into the documentary to explain our various active projects that are working towards alleviating this conflict. Two Save the Elephants projects are highlighted in the documentary starting with the more grass roots behavioural work of Lucy King's Elephants and Bees project through to our technologically unique Geofencing project which is lead by Jake Wall. We hope that by participating in this documentary Save the Elephants can emphasise our commitment to working towards a tolerant relationship between man and elephant. The documentary will be shown in the US in the fall on Discovery Channel.

Lucy King

Elephant News Service

For the eighth year now, I continue to run the two news listservs for Save the Elephants, on both Asian and African elephants. The list of subscribers has increased to 512 African elephant news subscribers, and 367 Asian elephant news subscribers. Over the last year, 269 news stories have been sent around on African elephants; 367 stories have been circulated on Asian elephants. In addition, over the same period, the abstracts and complete pdf versions of 114 scientific papers on elephants have been made available to subscribers. As soon as I circulate each news story, I post it on the Save the Elephants' new web site, where it appears and is archived in a chronological, searchable fashion. If you would like to join please go online to www.savetheelephants.org.

Melissa Groo

Tsavo Elephant Count



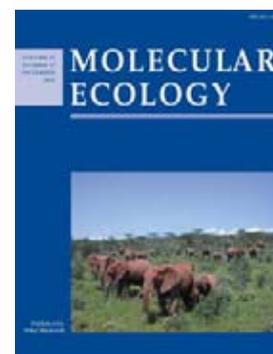
In January 2008, Save the Elephants provided a plane and a team of assistants to help the Kenya Wildlife Service count elephants in Tsavo National Park.

Aerial counts of Tsavo's ecosystem have been carried out since the 1960's and are important for many reasons. Primarily they provide a very useful benchmark for comparison with previous years, as well as information on trends and changes that may be occurring. Censuses also provide key information on elephant distribution, in particular in relation to water and food resources, as well as helping to document the number and distribution of elephant carcasses. Finally, censuses help provide information on other species within the ecosystem such as buffaloes, rhinos and livestock, and help monitor incidences of human activities that may be threatening elephants e.g. protected area encroachment, logging and charcoal burning.

Alice Leslie

George Wittemyer

I recently accepted a position as an assistant professor in the Department of Fish, Wildlife, and Conservation Biology at Colorado State University, where I will continue my work with STE on the Samburu elephants. In addition, I have had a number of publications this year. A paper that I co-lead with John Okello from Makerere University in Uganda provides the first in depth analysis of the genetic impact of historic ivory trade. I have also led work to be published in a special feature on organism movement in the Proceedings of the National Academy of Sciences looking at factors influencing repetitive movement cycles among the Samburu elephants. I continue to work closely with David on the long term monitoring and social studies in Samburu as well as Iain and Fritz on elephant movement research.



STE Website and new Publications by STE authors and collaborators in the last 12 months

We continue to disseminate our research and results to the general public through published scientific journals, lectures and presentations, and through our website. In 2000, Save the Elephants' website was officially launched. The Website has continued to be an enormous success in terms of promoting our mission and increasing public awareness about elephants. In September 2008, Moritz Zimmermann (Momo) helped re-design the website into a better, flashier, and more user friendly one which we hope our donors, friends, and colleagues will find interesting and informative. www.savetheelephants.org. Below is a list of our latest publications.

Ihwagi, F.W. (2007) Forage Quality and Bark Utilisation by the African Elephant (*Loxodonta Africana*) in Samburu and Buffalo Springs National Reserves, Kenya. *M.Sc. Thesis, University of Nairobi*

King, L.E., Douglas-Hamilton, I, Vollrath, F. (2007) African elephants run from the sound of disturbed bees. *Current Biology* 17, R832-R833, October 9th.

Martin, E. & Stiles, D. (2008) The Ivory Markets in the USA. *Save the Elephants & Care for the Wild*

Nicholas J. Georgiadis, Festus Ihwagi, J.G. Nasser Olwero, Stephanie S. Roman (2007) Savanna herbivore dynamics in a livestock-dominated landscape *Elsevier. Biological Conservation* 137 (2007) 473-483

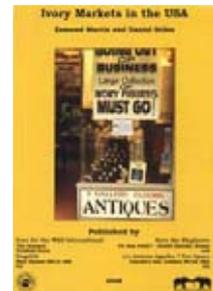
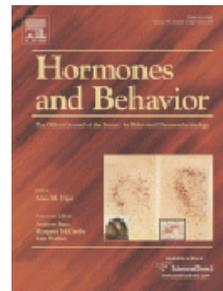
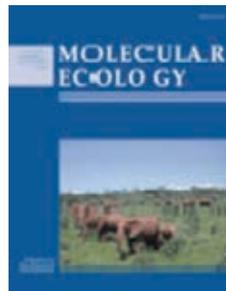
Okello, JBA, Wittemyer, G, Rasmussen, HB, Arctander, P, Nyakaana, S, Douglas-Hamilton, I, Siegismund (2008) Effective population size dynamics reveal impacts of historic climatic events and recent anthropogenic pressure in African elephants. *Molecular Ecology* (2008) doi: 10.1111/j.1365-294X.2008.03871.x

Okello, JBA., Masembe, C., Rasmussen, HB., Wittemyer, G., Omondi, P., Kahindi, O., Muwanika, VB., Arctander, P., Douglas-Hamilton, I., Nyakaana, S., Siegismund (2008) Population Genetic Structure of Savannah Elephants in Kenya: Conservation and Management Implications. *Journal of Heredity* 2008:99(5):443-452 doi:10.1093/jhered/esn028

Quammen, David, (2008) Family Ties – The Elephants of Samburu. *National Geographic Magazine September Issue* p34-63

Rasmussen H.B., Ganswindt, A., Douglas-Hamilton, I., and Vollrath, F. (2008) Endocrine and behavioral changes in male African elephants: Linking hormone changes to sexual state and reproductive tactics *Elsevier. Hormones and Behavior* 54 (2008) 539-548

Rasmussen, H.B., Okello, J.B.A., Wittemyer, G., Siegismund, H.R., Arctander, P., Vollrath, F., (2007) Age- and tactic-related paternity success in male African elephants. *Behavioral Ecology* doi:10.1093/beheco/arm093



Njoki Kibanya

STE Staff and Associates



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Camp Guard



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Education Officer



Barnerd Lesowapir
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Beatrice Wamburi
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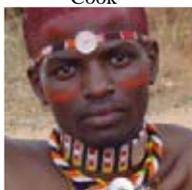
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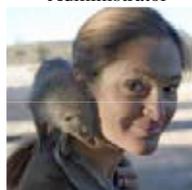
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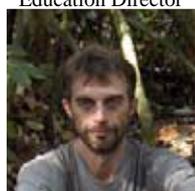
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Donors and Partners

Without the outstanding support and generosity of our donors, Save the Elephants would be at a total loss and none of the vital conservation work that we do would be feasible. It is with this in mind that all of us at STE extend a very heartfelt thank you to anyone who has ever contributed to our projects in any form. We are truly indebted to you and applaud your kindness.

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The Following are donations (including in-kind) received between 1 September, 2007 and 21 August, 2008:

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Without the outstanding support work of many people behind the scenes, none of what we achieve at STE would be possible. With this in mind, we would like to say a very special thanks to all those people who work tirelessly, enabling STE to function the way it does. We are also very grateful for the continued support of WCN and Ambrose Appelbe, and for all of Oria Douglas-Hamilton's assistance with fundraising.



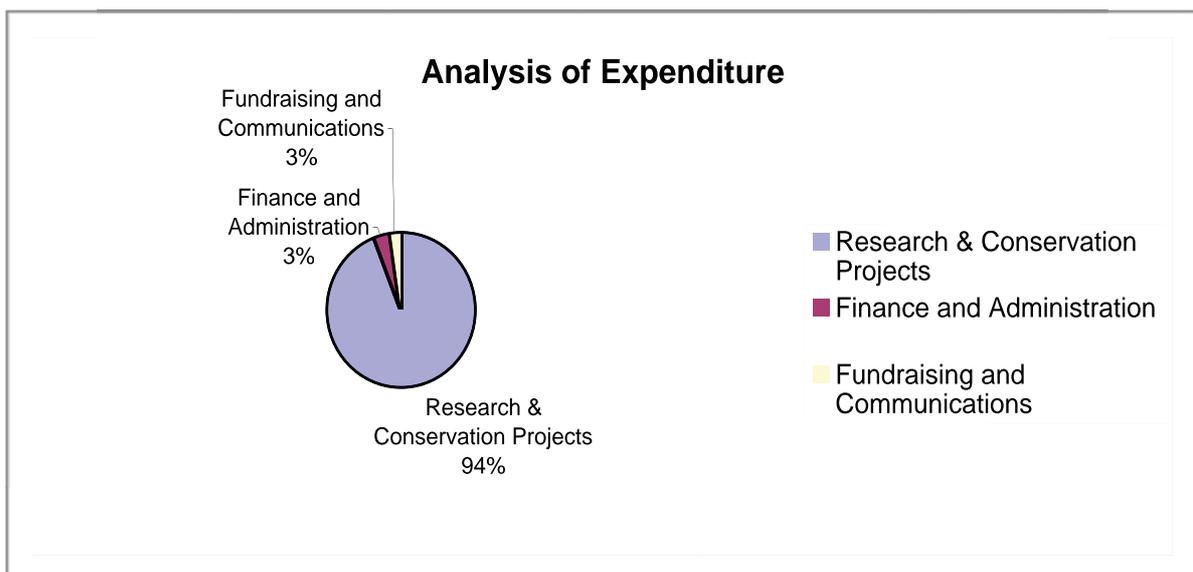
Financial Overview

Save The Elephants

Statement of financial activities (unaudited) for the year ending 31 August 2008

(\$)

Income	
Donations, Grants & Royalties	681,020
Total Income	681,020
Expenses	
Program Expenses:	
Samburu Project	46,543
Tracking Animals For Conservation	42,226
Marsabit Project	10,463
MIKE Project	34,976
Education Project	53,396
Community Support	10,682
GIS Services & Training	9,608
Boni Forest Project	24,765
Ewaso Tracking Project	19,545
Globe Foundation Project	12,639
Aeroplane, Aerial and Ground Support	49,976
Field Logistic Support and Communications	70,900
Elephant Project, Mali	195,731
Human Foot Print	35,458
STE Web News Service and Overseas Training	30,632
CITES Conference, Elephant Count and Ivory Study	14,995
Carnivore Project	18,426
Trans Boundary Elephant Project	473
Capital Expenditure (vehicle, computers, and field equipment)	52,600
	734,034
Supporting Services Expenses:	
Finance and Administration	27,150
Fundraising and Communications	21,200
	48,350
Total Expenditure	782,384



Wainaina Kimani



Contact and Donations

Contact Us:

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How to Donate:

STE relies entirely on the generosity of our supporters to continue our research and to help save elephants. You can help us secure a future for elephants by sending a cheque to any one of the addresses below, by making an online donation, or by remembering us in your will. No donation is too small but the stakes for the African elephant are high, so please give generously.

Online:

www.savetheelephants.org

www.wildnet.org (USA)

www.justgiving.com/savetheelephants (UK)

USA:

Wildlife Conservation Network / Save the Elephants
Project 25745 Bassett Lane
Los Altos, CA, 94022
(100% of all donations sent through WCN go directly to STE)

UK:

Save the Elephants
c/o Ambrose Appelbe
7 New Square
Lincoln's Inn, London, WC2A 3RA
Reg. Charity No. 1118804

Kenya:

Address as above

South Africa:

Funds for the South Africa project can be transferred directly into the following bank account:
Transboundary Elephant Research Programme
Account number: 033356165
Standard Bank, Hoedspruit Branch
Code: 05-27-52
International Banking Account Number: SBZAZAJJ



SAVE THE ELEPHANTS



Photo credit: Michael Nichols, National Geographic Magazine