



# OVERVIEW

Annual

## Cheetah Conservation and Human Impact in Kenya

By: Mary Wykstra – Action for Cheetahs in Kenya (ACK)



Photos: Left to right-Cheetah in Samburu (photo by Peter Barber); Chris Lentaam and Cosmas Wambua tracking in Samburu, Cattle in Salama, Collared cheetah in Samburu.

### SUMMARY

The *Action for Cheetahs in Kenya (ACK)* mission is to promote the conservation of cheetahs through research, awareness and community participation in Kenya. ACK works closely with local wildlife authorities and land holders to develop policies and programmes which support wildlife conservation and human livelihoods for the long-term development of sustainable human and wildlife zones. The project receives technical and financial support from the Cheetah Conservation Fund (CCF) and works in affiliation with the Kenya Wildlife Service (KWS). ACK links with other large carnivore programmes through *Carnivores, Livelihoods and Landscapes (CaLL)*, a Kenya non-profit organization.

The cheetah (*Acinonyx jubatus*) is classified as Vulnerable (IUCN 2008). Current study results show that Kenya holds 1200-1400 cheetahs with over 75% residing on land outside protected areas. Cheetahs have been extirpated from 25% of their historic Kenyan range in the last 20 years (KWS 2010). The goal of this project is to promote cheetah population sustainability in Kenya through coexistence with people. The objectives are 1) Identify factors affecting cheetah livestock predation and mitigate conflict; 2) Understand cheetah habitat and prey selections; 3) Influence public and administrative changes to positively affect cheetah conservation-management protocol. The project focuses on two regions (Salama and Samburu) which are identified as a high priority in the National Cheetah and Wild Dog Strategic Plan and follows methods recommended by the Global Cheetah Master Plan.

Current research includes conflict evaluation, GPS-collars, habitat survey, and faecal analysis. Results identify factors influencing cheetah habitat selection and issues affecting livestock predation. This information assists in problem animal-control measures to prevent the killing of cheetahs and promotes ecological awareness through community education and school programmes. ACK community development projects support sustainable activities to alleviate poverty that empower participants to be leaders in the community and encourage positive conservation attitudes.

## ORGANIZATIONAL STRUCTURE

The ACK Director (Mary Wykstra) and Senior Research Scientist (Cosmas Wambua) developed research and education programmes through support from CCF from 2002 to 2008. Since 2009, we have continued to work in affiliation with CCF and KWS under a permit through the Ministry of Education, Science and Technology. The ACK office headquarters is based in a rented home in Nairobi where all data is stored and administration activities occur. With the completion of the national survey (2007), the generated report focuses ACK research in regions where we will complement the KWS-adopted National Strategic Plan for Cheetah and Wild Dog (2010). This improves ACK links with KWS for programmes which will benefit the conservation of cheetah and enhance cheetah management programmes.

The primary ACK field base is a tented camp located near Salama town, in the Mukaa District (formerly part of the Machakos District). The study area is situated in parts of the Ukambani, Mukaa, Makueni and Kajiado districts and is the southern portion of the Machakos Wildlife Forum. Lumumba Mutiso is the ACK Community Liaison Officer in the Machakos Wildlife Forum (MWF), coordinating the collection of information on livestock losses and cheetah movements. “Cheetah Scouts” work in the Salama, Kiu and Ulu areas assisting with data collection, community awareness, and conflict mitigation.

A second field base is located in the Samburu District focused in the Meibae Conservancy and works in area affiliation with the Ewaso Tracking Project (Save The Elephant), and the Ewaso Lions Project. Chris Lentaam is the community officer in the Meibae area. Collaborations with Save the Elephants, the Ewaso Lions Project, Northern Rangeland Trust, African Wildlife Foundation, and EarthWatch International link ACK with other wildlife monitoring and cheetah specific programmes. Cheetah monitoring in this area has authority from the Samburu and Isiolo County Councils, and is conducted in collaboration with KWS and local conservancy management.

Donations specifically designated for Action for Cheetahs in Kenya are directed through Project Survival at Cat Haven ([www.cathaven.com](http://www.cathaven.com)) or CCF ([www.cheetah.org](http://www.cheetah.org)) for 501(c)3 tax deductible status in the USA. Other international donations can be designated directly to ACK through any CCF international institution or through Cheetah Friends Europe (CFE) ([www.cheetahfriends.nl](http://www.cheetahfriends.nl)). Semi-annual reports are written for CCF, KWS, partners and donors. ACK seeks local and international partners who wish to support Kenya-specific research, education and community development through funding and collaborative programmes. ACK also partners with Eco-Sys Action and the Wana Duma Children’s Project to expand education and development projects in the primary ACK study areas.

## I. ACCOMPLISHMENTS

The list of accomplishments from January – December 2010 includes:

### RESEARCH

- Ongoing use of community scouts and improved cheetah monitoring and conflict mitigation in Salama community areas
  - 80 Morning and Night driving game counts (Salama)
  - 80 walking game counts (Salama)
  - 61 conflicts were brought to the attention of our Salama field officers. 27 conflict interviews verified livestock lost to cheetah (6), Hyena (9), and wild dog (1) – eleven incidents were attended but there was not enough evidence to confirm the responsible predator. An additional 34 incidents were reported late or by neighbours thus verification of the loss could not be confirmed (cheetah (6), Hyena (16), jackal (2), wild dog (1), leopard (1), python (1), Unidentified (7));
  - Walking transects set up in Samburu in September and conducted October through December with the ACK scout and Meibae ranger staff completing 54 transects 9 data analysis still underway);
  - The highway continues to be the largest threat to predators in the Salama area with six animals being killed by vehicles in 2010 (python (1), serval (3), hyena (1), and jackal (1). The roads in Samburu are also being improved, but the same ratio of losses is not reported.
- Traps set between February and July in Salama (180 trap days - 3 traps x 60 days) and Samburu (1 trap x 50 days) with no successful cheetah capture - all traps were removed from the field for repairs and storage in August until 2011;
- KWS granted permission for Dr. Moshin Likoniwalla to work with us for cheetah immobilizations with KWS veterinary staff and when KWS veterinary staff are unavailable – Moshin has offered to donate his time for the cheetah radio collaring project;
- A female cheetah was darted and collared in Samburu, 27 January, with monthly monitoring until the collar ceased transmission in May. Search efforts of 15 days in June and July failed to locate the collared cheetah although tourist sightings occurred on days when ACK staff were out of the Park. In October the female was seen with 4 cubs in Buffalo Springs Reserve. She was seen several times after that, but lost 2 cubs.

### COMMUNITY DEVELOPMENT, EDUCATION AND AWARENESS

- Ranger training materials on predator track ID and livestock kill ID were printed and delivered in Westgate, Meibae, Samburu NR and Buffalo Springs NR;
- Successful termination of the three year Cattle Dip Project in Salama with a final workshop in March;
- Bee keeping workshop with one community youth group in August 2010; Four community videos and six school videos in Salama, reaching over 3000 people with information on the plight of predators in Africa.

## **II. RESEARCH AND EDUCATION ACTIVITIES**

### **A. ECOSYSTEM AND PREDATOR CONFLICT RESEARCH**

#### **1. National Census**

The KWS officially launched the Kenya National Strategic plans for cheetah, wild dog, lion and hyena in July 2010. ACK continues to complete the final survey analysis from fieldwork completed in 2007. Findings from the national survey are being used to make an addendum to the information in the KWS publication that was drafted prior to the survey completion.

#### **2. Ecosystem Monitoring**

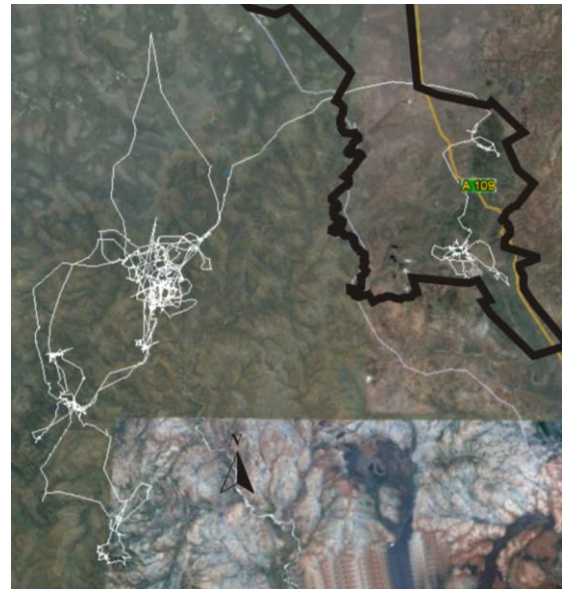
Land use changes and an increase in human activity throughout Kenya affect wildlife density and distribution. Land subdivisions, livestock diseases, human-wildlife conflict and poaching reduce prey base. These patterns are ever changing now that the shareholder-managed, commercial ranches have been sub-divided into smaller (5-27 acre) subsistence plots (Wambua 2008). ACK continues to document the effects of subdivision in the Salama study site through mapping of settlements and accompanying activities, evaluating changes in prey distribution and density and providing an opportunity to identify patterns of cheetah movement in relationship to livestock losses. The distribution of game across the Salama region indicates adaptations to the varied types of land use, especially in the time of day when they are active. The cheetah's preferred prey are scattered across the land; however, increased night activity of cheetah prey species might account for a rise in human-wildlife conflict and for adaptations including increased cheetah activity at night. As a follow up to the study conducted by Cosmas in 2008, we initiated game counts in April 2010 to monitor changes and trends in wildlife distribution, density and abundance two years after settlement was initiated in the Aimi ma Kalungu and Malili ranches (over 40,000 acres). Results of this comparison will be available late 2011.

Community "Cheetah Scouts" are visible members of the staff operating daily in cheetah-range areas. Herders and managers report livestock losses and predator sightings to a Community Liaison Officer (CLO) and Cheetah Scouts. In addition to collecting data on cheetah sightings and tracks, the scouts distribute information about cheetah behaviour and the reasons for livestock losses. The Scouts also prevent greater losses by helping to quickly find lost livestock reported to them. Scouts visit cheetah conflict sites within 24-hours (and often within hours) of a report to determine what might have led to the loss, assisting farmers with conflict mitigation especially improvement of livestock bomas. Cheetahs take advantage of opportunities to kill goats, sheep and calves when game is scarce and other pressures limit the cheetah to areas of human land development. Sightings, predator tracks, and conflict reports are entered into a database to evaluate cheetah movements and to map conflicts onto identified cheetah ranges and human settlements. Our scout program is being expanded into the Samburu district through affiliation with the Westgate and Meibae Conservancies, the Ewaso Tracking and Ewaso Lions projects, and Save the Elephants.

In 2010, we added walking transect monitoring to the duties of the Salama scouts, meaning that they use regular routes to monitor the prey and predator use. Point transects (40) and line transects (40) were conducted in January-December providing information to create a detailed map of cheetah and prey. Preparation for sniffer dog work and faecal collection was conducted in April through June. All materials and equipment were purchased for faecal processing and analysis.

### 3. Cheetah Movements

The cheetah (Jane), collared in August 2009 ceased transmission in November 2009 (figure 1). While it is possible that the collar is still recording points, she could not be located by standard tracking. If she is seen in our study area, or by research colleagues, every attempt will be made to trap or dart her for collar removal/replacement. The frequency of cheetah sightings declined slightly in early 2010 following heavy rains. Tall grass, greater prey dispersal and increased agricultural activities in the area could all play a role in the change of cheetah sightings. Two females, one with two and one with four cubs were seen regularly. Additionally, two adults (assumed to be males) and a single individual adult are among the reports most frequently noted. Despite cheetah tracks being seen in the area where traps were set, no cheetahs were trapped during the trapping sessions in March-June 2010. Trapping will continue in the Salama area after June 2011.



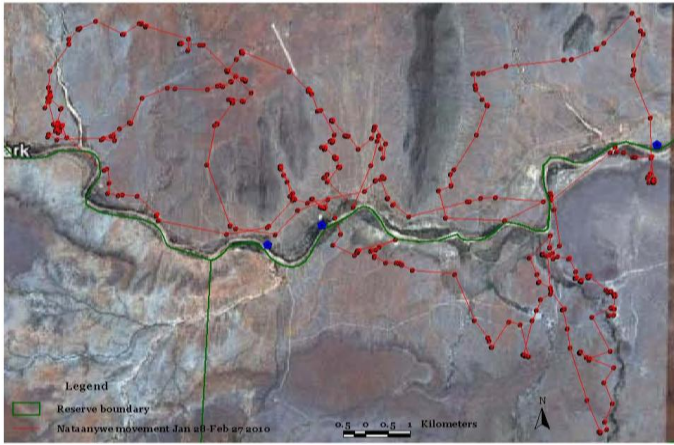
*Figure 1: GSM data from Cheetah “Jane” – crossing the Mombasa highway twice and travelling more than 50 km southeast of her collaring site.(Salama study area outlined in black.)*

It is believed that our originally collared female from 2005 again has two cubs (report received from community members June 2010 and confirmed tracks by Cheetah Scout) – from our estimates this would place her as a 12 year old mother! While it is possible that our original estimate based on receding gum line, broken and yellow teeth, and body condition could have overestimated her age at the time of collaring, it is still quite impressive that she has lived so long in a community area and is currently raising her 6<sup>th</sup> litter of cubs!

In January 2010, we successfully darted and collared a female cheetah (Nataanywe – meaning the anticipated one). ACK staff tracked the cheetah for monthly data downloads (figure 2), but the collar ceased transmission after three months. In June, Nataanywe was seen by tourists, but ACK staff could not locate her to evaluate collar replacement. Shivani Bhalla, director of the Ewaso Lions Project, confirmed the collar was not transmitting when she was able to get within 200 meters of Nataanywe in the end of July. ACK researchers returned to Samburu in October and November after reports that Nataanywe was seen in Buffalo Springs with four cubs. It was in



late November that she lost two of the cubs (believed to be due to a lion attack on the family). In December the new family returned to the Samburu NR where they were frequently seen.



**Figure 2: Downloaded data from Cheetah “Nattanywe” 2010— crossing the Ewaso River twice and travelling between Samburu and Buffalo Reserves.**

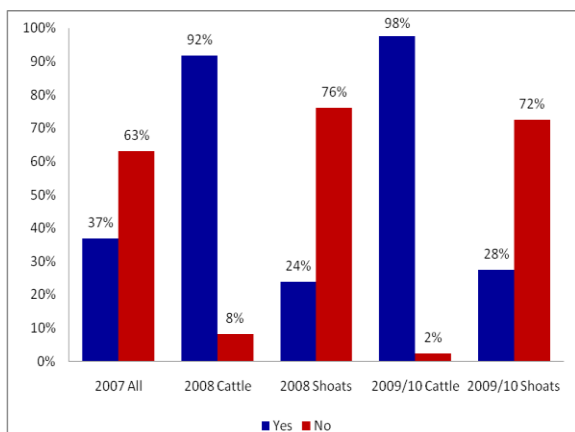
From March through June, a single trap was set for two weeks per month in Westgate, then in Meibae for three months with no success in catching a cheetah. Cheetah tracks were in the area, but again tall grass, well dispersed game, and high livestock activities could have been the reason for cheetah not taking the bait. Trapping will resume after June 2011 in Meibae. ACK is grateful to Ewaso Lions Project, Save the Elephants, Elephant Bedroom, Samburu Sopa Lodge, the Westgate Conservancy and the Meibae Conservancy for providing locations for accommodation at greatly discounted rates during our work in Samburu.

#### 4. Livestock Husbandry and Health

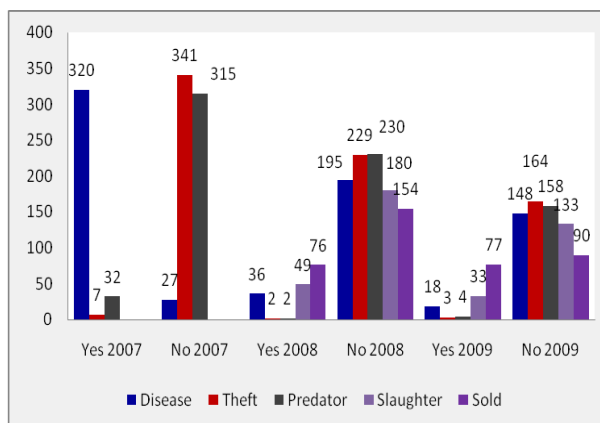
In March, we presented results of the dip project at a Dip workshop for the dip leaders, chiefs, area veterinary representatives, and representatives from the new chemical provider (Ultravetis) with data collected at interviews conducted in 2007-9. The goals of the project were: 1) to develop sustainable dipping stations in four areas for improved livestock husbandry as measured through dip records; and 2) to improve attitudes on wildlife conservation and predator issues as measured through interviews. Lumumba, the ACK Community Liaison officer, conducted interviews at each of the four dips for six months out of each year. He also monitored the record keeping and assisted with community meetings. *A full report on the results of this project is available on request.* This project was supported by Cheetah Friends Europe and private donations. The original renovations were funded in part through government support from the Constituency Development Fund of Kenya.



Results from the dip project gave the dip managers information on their target audience such as the percentage of cattle to shoats (sheep/goats) brought to the dip (figure 3). This information enabled the management to target their audience and to market their product to the missing audience. An example of the results from economic impacts of predators vs. other livestock losses showed that only 2% of livestock loss by farmers attending the dips came from predators (figure 4).



*Figure 3: People were asked if they bring all of their livestock to the dip each week. Most people bring all of their cattle to the dip, but few bring all of their sheep and goats (shoats). People attributed lack of funds to their inability to bring all livestock.*



*Figure 4: People were asked if they lost livestock to predators (yes - 2%), or other causes for changes in livestock numbers resulting in Disease (18%) Theft (2%) Slaughter (27%) Sale (51%). With predators being the lowest source of loss, the issue to address in livestock management is disease.*

Partnerships with dairy and meat production experts continue to assist the community; through partners we hope to develop programmes for improved production aimed at poverty alleviation in the Salama area. Eco-Sys Action also supports programmes in tree planting and cultivation, beekeeping, and handcrafts. Sustainable community programmes aim at connecting community and conservation for greater awareness of the effects of living with wildlife.

## B. PUBLIC EDUCATION ACTIVITIES

### 1. Education and Capacity Building

ACK presents educational materials to schools, communities and tourists on request. We piloted a video series depicting conservation activities from a private reserve in South Africa. This four-week programme was not well attended. Although some of the people found the subject interesting, they could not understand the South African accent, thus making it difficult for them to follow the subjects of discussion. We treated the group that piloted the movie to a light snack and comedy documentary of “Animals are People Too”, which received rave reviews. Videos on cheetah and leopard were presented at six schools, two primary and four secondary, and in three community settings. The video presentations were followed by a question and answer session where the people were invited to ask anything about the video or our work in Kenya. These discussions have been well received by the community with some claiming that they came for the discussion as much as for the video itself.

Eco-Sys Action (Hong Kong/France) and the Wana Duma Children’s Project (USA) functioned independently from ACK this year while we focus our efforts on research and publications. Mary was accepted to Yale University for a one-year program in the Forestry and Environmental

Studies Department and attended classes from September 2010. Her program will be completed in May 2011. Upon completion of the Master of Environmental Management degree, Mary will improve her skills to supervise local and international students, and will complete publications of results from studies carried out in the last several years.

Chris Lentaam is our Community Officer/Cheetah Scout supervisor in Samburu. After assisting with the trapping and tracking in April – June, Lentaam was given a one-year contract with ACK. After motorcycle training in Nairobi, Lentaam participated in further training with the Salama scouts. On return to Meibae, Lentaam worked with Cosmas to set up the wildlife monitoring transects for that area.

All of our field staff completed motorcycle training programmes in Nairobi in August 2010. Last year, our 4-year old used motorcycle stopped working. A generous donation from the Cleveland Zoological Society and Metroparks Zoo enabled us to purchase a new off-road motorcycle which will be shared by the Salama staff. In Samburu we will not be purchasing another motorcycle until our program is further established, however the training was also provided to Lentaam in anticipation of future driving needs. Use of the motorcycle improves our ability to reach conflict and cheetah sighting areas for loss consultation and data collection.

## **2. Volunteer Programme**

Returning volunteer Peter Barber assisted with camp construction in Salama and cheetah darting in Samburu in January-March, and also helped with data entry and game counts. Peter returned in October to November to assist Cosmas with research and project management. Volunteers Shannon Monroe (March to June) and Maxime Lapidaire (May to July) assisted with data entry, education material development and cheetah monitoring. Shannon assisted with the Cattle Dip workshop and led a teacher workshop review of the ACK teacher education packet that has been in production for the last few years. Both Shannon and Maxime edited the book and assisted with plans for distribution and testing of the material usage in schools. Dr. Mohsin Likoniwalla (B.VetMed, Veterinary Surgeon) is a local veterinarian who received authorization from KWS to assist in cheetah immobilisations, and will be advising on cheetah collaring activities. Chifuyu Beckett worked in the Salama area to set up programmes for evaluating stress levels and indicators of cheetah movement and behaviour. Faecal analysis studies will continue in collaboration with the Smithsonian Institute through Dr. Adrienne Crosier to identify prey through hair identification and to evaluate cheetah health through faecal corticosteroid assay testing. Maïke Beiber returned as a volunteer at the Salama camp to assist with staff management, game counts, and data entry in November.

Liz Larson is supported by Utah's Hogle Zoo and assists with volunteer communication from the US. Julie Good - from the Cleveland Metroparks Zoo – remains the liaison between ACK and the American Association of Zoo Keepers, but has discontinued work with web site management. We are currently seeking a web site manager.



### **III. PROJECT BENEFITS**

This project supports long-term plans for cheetah conservation and is endorsed by CCF, KWS, the Global Cheetah Master Plan and the Association of Zoos and Aquariums Cheetah Species Survival Plan. ACK is guided by the KWS National Strategic Plan for Cheetahs and Wild dogs launched in 2010, and works in affiliation with local and international partners to achieve goals in cheetah conservation and sustainable livelihoods for people. ACK is a member of CaLL, a programme which links carnivore research throughout Kenya. Our aim in Salama is to link with poverty alleviation programmes to improve livestock husbandry through disease prevention (cattle dip project), improve habitat (tree planting), snare removal, and the promotion of sustainable income generation (bee keeping and handcrafts). Effective livestock management techniques promote ecological awareness and participatory conflict mitigation. Our goals in Samburu are still in the base line phase with a great need for understanding cheetah movements and sustainability in pastoral and tourism-based areas.

Involvement of local authorities and inclusion of local employees improves community relations and conservation attitudes that are key factors for long-term success. ACK employees acquire research skills and knowledge through local and international training to stress the importance of wildlife conservation. Information is shared with local people and used in program development. ACK's Senior Researcher (SR - employed 2002), Community Liaison Officer (CLO - employed 2004) and Cheetah Scouts (employed 2008) are bridges between researchers and community. The SR was funded by CCF in his MSc (2008), and both he and the CLO were funded for Cheetah Conservation Biology and Integrated Livestock and Wildlife Training at CCF Namibia. These experiences lead to career advancement in wildlife conservation. The training materials from the 2008 workshops attended by Lumumba and Cosmas were used to develop a presentation as a part of the cattle dip final training seminar on livestock management as a business (Agribusiness).

The differences in cheetah distribution and behaviour in the various regions of Kenya emphasise the need for conservation efforts that work with all stakeholders. The information gathered from area efforts allows KWS to identify strategies for long-term cheetah conservation programmes and for policy decisions about translocation and problem-predator control. Building programme capacity in collaboration with KWS and local assistants is crucial to the success of cheetah conservation in Kenya. The monitoring of cheetahs and their ecosystems explains some cheetah movements in recently subdivided areas. Little is known about the influences of land use, environmental conditions and prey distribution on the regional adaptations of cheetah behaviours and home ranges. When this information is shared with the local communities, the tolerance for cheetahs improves (D'Udine 2009).

Community development activities build capacity within a community for business and livestock management. These programmes pave the way for future partnerships and encourage positive attitudes towards wildlife. The development of programmes for schools and tourists directly benefits the recipients, and indirectly benefits those with whom the recipient shares information. Tourism is one of the largest revenue generators in Kenya, and the cheetah is one of the key

species that people come to see. The people of Kenya will only benefit from their relationship with tourists if key animals, like the cheetah, continue to thrive.

#### **IV. PLANNED ACTIVITIES – 2011**

##### **RESEARCH**

- Monitor conflicts in the Salama and Samburu regions for ongoing conflict mitigation and awareness programmes;
- Continue wildlife counts and land-use monitoring in the Salama and Samburu regions;
- Collaborate with independent researcher in the use of spoor counts and camera trapping to estimate population density and cheetah distribution in and around Tsavo;
- Complete trapping and collaring of six additional cheetahs (2011-12) in the Salama and Samburu research sites to monitor movements and behaviours of cheetah in varying land use areas;
- Evaluate cheetah prey selection and stress hormone levels through cheetah faecal analysis in Salama area to develop a model for testing in other regions (Kenya and US Master's student in collaboration with KWS);
- Evaluate the usefulness of camera-traps in estimation of cheetah density in Salama and the Athi-Kapiti region;
- Use bait stations and camera traps to test alternative lures for cheetah capture and abundance testing (Master's student Erica Hermsen, Antioch University).

##### **EDUCATION AND AWARENESS**

- Continue the development of education and awareness programmes and materials for primary, secondary, local adult, and tourism sectors;
- Conduct environmental education and video presentations at schools in the Salama and Samburu region including programme monitoring and evaluation;
- Continue the development of local and international student intern programmes by identifying study sites and focus projects with KWS and other stakeholders, following the Wild Dog and Cheetah Strategic Plan;
- Participate in the KWS Large Carnivore Working Group and CaLL to promote links with other predator projects in Kenya, for the benefit of ecosystem preservation.

##### **COMMUNITY DEVELOPMENT**

- Monitor Kiu Livestock Dip Project 18 months after project completion (June 2011);
- Develop the Craft Sales Programme to create a business which offers an outlet to community-based crafts relating to wildlife and the environment;
- Link with Eco-Sys Wana Duma to launch micro-financing projects that are sustainable for the environment and economy;
- Improve programmes in trees and beekeeping to promote environmental caretaking..

## **VI. STAFF**

### **MARY WYKSTRA – Director, Action for Cheetahs in Kenya (ACK)**

Mary has been working with wildlife her whole life. After studying pre-veterinary medicine at Calvin College in Grand Rapids, Michigan (1982-1984), she received a Bachelor of Science degree in Zoology with a focus in Animal Behaviour from Michigan State University (1987). After college, Mary worked as a Zoo Keeper at Binder Park Zoo in Battle Creek, Michigan. In 1989, she moved to Salt Lake City and worked at Utah's Hogle Zoo as an Exhibit Technician; there she was responsible for fabricating enclosures for a large variety of animals, ranging from insects to elephants. In 1992, she was promoted to Exhibits Curator, and her duties were expanded to designing enclosures and supervising their construction and renovations. In 1998, Mary became involved with the (CCF), chairing a zoo keeper-initiated fundraiser event. This event (the "Cheetah Cha-Cha") became an annual event at Utah's Hogle Zoo with funds raised for CCF-initiated projects in Kenya.

In 2000, Mary moved to Namibia for six months to work as coordinator for the design and construction team of CCF Namibia's Education Centre. A year later, she returned to Namibia and spent another six months as a Research Assistant, assisting in all aspects of cheetah care and research at the facility. In December 2001, Mary was appointed the CCF Representative in Kenya and launched a study of farmland issues affecting cheetahs in Kenya. The data collected during this project, which includes information gathered from interviews with farmers and land managers in the Rift Valley region, is now used by ACK to develop solutions to cheetah-human conflict issues. Mary remains in close communication with both CCF Namibia and KWS, to establish an understanding of cheetah status in Kenya and to develop programmes in conservation and education.

Since 2009, Mary is the Director of ACK, and serves on the board of CaLL. She coordinates cheetah conservation programmes under the direction of ACK and in collaboration with KWS, through fundraising and field work in research, community development and education. ACK research remains in affiliation with and is supported by CCF. Mary operates under a permit from the Kenya Ministry of Education and Technology and in affiliation KWS. Mary will be attending Yale University in the School of Forestry and Environmental Studies to complete an MSc utilizing ongoing data collections in a one year professional study programme.

### **COSMAS M. WAMBUA – Senior Research Scientist, ACK**

Cosmas was born and raised in Machakos, Kenya. After graduating with a Bachelor of Science in Biology from Dr. B.R. Ambedkar University (Agra) in India, Cosmas volunteered with KWS for two years. His main duties involved GIS mapping, vegetation mapping, and animal census in various parks throughout Kenya.

In February 2002, Cosmas joined the Cheetah Conservation Fund –Kenya (CCFK) team as a research assistant. He now works for ACK to conduct data collection, data entry and analysis, and development of education programmes. He continues to utilise his cartographic skills to assist ACK in mapping and vegetation analysis in order to improve our understanding of cheetah habitat outside of protected parks. In July 2005 Cosmas attended an ESRI-sponsored GIS training course in Redlands, California (USA), to supplement his mapping skills. In July 2008 he completed his Master's Degree in Ecological and Systemic Biology at Addis Ababa University (Ethiopia). Cosmas' focus is ecological monitoring and

community development in the Salama region. He supervises efforts in the Salama area and coordinates the Community Officer and Cheetah Scouts. Cosmas maintains the ACK database and assures consistency in data collection methodology in the three study sites.

**P. LUMUMBA MUTISO – Community Liaison Officer, ACK**

Lumumba is a small-scale farmer who was born and raised in the Kiu/Salama area. In 2003, his livestock were being killed by cheetah and leopard, but he became interested in predators after meeting with CCFK staff. Lumumba was hired as the Community Liaison Officer in 2004. Travelling by motorcycle, bicycle and foot, he collects data on livestock losses and cheetah sightings and relays information to and from the people of his community. In 2008 Lumumba attended training courses in Namibia in Integrated Livestock and Wildlife Management and in Cheetah Conservation Biology. Lumumba coordinates ACK community activities and field data collection in the Salama area.

**CHRIS SIMON LENTAAM, ACK Community Officer Samburu**

Chris completed his secondary education at Marsabit Boys School in northern Kenya through a bursary from the Northern Rangelands Trust. He volunteered as a part-time ranger and radio operator for the Meibae Conservancy and participated in training for community work and ranger operations. Chris is interested in pursuing a career in conservation and business. He will be coordinating ACK activities in the Samburu region.



### **Additional Staff and Affiliates:**

Pius Mutila, Jimmy Kitange – Community Cheetah Scouts and Field Assistants (ACK, Salama)  
Ken Ochieng and Marck Matua– Housekeeping Staff (ACK, Nairobi and Salama)  
Cherie Schroff – Conservation Biologist (Tsavo Affiliate)  
Susanne Garrison, Susan Njeri, Daniel Karanja – Wana Duma Children’s Project (Gilgil Affiliates) and Christian Pilard ( Salama Affiliates)  
Dr. Francis Gakuya – KWS Veterinary Department (Mara/Samburu Mange Study, Collaboration)  
Dr. Moshin Likoniwalla – The Andy’s Veterinary Clinic (Cheetah Immobilization, Volunteer)  
Shivani Bhalla – PhD Candidate, Oxford University (Ewaso Lions Project, Collaboration in Samburu).  
Liz Larsen – US ACK Volunteer coordinator



*Photos: Left to Right: Introducing Westgate village to the trap, cubs in Nairobi Orphanage, Pius, Cosmas, Maxime, Lumumba and Jimmy during tracking training in Salama, Salama Research Camp.*

### **BIBLIOGRAPHY**

- D'Udine, F. (2009). Perceived effectiveness of domestic dogs and other livestock husbandry tools in mitigating human-cheetah conflicts in the Salama-Kiu region, Kenya. Geography. London, University College London). **MSc Conservation: 77.**
- IUCN (2008). An Analysis of Mammals on the 2008 IUCN Red List. Gland, IUCN, Conservation International, Arizona State University, Texas A&M University, University of Rome, University of Virginia, Zoological Society London
- KWS (2010). Kenya National Strategy for the Conservation of Cheetahs and Wild Dogs. Research. Nairobi, Kenya Wildlife Service.
- Wambua, C. M. (2008). Wildlife Density, Distribution and Abundance with emphasis on the Cheetah Prey in Machakos and Makueni Districts, Kenya. Department of Biology. Addis Ababa, Ethiopia, Addis Ababa University. Masters of Science.