



Photos: Left to right-Cheetahs in Samburu; General community interview with Floris D'Udine; A radio collar test with a goat; Mary Wykstra and Cosmas Wambua; A tent at the new Salama base camp; Wallace Isaboke giving a puppet presentation.

SUMMARY

The Action for Cheetahs in Kenya (ACK) project is the result of six years of affiliation with the Cheetah Conservation Fund (CCF) and Kenya Wildlife Service (KWS). Since January 2009, the project's 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 CCF. Linking with the other large carnivore programs provides comparative information and has resulted in the formation of a Kenyan non-profit organization, *Carnivores, Livelihoods and Landscapes (CaLL)*, which aims to link carnivore researchers and international partners to complement KWS projects.

The cheetah (*Acinonyx jubatus*) is classified as Vulnerable by the IUCN (CITES 1992). Currently, Kenya is home to nearly 1000 cheetahs with over 75% residing on public land outside reserves. Cheetahs have been extirpated from 25% of their historic Kenyan range in the last 20 years. Increased land subdivision and human settlement has resulted in the loss of habitat and prey, and an increase in cheetah-human conflict and human-related mortality of cheetahs. The goal of this project is to promote cheetah population sustainability in Kenya through coexistence with people. The ongoing objectives are 1) to determine the factors affecting cheetah livestock predation; 2) to mitigate human-cheetah conflicts; 3) to evaluate health of cheetahs in relation to human pressure; and 4) to establish cheetah conservation management protocol, which will be applied to saving cheetahs throughout Kenya. In 2009, the project focused on two regions identified as a high priority in the Eastern Regional Cheetah and Wild Dog Strategic Plan and follows methods recommended by the Global Cheetah Master Plan. An area in the Amboseli region (Mbirikani Group Ranch) will be added to our programme in 2010 through a PhD project conducted by Chifuyu Beckett.

Research includes conflict evaluation, targeted interviews, GPS telemetry monitoring, and habitat survey. Results help us evaluate prime cheetah habitat, factors affecting livestock predation, and, in 2010, will include health evaluation of resident cheetahs. The acquired information helps us control problem animals to prevent killing of cheetahs. It also promotes ecological awareness and conflict mitigation through school programs and community education. ACK community development projects support sustainable activities to alleviate poverty, empower participants as leaders in the community, and encourage a respect for conservation.







ORGANIZATIONAL STRUCTURE

The Kenya Director (Mary Wykstra) and Senior Researcher (Cosmas Wambua) developed research and education programs through support from CCF. Mary works in affiliation with CCF and KWS under a permit through the Ministry of Education, Science and Technology. The ACK office headquarters is from 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 they will most complement the KWS adopted National Strategic Plan for Cheetah and Wild Dog (2010). This improves ACK links with KWS for programmes which will most benefit the conservation of cheetah and the improvement of management programmes.

The primary ACK field base is a tented camp located 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 and community awareness and assistance in conflict mitigation.

A second field base is being developed in the Samburu District. This base will focus on cheetah monitoring beginning in 2010. The primary focus here is in identifying cheetahs for GPS collaring. Programmes in this area are linked to the Ewaso Tracking Project and the Ewaso Lions Project. Collaborations with the Northern Rangeland Trust and Earthwatch International will link predator monitoring and cheetah specific programmes. Cheetah monitoring in this area has authority from the Samburu and Isiolo County Councils and is also in collaboration with KWS and local Conservancy management.

In the south-eastern Kajiado district, PhD candidate, Chifuyu Beckett, will focus on cheetah monitoring and comparison of human wildlife conflict, cheetah behaviour, and stress levels of cheetahs. This area shares similar features to the Salama area, but is different in land use and level of conspesific predator interactions. This comparison aims to provide key elements in cheetah conservation for the development of policies, programmes and management protocols. This programme will link with the Living with Lions, MIKE and Predator Compensation programmes in the area. Again it will also work in collaboration with local community administration and KWS, and will employ cheetah scouts to assist in data collection.

Donations specifically designated for Kenya can be directed through Project Survival at Cat Haven (<u>www.cathaven.com</u>) or CCF (<u>www.cheetah.org</u>) for 501c3 tax deductible status in the USA. Other International donations can be designated directly to ACK, through any CCF International Institutions or through Cheetah Friends Europe (<u>www.cheetahfriends.nl</u>). Grants can be wired directly to the Kenya account, through Project Survival or through CCF offices in the USA depending on the preference of the grantee. In addition to direct donations, student and volunteer fees help support financial needs for ACK projects. 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 has partnered with Eco Sys Action to expand education and development projects in the primary ACK study areas.

I. ACCOMPLISHMENTS

The list of accomplishments from January – December 2009 includes: RESEARCH

- Ongoing use of community scouts and improved cheetah monitoring and conflict mitigation in the Machakos Wildlife Forum community areas;
- Operations of Salama based studies from the new field camp (May 2009);
- Completion of 200 Cattle Dip interviews (Apr-Jul 2009);
- Trapping and darting attempts in Salama and Samburu (96 trapping days [3 traps x 32 days] (Jan-Jul) and 28 trapping days [2 traps x 14 days] (Jul-Sept) Salama; 12 days field searches in Samburu);
- Construction of Robo-goat an artificial goat that moves and cries 24 hours/day which was tested in the Salama trapping sessions;
- Collaring of female cheetah (Salama, 5 August 09) and successfully receiving data into the Ewaso Tracking Project data base;
- Completion of 250 Community Interviews;
- Launching of Salama cheetah scout walking transects for detailed game density and abundance trend analysis.
- Incorporation of updated cheetah distribution data to complement the National Strategic Plan for Cheetahs and Wild Dogs.

COMMUNITY DEVELOPMENT, EDUCATION AND AWARENESS

- Judging of the tree-planting contest, with the winning school chosen for a field trip (June 2009);
- Planting 200 trees in the Marwa area;
- Partnership with Eco Sys Action (Hong Kong) to host Cheetah Football (Soccer) Cup and Ride for the Cheetah bike race;
- Partnership with independent field officer Wallace Isaboke (Kenyan) in community bee project, community videos and tree nursery project;
- Participation in Jamhuri Day celebration as a speaker at the local celebration;
- Ongoing partnership with Eco Sys Action, Cheetah Friends Europe and the Wana Duma Children's Project in disadvantaged children support programmes;
- Ongoing partnership with Eco Sys Action in development of micro-finance project.

II. RESEARCH AND EDUCATION ACTIVITIES

A. ECOSYSTEM AND PREDATOR CONFLICT RESEARCH

1. National Census

After completion of the survey in October 2007, the distribution and location of current study areas have been updated and mapped. The second draft of the full survey report is still under editing and expected to be completed next year (2010). The report's data on cheetah distribution and population will be used for an addition to the National Strategic Plan for Cheetahs and Wild Dogs for an official launch in February 2010. All data has been merged and regional reports are being prepared for publication.



Figure 2: Rough estimated cheetah population in Kenya

Location	Min	Max
Nakuru/Naivasha,Baringo/Bogoria (KWS/CCFK 2003)	17	30
Masai Mara - KWS	38	60
Kaiado - Magadi	60	113
Laikipia(KWS/CCFK 2004)	77	214
Tsavo East, West, Taita	103	120
Samburu District	232	594
Isiolo/Meru District	136	175
Turkana District	37	54
Marsabit District	55	77
Mandera/Wair District	93	220
Garissa, Tana Ijara	72	83
TOTAL	920	1740

2. Human Impacts on Cheetah

Figure 1: Cheetah distribution

Continued monitoring of human settlement and prey distribution complemented the cheetah monitoring activities in 2009. 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. Research in the Salama region provides an opportunity to identify patterns of cheetah movement in relationship livestock losses. These patterns are ever changing now that the shareholder-managed, commercial ranches have divided into smaller (5-27 acre) subsistence plots (2008). The distribution of game across the Salama region shows adaptations to the varied types of land use especially in the time of day of activity. The cheetah's preferred prey are scattered across the land, but show increased night activity, which could account for decreased diurnal cheetah activity and the increased human-wildlife conflict.

This year (2009) was recorded and the worst drought in the last 40 years, thus the level of poverty and desperation for food and natural resources were at a peak. Poachers' snares and illegal charcoal burning, in areas where ranch security once patrolled, have resulted in a large reduction of the cheetah's prey base. Cheetah scouts, in collaboration with KWS patrols, aim to reduce this threat by removing snares and educating the community about the dangers of unsustainable land use.

Community "Cheetah Scouts" are visible members of the staff operating daily in cheetah rang areas. In addition to collecting data on cheetah sightings and tracks, the scouts distribute information about cheetah behavior and the reasons for livestock losses. The Scouts also prevent greater losses by helping to quickly find lost livestock reported to them. Herders and managers report livestock losses and predator sightings to a Community Liaison Officer (CLO) and Cheetah Scouts. Scouts visit cheetah conflict sites within 24hours of a report to determine what might have led to the loss, assisting farmers with conflict mitigation. 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



Photo by Maike Bieber – Jimmy, Pius and Lumumba; cheetah scouts and Community Liaison officer respectively

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. Predators that are found dead are also recorded – the majority of the 2009 losses were serval which were hit by car (7) on both main and secondary roads. We have added walking transect monitoring to the duties of the scouts, meaning that they use regular routes to monitor the prey and predator use.



GSM data from Cheetah "Jane" – 50 km south of her collaring site.

Following the September 2005 case study on a radio-collared cheetah, KWS granted permission to collar an additional four cheetahs in Salama to further determine their pattern of movement and behavior. Cheetah traps were set from August 2008 - August 2009. Detailed data on cheetah movements was collected by scouts to determine trap locations, and one cheetah female was captured and collared in August 09. The telemetry monitoring study is guided by Chifuyu Beckett to evaluate cheetah home ranges in areas of human settlement. Chifuyu's PhD will compare the Salama region to a pastoral area near the Amboseli National Park (Mbirikani Group Ranch), in order to determine the movement and behaviours, and evaluate cheetah stress levels as related to varied land uses and human influences. Additionally, these results will be compared to a pastoral region outside of the Samburu Reserve in northern Kenyaa project made possible by our partnership with Save the Elephants and the Ewaso Tracking Project. Monitoring in these three areas will provide valuable data on cheetah responses to human impacts.

Using what we learn about cheetah behaviors from our telemetry (radio collar) studies, we are able to suggest action to help communities prevent livestock losses. Modern technology allows us

to record a collar's location every hour, and a collared cheetah's speed every 15 minutes. The collar will also record ambient temperature. Information from this study will be used to model cheetah conflict mitigation policy throughout Kenya.

3. Livestock Husbandry and Health

Community development in the Salama region has been focused mainly on the renovation of four livestock cattle dips in the cheetah monitoring region. A livestock dip uses a short acting chemical bath of acaricide, which kills and repels tse-tse flies and ticks, to aid in control of disease.

This project aim was to develop a sustainable community project through a three-year (2006-2009) plan, whereby farmers improve their husbandry habits, and we learn how much livestock can be saved by eliminating disease. As a follow-up to last year's management training, this year's focus was on community understanding of the importance of the project for long-term livestock health. Community meetings allow locals to ask questions of the dip managers, chemical providers, and ACK and KWS staff. Management committees must show transparency in their accounting and management of the dips as a requirement in program participation. The initial evaluation of the programme shows improved productivity in milk and meat, and decreased losses from tick-borne disease. The connection between the project and cheetah conservation was stressed in 2009 in preparation for the dips full turn over to the community. Programme sustainability will be tested through a follow-up evaluation of dip operations, but all dip management will be the full responsibility of the community.

Partnerships with dairy and meat production experts continue to assist the community; through them 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. New programmes will be linked to the Eco Sys Wana Duma micro-credit project in 2010 to improve business management for livestock and a variety of other projects.

4. Use of dogs and other husbandry practices

CCF Namibia and other projects in Southern Africa use livestock-guarding dogs to protect small stock from cheetah attacks. To evaluate feasibility for such a programme in the Salama region, an MSc student, Floris D'Udine, was approved for a study evaluating the distribution of settlements and the use of dogs and other livestock husbandry practices. The interviews from this study will also be compared to conflict interviews conducted by ACK staff in the last 4 years. This will allow us to implement further programmes in livestock loss prevention.

From April-June 2009 Floris supervised 145 interviews with random households in our general study area. Interviews were conducted using our existing staff and were aided by two other community members (Mike Wambua and Sam Bansah). The study showed that the primary use of dogs is for guarding of the homestead and that few people give proper care to the dogs. The average life of a dog in this area was 5 years with less than US\$200 being spent for care of the dog per year. An interesting finding in Floris' study was that people with more dogs and larger herds were more likely to report the loss of livestock to predators. Also that people with higher education levels have a higher tolerance for predators than those who are less educated. People expressed interest in learning more about the use of dogs in livestock loss prevention. This stresses our needs to continue to develop stronger education materials and to spend more time with the people in communities that share the habitats with cheetahs.

B. PUBLIC EDUCATION ACTIVITIES

1. Education

ACK presents educational materials to schools, communities and tourists on request. Presentations to communities include showing educational videos, speaking at public barazas (community meetings) and hosting informal discussions with various community groups. Local and international volunteers assist in drafting supplemental materials and activities for school presentations. Our tourism presentation explicates the links we have with local and international partners. Two ACK staff members are members of the Kenya Professional Safari Guides Association at the bronze entry level.

Past volunteers have been supporting school fees for disadvantaged children in Gilgil (near Nakuru where CCFK was based 2002-6) and in the Salama study area. In collaboration with Eco-Sys Action (Hong Kong/France) and the Wana Duma Children's Project (USA), a non-profit organization has been formed. "Eco-Sys Wana Duma" keeps sponsored children in school and healthy by providing consultation and funding. The project looks at the needs of each child case by case. It will also address needs in some of the schools where the participating children attend. Wana Duma employees monitor the needs of the children and ensure that they become integrated, successful members of their home communities.

Wallace Isaboke presented programmes at 6 primary schools to test the effectiveness of three methods of information delivery. Wallace showed videos complimented by some cheetah and leopard status facts, he used posters that CCFK developed in 2003 and he used puppets to tell the story of the cheetah and present cheetah and leopard facts. He measured the level of understanding that the kids in Standard 4-7 had prior to and after the programme. Wallace is still running analysis on the data from the presentations. This will guide us in further programme development.



This year we partnered with Eco Sys Action and Sporting Conservation to host a sports weekend, linking the cheetah into the day's events and distributing information about environment. On the 12th December, the Cheetah Football Cup was sponsored by Eco Sys

Action. Sixteen teams competed in the daylong event. On the 13th, the Cheetah Bike Race was organized by ACK and Tand'Afrika and was sponsored by Eco Sys Action. Thirty-three bikers competed in a 30km race around the Aimi and Malili areas

where prey and predator co-exist with people. The goal of the event was to promote sustainable conservation and link Eco Sys and ACK with the community.



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In 2008, Senior Researcher, Cosmas Wambua, completed his Master's Degree in Ecological and Systematic Zoology, through the Department of Biology at Addis Ababa University in Ethiopia. He continues the ecological monitoring in the Salama region and is now our data base manager. Cosmas' focus is in gaining a better understanding of how the increase or decrease in game affects cheetah and livestock conflicts. As our database manager he is in charge of keeping consistency in data collection of ACK and our partners. Our Cheetah Scouts are trained by Cosmas in cheetah ecology and biology with the hope of promoting higher education opportunities. International training in Namibia is also a means of assisting local ACK and partner researchers to improve data collection and conflict mitigation in integrated farmland/wildlife ecosystems.

3. Volunteer Programme

Returning volunteer Peter Barber assisted with camp construction in Salama and cheetah capture attempts in Salama and Samburu in January-March. Susanne Garrison and Christian Pilard visited the children supported through the Wana Duma Programmes to show support in the name of the cheetah (duma). Eco Sys Action employee Melina Ibarra joined us on school visits and community programmes to evaluate poverty alleviation concepts, especially pertaining to water collection. Eco Sys Action employee Hassan Njenga assists with community development and children's support in Salama. Wallace Isaboke completed his project supported by the Rufford Foundation and is currently writing his report and results. Sandy Ball assisted with an evaluation project to test different methods of presenting information in schools. The resulting method was implemented by Wallace Isaboke in six primary schools through poster, video and puppet presentations. Kelly Hansen and Maike Bieber assisted with the puppet programme.

Brenda Sherburn conducted art classes in Gilgil and Salama and currently raises awareness through her global programme "Save World Draw." St Lawrence University students Jacob Malcomb (May 2009) and Maxwell Olsen (Nov 2009) conducted month-long independent studies assisting us with cattle dip analysis and data entry in the Salama area. Darcy Ogada and Carla Raniki, who live in Kenya, assist in data analysis and awareness (posters and calendar design), respectively. Maike Bieber (Germany) and Victoria Yu (USA) were general volunteers assisting with data entry, written reports and general ACK operations. Dr. Mohsin Likoniwalla (B.VetMed, Veterinary Surgeon) is a local veterinarian who is receiving authorization from KWS to assist in cheetah immobilizations. Chifuyu Beckett arrived to be full time in Kenya working on her PhD and assisting ACK in accomplishing its mission. Chifuyu will be with the team for at least three years.

In the US there are two volunteers who greatly assist the ACK functions: Liz Larson is supported by Utah's Hogle Zoo and coordinates communication with volunteers. Julie Good is supported by the Cleveland MetroParks Zoo and assists with web site management.

III. PROJECT BENEFITS

This project supports long-term plans for cheetah conservation and is endorsed by CCF, KWS, the AZA Cheetah Species Survival Plan and the Global Cheetah Master Plan. ACK conducts poverty alleviation programs in Salama to improve livestock husbandry though disease prevention (cattle dip project), improve habitat (tree planting), conduct snare removal, and promote sustainable income generation (bee keeping and handcrafts). Effective livestock management techniques promote ecological awareness and participatory conflict mitigation.

Involvement of local authorities and incorporation of local employees improve community relations and conservation attitudes and is a key factor for long-term success. ACK employees acquire research skills, and knowledge through local and international training to stress the importance of wildlife conservation which is then shared with local people. 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, and both he and the CLO were funded for Cheetah Biology and Integrated Livestock and Wildlife Training at CCF Namibia. These experiences lead to career advancement in wildlife conservation.

The differences in cheetah distribution and behavior in the varied regions of Kenya emphasize the need for conservation efforts that work with all stakeholders. The information gathered from such efforts allows KWS to identify areas for long-term cheetah conservation programmes, and it can be used in 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 behaviors and home ranges. When this information is shared with the local communities, the tolerance for cheetahs improves.

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 – 2010

RESEARCH

- Monitor conflicts in the Salama region for improved conflict mitigation and awareness programmes;
- Continue wildlife counts and land-use monitoring in the Salama area and implement game counts in Mbirikani and Samburu;
- Conduct telemetry studies through radio collaring in Salama, Mbirikani and Samburu regions in collaboration with PhD student and the Ewaso Tracking project;
- Complete the Salama livestock dip project and report results;
- Collaborate with independent researcher in the use of spoor counts and camera trapping to estimate population density and cheetah distribution in and around Tsavo;
- Evaluate stress levels through collaborative PhD research in faecal cortical analysis (analysis of stress hormones) in Salama, Mbirikani and Samburu;

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 region including programme monitoring and evaluation;
- Use the national census data to conduct stakeholder workshops for identifying conservation focal areas in collaboration with KWS, EAWLS and other partners;
- Continue 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 Carnivores, Livelihoods and Landscapes to promote links with other predator projects in Kenya, for the benefit of ecosystem preservation;

COMMUNITY DEVELOPMENT

- Evaluate the sustainability of the Kiu Livestock Dip Project in supporting increased livestock productivity within the community;
- 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 for projects that sustainable for the environment and economy;
- Improve programmes in trees and beekeeping to promote environmental caretaking.

V. BUDGET

ojected 2009 Expenses	tual Jan-June 2009	tual Jul-Dec 2009 Expense	ojected 2010 Expenses		
	penses				
77,000.00	54,500.00	89,500.00	38,000.00		

Income: 2009 financial supporters include private donations, Cheetah Conservation Fund, Utah Zoological Society and Utah's Hogle Zoo, Cleveland Zoological Society and Metroparks Zoo, Kansas City Zoo, Cincinnati Zoo Angel Fund, St. Loius Zoo Field Conservation Grants, the Fresno chaffee Zoo, the Oregon Zoo, Cheetah Friends Europe, African Travel, Idea Wild, Cat Haven, Animal Ark, Binder Park Zoo, EcoSys Action, Nature Encounters Safaris, PAWS Safari, and JH Safaris. Additional income is received from craft sales, speaking stipends, volunteer fees and rent sharing.

Current affiliated organizations include the East African Wildlife Society, Kenya Wildlife Service, African Wildlife Foundation, Machakos Wildlife Conservancy, Ewaso Tracking Project and Save the Elephant.



The 2010 estimated Budget is itemized below:

BUDGET ITEM	METHOD OF CALCULATION	TOTAL US \$
STAFF	PI, (2) Research Assistants, Education Officer, Field Assistants/scouts	46,000
OPERATING	Office, communication, bank fees, park fees, permits	10,000
LODGING	Facility rental, food, insurance	50,000
TRANSPORT	Purchase of new vehicle and motorcycle - Maintenance, fuel, insurance (2 vehicles, 1 motorcycle), public transport	54,000
RESEARCH	Equipment, GSM Telemetry, veterinary supplies	41,000
COMMUNITY DEVELOPMENT PROJECTS	Dip, Education, Trees, Bees and Craft Projects	37,000
TOTAL	238,000	

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 Behavior 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 Cheetah Conservation Fund (CCF), chairing a zoo keeper-initiated fundraiser event. This event (the "Cheetah Cha-Cha") is now an annual event at Utah's Hogle Zoo. 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. Utilizing information gathered from interviews with farmers and land managers in the Rift Valley region, this project aims to develop solutions to cheetah-human conflict issues. Mary is in close communication with both CCF Namibia and the Kenya Wildlife Service, to establish an understanding of cheetah status in Kenya and to develop programmes in conservation and education. In 2009, Mary will be the Director of Action for Cheetahs in Kenya (ACK), and will be on the board of Carnivores, Livelihoods and Landscapes (CaLL). She will coordinate cheetah conservation programmes under direction of ACK and in collaboration with KWS, through fundraising and field work in research, community development and education.

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 the Kenya Wildlife Service (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 assists with data collection, data entry and analysis, and development of education programs. He continues to utilize his cartographic skills to assist ACK in mapping and vegetation analysis, to aid the 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). Beginning this year, Cosmas will be the Senior Research Scientist for ACK and will use his skills in Ecological Monitoring and GIS to coordinate academic programmes affiliated with ACK.

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 the predators after meeting with CCFK staff. Lumumba was hired as the Community Liaison Officer in 2004. Traveling 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 Biology. Lumumba will coordinate community activities and field data collection in the Salama area.

CHIFUYU H BECKETT, M.Sc., ACK Research Assistant and University of Pretoria PhD candidate

Chifuyu has experience working with CCF:capturing, immobilizing, and medically treating cheetahs in Namibia (2001), and tracking tagged cheetahs in both Namibia and Kenya. She earned a M.Sc. in Zoology from Georgia Southern University in 2004. She then worked as a wildlife veterinary technician at the Lion Country Safari in Florida, USA (2005-6). Chifuyu joined ACK in 2007. She will responsible for tracking cheetah movement, analyzing fecal matter andstress hormone levels, monitoring local ecology, and conducting regular community meetings. She also supervises Scouts in the Salama and Mbirikani regions.

Additional Staff and Affiliates:

Pius Mutila, Jimmy Kitange – Community Cheetah Scouts and Field Assistants (ACK, Salama); Ken Ochieng – Housekeeping Staff (ACK, Nairobi); Cherie Schroff – Conservation Biologist (Tsavo Affiliate); Wallace Isaboke – Conservation Biologist (Salama Affiliate); Susanne Garrison, Christian Pilard, Susan Njeri, Daniel Karanja, Hassan Njenga – EcoSys Wana Duma (Gilgil and Salama Affiliates); Dr. Francis Gakuya – KWS Veterinary Department (Mara/Samburu Mange Study, Collaboration); Shivani Bhalla – PhD Candidate, Oxford University (Ewaso Lions Project, Collaboration in Samburu).



Photos: Top Row - Beekeeping project; cheetah after a good meal; Scout conducting interview, schoolchildren after planting trees; trap set for cheetahs.

Bottom Row – Cattle dip managers; Hassan Njenga presenting at a community meeting; Robo-goat for trapping cheetahs; cubs playing in Samburu.

VII. REFERENCES

- Boone, R. B., S. B. BurnShilver, P. K. Thornton, J. S. Worden, and K. W. Galivin. 2005. Quantifying declines in livestock due to land subdivision. Rangeland Ecological Management 58:523-532.
- Brown, J. L., and D. E. Wildt. 1997. Assessing reproductive status in wild felids by non-invasive faecal steroid monitoring International Zoo Yearbook 35:173-191.
- Buys, D., and H. J. Keogh. 1984. Notes on the microstructure of hair of the Orycteropodidae, Elephantidae, Equidae, Suidae, and Giraffidae. South African Journal of Wildlife Research 14:111-119.
- Graham, L. H., and J. L. Brown. 1996. Cortisol metabolism in the domestic cat and implications for non-invasive monitoring of adrenocortical function in endangered felids Zoo Biology 15:71-82.
- Groom, R. 2007. How to make land subdivision work: An analysis of the ecological and socio-economic factors affecting conservation outcomes during land privatization in Kenyan Maasailand. Page 247. School of Biological Sciences. University of Bristol, Bristol.
- Karanth, K. U., and M. E. Sunquist. 1995. Prey selection by tiger, leopard and dhole in tropical forests. Journal of Animal Ecology 64 439-450.
- Keogh, H. J. 1983. A photographic reference system of the microstructure of the hair of southern African bovids. South African Journal of Wildlife Research 13:89-94Marker, L. 1998. Current status of the cheetah (*Acinonyx jubatus*). Pages 1-17 in B. L. Penzhorn, editor. A Symposium on Cheetahs as Game Ranch Animals, Onderstepoort, South Africa.
- Marker, L. L., J. R. Muntifering, A. J. Dickman, M. G. L. Mills, and D. W. Macdonald. 2003. Quantifying prey preferences of free-ranging Namibian cheetahs. South African Journal of Wildlife Research **33**:43-53.
- Munson, L., K. A. Terio, M. Worley, M. Jago, Bangot-Smith, and M. A., L. 2005. Extrinsic factors significantly affect patterns of disease in free-ranging and captive cheetah (*Acinonyx jubatus*) populations. Journal of Wildlife Diseases **41**:542-548.
- Rodrigues, S. 2008. Perceptions and attitudes of a Maasai Community regarding wildlife-damage compensation, conservation, and the predators that prey on their livestock. Human Dimensions of Wildlife 13:205-206.
- Nowell, L., and P. Jackson 1996. Wild cats: status survey and conservation action plan. IUCN, Gland, Switzerland.
- Rabinowitz, A. 1986. Jaguar predation upon domestic livestock in Belize. Wildlife Society Bulletin 14:170-174.
- Terio, K. A., L. Marker, and L. Munson. 2004. Evidence for chronic stress in captive but not free-ranging cheetahs (Acinonyx jubatus) based on adrenal morphology and function. Journal of Wildlife Diseases 40:259-266.
- Terio, K. A., S. B. Citino, and J. L. Brown. 1999. Fecal cortisol metabolite analysis for noninvasive monitoring of adrenocortical function in the cheetah (Acinonyx jubatus). Journal of Zoo and Wildlife Medicine 30:484-491.
- Wambua, C. M. 2008. Wildlife density, distribution and abundance with emphasis on cheetah prey in Machakos and Makueni Districts, Kenya. Page 70. Department of Biology. Addis Ababa University