

O V E R V I E W

2008

Year-end Report

Cheetah Conservation and Human Impact in Kenya

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SUMMARY

The Cheetah Conservation Fund - Kenya (CCFK) project was initiated in 2001 to conduct research and understand the issues facing the survival of cheetahs in Kenya. Since July 2005, the CCFK base of operations was from a home office in Nairobi. Field work to date included detailed evaluations of the Nakuru, Laikipia and Machakos Wildlife Forums (2002-4), a national survey of cheetah distribution (2004-7) a case study in the Machakos Wildlife Forum (MWF) (2004 – present), and cheetah monitoring in the Samburu and Isiolo districts launched in August 2008. Programmes include community participation in cheetah habitat monitoring, cheetah telemetry monitoring (radio collaring), verification of livestock losses and community development through Livestock Dips and data collection on livestock health and husbandry.

Supplemental programs in cheetah education and awareness are given in school, community and tourism sectors by request. Materials are developed with new information added as research findings support. Awareness and educational programs offer participatory involvement for mutual information sharing. Volunteers and student interns assist in program development and activity participation where possible.

Photos: Top Left- Cheetah in Samburu during initiation of monitoring programme; Top Center- Lumumba Mutiso conducts interview at cattle dip; Top Right- Salama research team; Bottom Left – School children planting trees; Bottom Right – Volunteer given tree to plant by cattle dip committee.

ORGANIZATIONAL STRUCTURE

The Kenya Director, Mary Wykstra, and Research Assistant, Cosmas Wambua, developed research and education programs under the support and mission of the Cheetah Conservation Fund (CCF). Mary works in affiliation with the Kenya Wildlife Services (KWS) under a permit through the Ministry of Education, Science and Technology which is valid through August 2010. Lumumba Mutiso is the Community Liaison Officer in the MWF collecting information on livestock losses and cheetah movements in the Makueni region. Three “Cheetah Scouts” were employed in the Salama area starting in August 2008 and Northern Rangeland Trust scouts collecting cheetah and lion data were employed through a partner project (Ewaso Lions Project) in the Samburu region in May 2008.

Grants and donations specifically designated for Kenya are channeled through the General Operating Budget of CCF Namibia via CCF administration offices in the USA or wired directly to a Kenyan account. In addition to direct donations, student and volunteer fees assist in support of the financial needs for CCFK projects. Semi-annual reports are written for CCF, KWS and donors. In December 2008, papers were submitted to the Office of the President to register a carnivore programme, Carnivores, Livelihoods and Landscapes (CaLL). Future cheetah studies in Kenya while remaining in affiliation with CCF will be formally managed under CaLL and will be called Action for Cheetahs in Kenya (ACK). This step will provide more freedom in seeking funds for the needed cheetah work in Kenya without the need to rely on already stretched CCF funding. It will give ACK the ability to seek local and international partners that wish to support Kenya specific research through funding and collaborative programmes.

ACK operations are based in Nairobi with the focused field study in Salama. With the completion of the national survey in the identified priority regions, the generated report will be used to focus ACK involvement in regions where they will most compliment the KWS adopted National Strategic Plan for Cheetah and Wild Dog (2007). Involvement in cheetah projects will compliment the efforts of KWS and work in collaboration with other carnivore programmes. Complementary programmes were accepted through KWS and CCF in August 2008 via researchers Cherie Schroff and Chifuyu Beckett for cheetah monitoring in the Tsavo, Samburu and Salama regions. In 2009, these researchers will also employ local assistants to utilize recommended cheetah monitoring programmes to test effectiveness of spoor counts, camera trapping and telemetry in evaluations of sustainable cheetah populations. Stress factors will be evaluated via interview and fecal analysis methods to incorporate programmes to stabilize Kenya’s cheetah population.

I. ACCOMPLISHMENTS

The list accomplishments from January – June 2008 includes:

RESEARCH

- Cosmas Wambua thesis defense and completion of an MSc. degree on wildlife density, distribution and abundance with emphasis on cheetah prey in Machakos and Makueni districts, Kenya (Publications pending);
- Draft report of National Cheetah Survey (final report pending peer review);
- Utilizing community scouts to improve data collection for cheetah monitoring and conflict mitigation in the MWF community areas.
- Development of cheetah monitoring in the Samburu region in collaboration with the Ewaso Tracking Project.
- Tsavo, Samburu and Salama studies approved by KWS and Ministry of Education and Technology to incorporate Cherie Schroff and Chifuyu Beckett into the ACK team.

EDUCATION AND AWARENESS

- January, May, July and December 2008 community meetings (baraza);
- Tree planting and environmental education at 4 schools (400 trees);
- Tree planting and environmental education at 2 cattle dips (1500 trees);
- Partnerships formed with EcoSys Action (Hong Kong), independent field officer (Wallace Isaboake, Kenyan) and Wana Duma Children’s Project (USA) to improve programmes;

- Cosmas Wambua (Senior Research Assistant) and Lumumba Mutiso (Community Liaison Officer) attended Integrated Livestock and Wildlife Training and Cheetah Biology courses offered by CCF in Namibia.

COMMUNITY DEVELOPMENT

- Monitoring of Community development activities as a three-year commitment of support for sustainable development of four Community Livestock Dips in the Kiu-Salama region;
- Cooperation with the KWS Community Officer for the Machakos/Makueni/Kajiado region (Julius Manza) in organizing and implementing snare removal exercises with international and local community volunteers;

II. RESEARCH AND EDUCATION ACTIVITIES

A. ECOSYSTEM AND PREDATOR CONFLICT RESEARCH

1. National Census

With the completion of the national survey in October 2007, the focus of 2008 efforts was in data analysis. The central and northern districts which fell into the Priority 2 category focused in the regions where little was known about cheetah distribution and where research is limited by infrastructure and security issues. In order to assure the most accurate report possible based on a single pass survey, it is important that the data be carefully considered in terms of consistency. Data collected included land use, water sources, wildlife and livestock, human settlement and ecological issues as they concern the presence and distribution of cheetahs. The data was re-evaluated and entered into the SPSS programme format for more accurate analysis as a result of the first peer review. Regions were also further separated to increase the ease of identifying priority cheetah conservation regions and issues that are distinct in those regions. A second draft will be peer reviewed in February 2009.

2. Human Impacts on Cheetah

Land use changes and an increase in human population and activity levels throughout Kenya affect wildlife density and distribution. The subdivision of land, livestock diseases, human-wildlife conflict and poaching reduces prey base. Research in the Kiu region of the MWF provides an opportunity to identify patterns of cheetah movement and livestock losses occurring within share holder managed commercial ranches after division into subsistence plots from 5 to 27 acres. The distribution of game across the various managed lands in the Salama region show adaptations to the types of land use. Cheetah preferred prey are scattered across the land, but show increased night activity which could account for the changes in diurnal activity of the cheetah and explain issues of human wildlife conflict. Continued settlement and prey distribution monitoring will compliment the cheetah monitoring activities in 2009.

In the Kiu area, cheetahs have been reported to opportunistically kill goats, sheep and calves since August 2002. Herders and managers assist in reporting livestock losses and cheetah sightings to a Community Liaison Officer (CLO) and Cheetah Scouts. Sightings, predator tracks and conflict reports are entered into a data base in order to evaluate the cheetah movements and to map the conflict cases in relation to identified cheetah ranges and human settlements. A large issue in the loss of prey base is indiscriminate snaring of wildlife and charcoal burning in the land which was once patrolled by ranch security. Cheetah scouts and organized patrols in collaboration with KWS aim to reduce this threat through snare removal and community education about the impacts of unsustainable land use.

Community "Cheetah Scouts" are visible members of the staff operating daily in cheetah conflict areas. In addition to data collection on cheetah sightings and tracks, the scouts assist in distributing information about the cheetah's behaviors and our understanding of the reasons for livestock losses. Lost livestock reported to the scouts can more quickly be found to prevent losses. Cheetah conflict sites are visited within 24 hours of the report to collect data on the circumstances leading to the loss in order to assist with conflict mitigation.

Following the September 2005- case study on a radio collared cheetah, permission was granted by KWS to collar an additional four cheetahs to determine the pattern of cheetah movements and behaviors of additional cheetahs in Salama. Cheetah traps were set in August 2008 without success. More detailed data on cheetah movements is needed through the scout monitoring programme and through camera trapping which will be implemented in 2009. This study is guided by a DPhil student (Chifuyu Beckett) to evaluate cheetah home ranges in settlement areas and will be compared to a pastoral region outside of the Samburu Reserve in northern Kenya . Additional areas are being evaluated for participation in the telemetry study (Mbirikani Group Ranch - Amboseli region) in order to determine the patterns of cheetah movements and the stress relationship to varied land uses. Using the information collected from telemetry studies, we can make suggestions to communities regarding the cheetah's behaviors as they influence livestock losses. Modern technology will allow the collection of location points every hour, and the speed of the cheetah movements every 15 minutes. Ambient temperature will also be recorded by the telemetry collar.

Cherie Schroff's request for evaluation of the Tsavo region using spoor and camera traps was also approved. She spent August 2008 in the Tsavo Parks and Rukinga Sanctuary identifying her base and the areas where spoor and camera trap methods will be used. These non-invasive methods will be conducted during the same time periods as the collar methods are used in Salama, Samburu and Amboseli regions for methodology effectiveness comparisons.

A KWS mange study in the Masai Mara and Samburu areas is also in collaboration with ongoing cheetah programmes. Further ties between the programmes will continue to link the needs for cheetah conservation in Kenya through Action for Cheetahs in Kenya.

3. Livestock Husbandry and Health

Community Development in the Kiu area has been directed through the renovation of four livestock cattle dips in the cheetah monitoring region. A livestock dip uses a short acting chemical bath (acaricide) to aid in control of disease by treating livestock to kill and repel ticks and tse-tse flies. This project aims to develop a sustainable community project through a three year (2006- 2009) plan whereby the project collects data on livestock husbandry and predator tolerance issues while assisting in improved livestock husbandry and improved understanding of predator issues. As a follow-up to last year's management training, this year the focus is on community understanding of the importance of the project for long term livestock health. Community meetings allow members to ask questions of the dip managers, chemical providers, cheetah staff and KWS. Management committees are showing 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 terms of milk and meat, and decreased tick born disease losses. The connection of cheetah conservation and the project will be stressed in 2009 as the dip programme is completely turned over to the community. Measures of programme sustainability will be tested through a longer evaluation of the operations of the dips via follow-up, but all dip management will be the full responsibility of the community at the end of 2009.

B. PUBLIC EDUCATION ACTIVITIES

1. Education

The project conducts education presentations to schools, communities and tourists on request. Presentations to communities include showing educational videos, public speaking at baraza (community meetings) and informal discussions with various groups of people and communities. Local and International volunteers assist in drafting materials and activity pages to be used as supplemental material during school presentations Information in the tourism presentation explains CCF links with local and international partners. Two staff members are members of the Kenya Professional Safari Guides Association at the bronze entry level.

Past volunteers have been assisting children through support of school fees for disadvantaged children in Gilgil (near Nakuru) and Salama study areas. In collaboration with an organization known as Eco-Sys Action, a non-profit organization has been formed. "Eco-Sys Wana Duma" assists through consultation and funding for keeping sponsored children in school and healthy. 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. Non-profit registration is pending government approval, but once fully authorized employees of the project will monitor the needs of the children and ensure that they become integrated, successful members of their home communities.

2. Capacity Building

Research Assistant, Cosmas Wambua, completed his Master's degree in Ecological and Systematic Zoology through the Department of Biology, at Addis Ababa University in Ethiopia. Wildlife monitoring through game count transects will continue in the area using the baseline data collected in Cosmas' Msc in order to fully understand the trend in game as it relates the cheetah and livestock conflicts. His skills will now be implemented through ongoing ecological monitoring in the Salama area and collaboration with our new partners, Chifuyu and Cherie in their respective study sites. Cosmas is now the data base manager and will assist in keeping consistency in data collection. Chifuyu and Cherie will be hiring local assistants once their funding is secure. Assistants will be trained in ecology and biology with the aim of higher education opportunities where feasible.

Mary Wykstra and two KWS Veterinarians, Dominic Mijele and Isaac Lekool, visited the CCF Namibia facility during annual cheetah health exams in March 2008. The visit was planned to improve the capacity of the KWS/CCFK team in immobilization protocols in anticipation of the telemetry programme. Additionally, KWS has implemented a study of the issue of mange in cheetahs in and around National Parks, primarily the Masai Mara and Samburu. Hands on experience with experts in current protocols for cheetah immobilization ensures the most up to date techniques are used in Kenya.

Cosmas and Lumumba Mutiso attended training courses in Namibia. Lumumba attended courses in Integrated Livestock Management and Cheetah Biology from July-August 2008. Cosmas attended the Cheetah Biology course in November 2008. These courses complimented the on-the-job experience of both men and aid with new skills in data collection, project design and understanding of model programmes in other regions.

Partnerships with Dairy and Meat production experts continue to assist the community in development of programmes for improved production aimed at poverty alleviation in the Salama area. EcoSys Action also supports programmes in tree planting and cultivation, bee keeping and hand crafts. Sustainable community programmes aim at connecting community and conservation for improved awareness of the effects of living with wildlife.

3. Volunteer Programme

Volunteer acceptance was scaled down in 2008 due to political issues in Kenya. Returning volunteer, Peter Barber, assisted with cattle dip management and game counts in January-March. Susanne Garrison and Christian Pilard visited the children supported through the Eco-Sys Wana Duma Programme to develop a program plan for support of disadvantaged children in the name of the cheetah (duma). Student volunteer, Jessica Summers, assisted with data entry and community relations in June. Sandy Ball, Amanda Perrett, Karen Dixon and Cheryle Robinson continue edits and revisions to education materials in anticipation of a final draft for testing in schools by the end of 2008. Stephanie Wingren and Bonnie Nelson assisted Chifuyu and Mary in Salama and Samburu cheetah trapping attempts in August 2008. Susanne Garrison and Christian Pilard returned in October and November for Wana Duma related projects in Gilgil and Salama.

III. BENEFITS TO KENYA.

An understanding of cheetah distribution and the differences in behavior in the varied regions of Kenya promote the need for conservation efforts which work with all stakeholders. The information assists conservation programmes and KWS in identifying areas for long-term cheetah conservation programs and can be used in policy decisions on translocation and problem predator control. Building capacity in collaboration with KWS and local assistants is crucial to the success of cheetah conservation in Kenya.

Monitoring of cheetah and their ecosystem provides answers to some of the issues of cheetah movements in recently sub-divided areas. Little is known about the influences of land use, environmental conditions and prey base 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 in business and livestock management. These programmes pave the way for future partnerships and encourage positive attitudes for wildlife. The development of programmes for schools and tourists directly benefit the recipients, and indirectly benefit those with whom the recipient shares information. Tourism is one of the largest revenue generators in Kenya, and cheetah are one of the key species that people come to see. The people of Kenya will only benefit from their relationship with tourists if the key animals, like cheetah, continue to thrive.

IV . PLANNED ACTIVITIES – 2009-10

RESEARCH

- Monitor conflicts in the Salama (Kiu) area for improved conflict mitigation and awareness programmes;
- Continued wildlife counts and land-use monitoring in the Salama area and implement counts in Mbirikani and Samburu;
- Telemetry studies through radio collaring in Salama, Mbirikani (Amboseli) and Samburu regions in collaboration with Dphil student and the Ewaso Tracking project;
- Collect data on livestock health and wildlife attitudes at the Salama livestock dip sites in affiliation with local and international universities;
- Collaborate with independent research in the use of spoor counts and camera trapping in estimating population density and cheetah distribution in and around Tsavo;
- Evaluate stress levels through fecal cortisol analysis in Salama, Mbirikani and Samburu;
- Utilize biomedical sampling and measurement protocols in collaboration between ACK and KWS research for understanding stress influences and disease in cheetahs in and around national parks.

EDUCATION AND AWARENESS

- Continue the development of education and awareness programs and materials for primary, secondary, local adult and tourism sectors;
- Conduct environmental education and video presentations at schools in the Salama region (Wallace Isaboke – includes programme monitoring and evaluation);
- Use the national census data to conduct stakeholder workshops for identifying cheetah 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 adopted by KWS in 2008;
- Participate in the KWS Large Carnivore Working Group to promote links with other predator projects in Kenya for the benefit of ecosystem preservation;
- Continue linking Kenya research with the goals of CCF and the Global Cheetah Master Plan.

COMMUNITY DEVELOPMENT

- Continue to Develop the Kiu Livestock Dip Project as a sustainable business supporting increased livestock productivity within the community;
- Develop Craft Sales Programme to create a business which offers an outlet to community based crafts relating wildlife and the environment;

- Improve programmes in trees and bee keeping promoting environmental caretaking.

BUDGET JUSTIFICATION

Projected 2008 Expenses	Actual Jan-June 2008 Expenses	Actual Jul – Dec 2008 Expenses
\$ 270,000.00	\$45,000	77,000

Income: 2008 financial supporters include private donations, Cheetah Conservation Fund – Namibia, the Utah Chapter American Association of Zoo Keepers (AAZK), Cleveland Zoological Society and Metroparks Zoo, Utah Zoological Society and Utah’s Hogle Zoo, Kansas City Zoo, Columbus Zoo, Cincinnati Zoo Angel Fund, SPOTS Europe, Detroit AAZK, Oklahoma City AAZK, Classic Escapes, St. Louis Zoo Field Conservation Grant, and Cheetah Friends Europe. 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, Machakos Wildlife Conservancy, Ewaso Tracking Project and Save The Elephant.

The 2009 estimated Budget is itemized below:

BUDGET ITEM	METHOD OF CALCULATION	TOTAL US \$
STAFF	PI, (2) Research Assistants, Education Officer, Field Assistants/scouts	54,000
OPERATING	Office, communication, bank fees, park fees, permits	15,000
LODGING	Facility rental, food, insurance	36,000
TRANSPORT	Trade-in purchase of new vehicle and motorcycle - Maintenance, fuel, insurance (2 vehicles, 1 motorcycle), public transport	75,000
RESEARCH	Equipment, GSM Telemetry, veterinary supplies	20,000
COMMUNITY DEVELOPMENT PROJECTS	Dip, Education, Trees, Bees and Craft Projects	30,000
	TOTAL	230,000

* Note: this budget does not include partner projects with Chifuyu Becket, Cherie Schroff or Wallace Isaboke as their work is self funded and in collaboration with ACK. Also separate is the KWS Mangle study in the Masai Mara and Samburu ecosystems. Budgets for these projects can be requested separately.

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 from 1982 to 1984, she received a Bachelor of Science degree in Zoology with a focus in Animal Behavior from Michigan State University in 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 responsible for fabrication of enclosures for a large variety of animals ranging from insects to elephants. In 1992, she was promoted to Exhibits Curator and duties were expanded to design the enclosures and supervise 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. In 2001, 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 cheetah 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, in the attempt to establish cooperation in understanding cheetah status in Kenya and developing programs 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 in affiliation with ACK and collaboration with KWS, through fundraising and field work in research, community development and education.

COSMAS M. WAMBUA – Senior Research Scientist, ACK

Cosmas was born in April 1975 in Machakos, Kenya. After graduating with a Bachelor of Science degree 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 mapping (GIS), vegetation mapping and animal census in various parks throughout Kenya. In February 2002, Cosmas joined the Cheetah Conservation Fund (CCF) - Kenya team as a research assistant. He now assists with data collection, data entry and analysis, and the development of education programs. He continues to utilize his knowledge of mapping to assist the CCFK through mapping and vegetation analysis to aid in understanding the status 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 Masters Degree in Ecological and Systemic Biology at Addis Ababa University (Ethiopia). In 2009, 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 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 CCFK staff. Lumumba was hired as the Community Liaison Officer in 2004. Using a motorcycle, bicycle and foot travel he collects data on livestock losses, cheetah sightings and is the relay for information to and from the people of his community. In 2008 Lumumba attended training courses in Namibia for Integrated Livestock and Wildlife Management and Cheetah Biology. Lumumba will coordinated community activities and field data collection in the Salama area.

Additional Staff and Affiliates:

Joseph Kisenge, Pius Mutila, Jimmy Kitange – Community Game Scouts/ Field Assistants (ACK, Salama), Ken Ochieng – Housekeeping (ACK, Nairobi), Chifuyu Beckett – Dphil Student (Salama affiliate), Cherie Schroff – Conservation Biologist (Tsavo region Affiliate), Wallace Isaboke – Conservation Biologist (Salama affiliate), Susanne Garrison, Christian Pilard, Susan Njeri, Daniel Karanja, Hassan Njenga – EcoSys Wana Duma (Gilgil and Salama Affiliate), 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-Cheetah wearing radio collar, Lumumb, Chifuyu and Jimmy examine predator tracks, Cheetah after treatment for Mange, EcoSys Wana Duma Team: Christian Pilard, Mary Wykstra, Susanne Garrison, Susan Njeri, Daniel Karanja, Hassan Njenga, Cheetahs in Tsavo Bottom Row – Cosmas and Wallace, Children planting trees, Cattle after being dipped, Cheetahs in Samburu, Delivering bee hives.