

O V E R V I E W
2006 year end

Cheetah Conservation and Human Impact in Kenya

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SUMMARY

The Cheetah Conservation Fund - Kenya (CCFK) project was initiated in 2001 with the goal of initiating cheetah research in Kenya to understand the issues facing the survival of cheetahs. Since July 2005, the CCFK base of operations has been from a home in the Mt. View Estate just 3km north of Westlands, Nairobi. The Kenya Representative, Mary Wykstra, and Research Assistant, Cosmas Wambua, develop research and education programs under the support and mission of the Cheetah Conservation Fund (CCF). CCFK works in affiliation with the Kenya Wildlife Services (KWS) under a permit through the Ministry of Education, Science and Technology, valid through August 2007. Lumumba Mutiso works with CCFK as a Community Liaison Officer in the Machakos Wildlife Forum (MWF) collecting information on livestock losses and cheetah movements in the Makueni region. A case study in the MWF was launched in January 2004 utilizing community participation in cheetah monitoring. As of March 2005, the MWF case study includes telemetry monitoring of a female cheetah and her cubs.

In 2004, a nation-wide cheetah census was launched in cooperation with KWS and East African Wild Life Society (EAWLS). A report was generated in 2005 analyzing the first Priority regions and the groundwork was laid for continuation of the study in 2006. The second phase of the census was initiated in May 2006 through funding from the Cincinnati Zoo Angel Fund and additional support from EAWLS Stichting Netherlands. The census work includes identifying regions with reported conflicts with cheetah and the presence of cheetahs is confirmed through field work. The goal of the project is to assist KWS in identifying sustainable and unique populations of cheetahs for future studies and programmes.

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.

ORGANIZATIONAL STRUCTURE

Under the umbrella of CCF Namibia, Mary works in affiliation with the KWS and under advisement of Dr. Laurie Marker. Grants and donations specifically designated for Kenya are channeled through the General Operating Budget of CCF Namibia through CCF administration offices in the USA. In addition to directed 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.

BASE OF OPERATIONS

CCFK operations are based in Nairobi with the focused field study in Salama. In 2006, the nation-wide census work focused in Eastern and Northern districts of Kenya (Priority 2 and 3-areas) with much of the base work conducted from the EAWLS office in Nairobi.

ACCOMPLISHMENTS

The list of 2006 accomplishments includes:

- The Nationwide census program, in collaboration with KWS and EAWLS, conducted Priority 2 region field work in the Tsavo, Taita and Samburu and Isiolo Districts;
- Reports were completed for the Laikipia and Machakos interviews conducted in 2004;
- Areas of cheetah presence were mapped of all areas evaluated up to December 2006 for evaluation at a National Census workshop planned for February 2007;
- An educational calendar (2007) was developed and distributed;
- Cheetah monitoring continues via the ongoing case study and radio tracking of problem cheetah in the MWF.
- Community development activities in livestock management were initiated with a Community Livestock Dip Management Workshop held in May 2006. Research and business plans were developed for project sustainability with workshops planned for 2007.
- Community development activities in livestock management were strengthened through renovations of four Community Livestock Dips in the Salama focal study area.
- Community “baraza” (information sharing meetings) were conducted at each of the four dip sites in December 2006 including representatives from the regional veterinary office, chemical manufacturer, KWS and regional administration.
- CCF Kenya and KWS representatives visited the Netherlands in August 2006 to meet members of a newly formed NGO’s, Cheetah Friends Europe and SPOTS.

I. ECOSYSTEM AND PREDATOR CONFLICT RESEARCH

The main focus of CCFK’s research in Kenya is the evaluation of farmland ecosystems for the long-term habitat viability for the cheetah. Information from Wildlife Forum interviews in 2002-4 (Nakuru, Laikipia and Machakos), Nation-wide Census data, and focused research in the Salama area (Machakos Wildlife Forum in the Kajiado District) can be combined to determine areas in need of further evaluation and areas of model programmes for supporting sustainable cheetah habitat. In other studies throughout Africa, it is known that cheetahs are negatively affected by conflict with other predators. Interviews show conflicts between people and other predators to vary from region to region. Links with the other large carnivore programs allows monitoring of the effects of other predators on cheetah populations. Affiliations with KWS include predator conflict data searches and access to data on predator numbers within and around KWS managed National Parks. CCFK has ongoing cooperation with the KWS Veterinary and Research Departments in protocol development for research and biomedical sampling (i.e. blood, hair, skin...), monitoring, trapping, collaring, knock down (tranquilizing) and necropsy procedures. The protocols are essential for consistency in data collection including measurements and health evaluations of cheetahs.

National Census

The current status of cheetah in Kenya is believed to be on a continuing decline. Past population estimates are based on calculations from studies mainly focused within Parks and Reserves. The base of this project is through the EAWLS office in Nairobi using a team of two EAWLS staff. While information on behavior and demographics is interesting and necessary for cheetah survival, we cannot apply conservation actions until we estimate cheetah numbers and determine where our efforts will have the most impact on future cheetah survival. Current population estimate studies were initiated in 2004, in affiliation with KWS and EAWLS, with the aims of 1) mapping conflict through analysis of KWS predator conflict reports; 2) evaluating cheetah presence through field data collection; 3) identifying areas of cheetah sustainability or unique situations in assisting KWS in identifying areas for further studies.

Phase one, completed in 2005, tested methodology where there was a higher degree of infrastructure in conservation, road network and security. Background work includes evaluation of KWS predator conflict records and reviewing reports from the areas targeted. Field work is dependant on the collection of KWS conflict data. Field work includes interview and observation based data collection for analysis through GIS mapping. Information on cheetah presence and areas of highest density are used as justification for long-term program development.

Areas targeted for the Nation-wide census include:

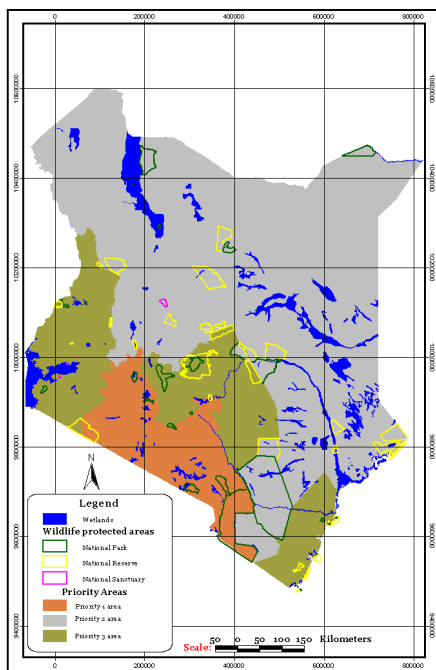


Figure 1: Target Priorities for Nation Wide Census

Priority 1 (completed 2005) – Establish a map of presence, absence and baseline population estimates to fill in the gaps where focused studies had already been done (KWS or CCFK). This phase evaluated selected areas in Narok, Kajiado, Nakuru and Transmara districts including: Masai Mara National Reserve, Nairobi National Park, Amboseli National Park, Tsavo West National Park, Lake Magadi and their adjacent wildlife dispersal areas.

Priority 2 – This area has less infrastructure and fewer past studies, but there is still a high need for data on presence, absence, and baseline estimates. It includes: Laikipia (report completed 2006), Tsavo East (field work completed 2006), Samburu (field work completed 2006), Isiolo (field work completed 2006), Meru Conservation Area (field work completed 2006), Marsabit, Nasolot, South Turkana, Kamnarok, Baringo, Bogoria, Wajir, Mandera, Turkana, Kora, Rahole, Tana river, Ijara, Lamu, Garissa.

Priority 3 – This area has little past records of cheetah and has high human numbers. It includes: Ruma (from Masai Mara), the area from Nairobi (Thika) to Tsavo East, Shimba Hills (South of Tsavo).

Weather and tribal clashes prevented field work in some of the northern and eastern regions in 2006. The remainder of the Priority 2 areas will be completed as soon as possible in 2007. Partnerships for the completion of the project are essential to its completion.

The GREAT CHEETAH CENSUS and **SNAP-A-CHEETAH** awareness programs were scaled back in 2006. Tourist and community individual photos are still accepted and catalogued until the census field work is completed. Upon completion of the field work with EAWLS the photograph submissions will be analyzed further.

Human Impacts on Cheetah

Land use changes and an increase in human population and activity levels throughout Kenya affect land use by wildlife. While pocketed populations of game are still strong on large commercial farms and on unsettled public land, these populations are changing over time. Subdivision of land, disease, human-wildlife conflict and poaching has reduced prey base throughout ranchlands. Livestock loss to cheetah is typically viewed as a minimal threat compared to that of lion, leopard, jackal and hyena, however localized cheetah problems are reportedly increasing in settlements where cheetah populations exist in close proximity to people.

The case study in the Kiu region of the MWF allows an opportunity to identify the pattern of cheetah movement and livestock losses due to cheetahs in recent subdivision of large ranches into subsistence plots of 5-27 acres. In the Kiu area cheetahs have been opportunistically reported killing goats, sheep and cattle since August 2002. CCFK was invited by the Wildlife Forum and the community to conduct studies on the issues facing the people in terms of wildlife conflict. The reported cheetah problem provides CCFK with the opportunity to involve community members in research and awareness towards the plight of the cheetah. Herders and managers assist in reporting cheetah sightings to a Community Liaison Officer. Sightings and conflict reports are entered into a database in order to evaluate the cheetah population density and to map the conflict cases in relation to identified cheetah ranges and human settlements.

The ongoing telemetry studies were initiated in March 2005 to provide information on movements and to map the range for a female cheetah. The female was initially collared when, with her five cubs, she killed a calf on a commercial ranch. The family was suspected to have been killing several goats and sheep from a neighboring settlement area. The collared family was tracked through dense vegetation, steep hills and areas of high human settlement - thus challenging the traditional thoughts of cheetah movement and habitat preference. After separation from their mother, two of the cubs (one of which was collared) were killed in poacher's snares in May 2005. The remaining three cubs could not be tracked, but community accounts still report three cheetahs to be resident in the area.

The collared mother gave birth to four cubs in August 2005. As she crossed the Mombasa Highway two of the cubs were killed on the road. The range of the family was mapped through December 2006 when she separated from the cubs. While it is typically recorded that a female will stay with her cubs up to 20 months these cubs have become independent at 15 months. The cubs remain in the area, but are not collared. The mother will continue to be tracked and community reports will continue to be collected in 2007. Their habitat use and proximity to livestock and settlements have been recognized within the community. The people have developed a network of communication whereby the locations of the cheetahs give warning of areas to be aware of when grazing. However, this family and an additional family of 5 and three males have opportunistically killed livestock throughout the study period

Through this monitoring we have become more aware of the impact of this highway on the cheetah population of the region, as there have been 5 cheetah deaths on a section of about 15 kilometers since 2003. Additionally two cheetahs were killed in poachers' snares and two were reported to have been killed by herders. The population of cheetahs in this region is estimated at 15-20 based on sighting reports and social groupings.

II. PUBLIC EDUCATION ACTIVITIES

Eco-tourism

Presentations in 2006 were requested through a number of tourism organizations including US operator Classic Expeditions, and Kenya operators JH Safari and Origin Safaris. The local Young Presidents Organization (YPO) also requested a two-day session with CCFK Staff. Involvement with the tourism sector provides income through requested donations as well as allowing the opportunity to

share information on the plight of the cheetah with local and international visitors to the Kenya wildlife refuges. Information in the tourism presentation explains CCF links with local and international partners. Fifteen presentations were given to over 200 tourists and their guides. CCFK staff remains members of the Kenya Professional Safari Guides Association as bronze members.

School Education

Local and International volunteers continue to draft a teaching workbook and activity pamphlet for Kenyan schools to supplement the existing CCF workbook. Editing and evaluation of the material will continue in 2007. A volunteer with a local performing group from the slums of Nakuru town have created a play to use the plight of the cheetah in an educational act which presents the issue facing the conservation of Kenya's wildlife. This performance is available to schools as a part of the group's educational activities. CCFK will request the group during student events in 2007.

One of CCFK's volunteers, Susanne Garrison has adopted sponsorship of 33 orphaned children through support of school fees, uniforms and materials. The sponsorship programme is being expanded to allow additional children to seek additional sponsorship in 2007 with the help of local and international volunteers.

Community Development

CCFK works with the Kiu community in tracking and identifying cheetah in the southern region of the Machakos Wildlife Forum. Through evaluation of community needs, CCFK chose the improvements of livestock dips as a target community project. A livestock dip uses a short acting chemical bath to aid in the control of disease by treating livestock to kill and repel ticks and tsetse flies. Some of the dips, which were built in the early 1900's have been closed or mis-managed over the years. Community committees were elected to take over management of the dips. The first of several dip management workshops was held in May 2006 with the Regional Veterinary Office and committee members from the four dips scheduled for renovation. Other workshops on livestock health and productivity, business management, and wildlife issues will be planned in 2007.

Through sponsorship from Cheetah Friends Europe (Netherlands), NK Brothers (Kenya), Rudy Nelson and Peter Barber (Canada) and Unga Feeds (Kenya), the renovations of four livestock dips occurred in October – December 2006. Renovations included resurfacing the concrete entry and exit paths, sealing of water tanks, replacing posts and rails and removal and replacing roofing. Three of the dips have selected pyrethroid-based chemical while one continues with the amatrax-based chemical. This project aims to develop a sustainable community project through a three-year plan whereby CCFK will collect data on livestock husbandry and predator tolerance issues. Affiliations with Nairobi and Kenyatta Universities will include local students in focused parasite projects in 2007.

On another community front, CCFK has developed a relationship with a number of craft persons through interaction in a large number of communities. CCF has initiated purchase of crafts and assists local artists and community groups to develop styles, colors and patterns for crafts specifically to raise funds for cheetah research. These crafts have been offered to international distributors and retail outlets.

Higher Education

Research Assistant, Cosmas Wambua, was accepted into a Master's course at Addis Ababa University in Ethiopia. His coursework in the Biology department will focus on Ecology and Systematic Zoology. His fieldwork will begin in June 2007 to evaluate the ecological impact of the subdivision on the habitat and prey base of the Salama area of the Kiu region. His studies will compliment the existing CCFK work in the region and provide a platform on which policy recommendations can be based for the land use in the area. Proposals are being evaluated for detailed studies in the Tsavo region (Cherie Scroff) and comparative home range studies of regions targeted in the nation-wide

census (Chifuyu Horikoshi-Bennett). Additional local and international student affiliations are reliant on the ongoing permit authorization for Mary to represent CCF as the research coordinator for CCF in Kenya.

Volunteer Programme

Local Kenya residents Amanda Perret, Cheryle Robinson and Alex Joji (Knowledge is Power) continue assisting with education materials, program development and fundraising activities. Interns, Milkah Njoki Kahiu and Wallace Isaboke, from East African Wildlife Society assist with the census project. Naomi Summerville-Large (Kenya) was an intern with CCFK as a part of her application for the President's Award from Greensted's Secondary School. The Lapidaire Family from the Netherlands provide ongoing support for facility and community development through funding with the Netherlands based Cheetah Friends Europe, and through physical assistance in the field. Christian Pilard of Eco-Sys (Hong Kong) assisted CCFK in project planning in the Craft Programme. CCF US staff person, Patricia Tricorache visited CCFK to assist Mary and Dr. Marker in programme planning in June. Sandy Ball (USA) visited Kenya to assist with the education and material and programme development, while Nicole Winterwood (USA) assisted with fieldwork. Peter Barber joined the project for 6 weeks to assist with the livestock Dip renovation. Divyan Khoda (UK/Kenya) joined in fieldwork and community meetings in August. Sarah Brooke (UK) returned to Kenya after completing her Masters with CCF in 2004 to volunteer for 3 months.

III. BENEFITS TO KENYA.

Monitoring of cheetahs in Machakos Wildlife Forum has given answers to some of the issues of cheetah movements in recently sub-divided areas. Data from the 2005-6 movements and livestock loss patterns from the collared cheetah and others recorded in the area are under analysis to evaluate the solutions and options for problem cheetah protocols. The visual sightings of the cheetah show remarkable adaptations in land use and prey preference in an area of increasing land fragmentation. This report will determine the need for ongoing and/or comparative monitoring projects in other areas.

The launch of the cheetah census program with EAWLS and KWS promotes a stronger base for claims of declining cheetah populations. The census identifies areas for long-term cheetah conservation programs and can be used in policy decisions on translocation and problem predator control. Information to date will be presented at a national workshop in February 2007 where members of the Global Cheetah Management Plan will aid in determining the direction of CCF activities in Kenya. KWS will attend the workshop and will also aid in developing the means whereby partnership projects can promote the conservation understanding and awareness for cheetahs.

The development of programmes for schools and tourists directly benefit the recipients, but will also indirectly benefit those with whom the recipient shares the 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.

PLANNED ACTIVITIES – 2007

CCF Kenya will:

- Complete Priority 2 regions for the Nation-wide cheetah population trend analysis with KWS and EAWLS.
- Utilize trend information to recommend focused projects for the benefit of the survival of the cheetah.
- Develop the Kiu Livestock Dip Project as a sustainable business supporting increased livestock productivity within the community.

- Initiate data collection at the Kiu Livestock Dip sights in affiliation with local and international universities.
- Continue the development of education and awareness programs and materials for primary, secondary, adult and tourism sectors.
- Continue development of local and international student intern programmes through identifying study sites and focus projects with KWS and other stakeholders.
- Evaluate information on cheetah sightings throughout Kenya using submissions from the “Great Cheetah Census” and “Snap-A-Cheetah” campaigns.
- Utilize biomedical sampling and measurement protocols in focusing efforts for cooperation with KWS for nation-wide use.
- Participate in 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.
- Monitor the case study cheetahs in the Machakos Wildlife Forum and link the monitoring program with Global Satellite to Mobile network technology.

Income: 2006 financial supporters include private donations, Cheetah Conservation Fund – Namibia, Origin Safaris (Kenya), Classic Escapes (USA)/JH Safaris (Kenya), the Utah Chapter American Association of Zoo Keepers, Cleveland Metroparks Zoo, Utah’s Hogle Zoo, Kansas City Zoo, Columbus Zoo, NK Brothers Construction (Kenya), Cincinnati Zoo Angel Fund. 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 and Save The Elephant.

CCF KENYA STAFF

MARY WYKSTRA – CCF Kenya Representative

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 B.S 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 zookeeper 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.



COSMAS M. WAMBUA – Research Assistant, CCF Kenya

Cosmas was born in April 1975 in Machakos, Kenya. After graduating with a Bachelor of Science degree in Biology from Dr. B R Amdedkar 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.



P. LUMUMBA MUTISO – Community Liaison Officer

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.