

**O V E R V I E W**  
**2003 year-end**

**Cheetah Conservation and Human Impact in Kenya**  
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Cheetah Conservation Fund, Kenya Representative

**June 2004**

## **INTRODUCTION**

The Kenya cheetah project was launched in December 2001 after nearly two years of preliminary work. The project is based on the Delamere Estates (DE) and works in affiliation with the Kenya Wildlife Services (KWS) under a permit through the Ministry of Education and Technology. Kenya Representative, Mary Wykstra, and Research Assistant, Cosmas Wambua, conduct research and education projects on behalf of the Cheetah Conservation Fund (CCF).

## **ORGANIZATIONAL STRUCTURE**

Under the umbrella of CCF Namibia and Dr. Laurie Marker, Mary works in cooperation with Kenya Wildlife Service (KWS) and under advisement of CCF. Grants and donations specifically designated for Kenya are channeled through the General Operating Budget of CCF Namibia.

## **BASE OF OPERATIONS**

CCF Kenya (CCFK) operations are based at the Delamere Camp manager's house. This Camp is on the Delamere Estates, Soysambu farm near Nakuru Town on the shore of Lake Elementaita. The Nakuru district is central in the Rift Valley including the towns of Nakuru and Naivasha. It comprises the land surrounding Lakes Naivasha, Elementaita and Nakuru. The northern border of the Nakuru Wildlife Forum (NWF) is shared by the Laikipia District prior to the town of Nyaharuru. The southern boundary is along Masai land. The western boundary is a combination of Masai land and the Mau Escarpment. The eastern boundary is the Aberdare Range and the Kikuyu Escarpment.

The focus of the study in 2002 was the Nakuru/Naivasha region. Education programs and long-term game monitoring continue in the NWF. In 2003, comparative evaluations were initiated in areas of more frequent cheetah sightings in the Machakos and Laikipia wildlife Forum districts. Cooperative studies with KWS evaluate Masai Mara and Kajiado districts. Other areas of evaluation include ranchland around the Tsavo Parks and Samburu Reserve in cooperation with private individuals and NGO's.

## **ACCOMPLISHMENTS**

The list of accomplishments through December 2003 for the Kenya project includes:

- Analysis of 2002 interviews with stakeholders within NWF and with surrounding communities;
- Ongoing game counts and habitat analysis in the NWF including semi-annual Forum-wide counts and specific monthly counts on the Soysambu Sanctuary on Delamere Estates;
- Networking in Machakos Wildlife Forum (MWF), Laikipia Wildlife Forums (LWF), and in the Tsavo (Taita Taveta Wildlife Forum) and Samburu (Save the Elephant) regions to lay groundwork for comparative interviews.
- 21 interviews conducted in MWF and LWF districts.
- Environmental Education Programs on cheetah and predator awareness with 24 schools reaching more than 2000 students in the Nakuru and Gilgil Municipalities (19 primary and 5 secondary schools.);
- Printing of 20,000 Primary and 20,000 Secondary activity pages for distribution during programs and by Friends of Conservation, Wildlife Clubs of Kenya and KWS;
- 20 presentations to tourists through local and international tour operators.
- Printing of tourism campaign brochures ("The Great Cheetah Census") launched in affiliation with Friends of Conservation's general tourism awareness campaign.
- Development of protocol for biomedical collection and measurements in cooperation with KWS. This includes protocol for sampling of live animals and necropsy sampling.
- Participation with KWS in biomedical collection of cheetah in the Masai Mara Reserve.
- Case study of problem cheetah in the MWF.

- Hosting two workshops on Kenya cheetah conservation (July and December), attended by representatives of KWS, other NGOs and research institutions, and interested individuals.
- Visiting the Serengeti Cheetah Research project to develop East African links in cheetah conservation.
- Establishing links with KWS and locally certified veterinarians to initiate biomedical collection and radio tracking programs for 2004.

## **RESEARCH**

### **National Census \*NEW\***

Two workshops were hosted by CCFK. The goal of the workshop was to encourage links between local researchers, NGOs and interested individuals. Because of information presented in the first workshop it was determined that the status of cheetahs in Kenya is still of question. While all the other information is interesting and necessary for cheetah survival, we cannot apply results until we know cheetah numbers and where our efforts will have the most impact on the future of cheetah survival. African Wildlife Foundation sponsored a part of the first workshop and sent representatives to both. East African Wildlife Society sent representatives to the second workshop to express their interest in partnering with CCFK to determine cheetah numbers. The development of plans for 2004 includes continuing education and awareness campaigns (“The Great Cheetah Census”, “Snap-A- Cheetah” and “Creative Expressions”) as well as identifying regions for conducting ground surveys using visual and interview analysis. (Details of the campaigns are under Education later in this report.)

### **Biomedical sampling**

In cooperation with the Kenya Wildlife Service a protocol for biomedical sampling (blood, hair, skin), knock down procedure, necropsy procedure and measurements of cheetah was developed. Sampling began in April 2003 in the Masai Mara and continued throughout the year. This procedure is available to all KWS and private veterinary practices to encourage the correct sampling for ongoing biomedical research. CCF Namibia protocols were used as a model and samples are submitted to the same studies as are done in Namibia. The White Oak Conservation Center funds shipment of samples to the US and CCF Namibia funds the shipment of samples to South Africa.

### **Ecosystem Research**

The focus of CCFK’s research in Kenya is the assessment of the farmland ecosystem for the long-term habitat viability for the cheetah. The project evaluates past and current issues through verbal interviews and visual analysis of the layout of the land.

CCF conducted habitat analysis in the Nakuru Wildlife Forum (NWF) through participation in game counts and through work with Master’s student Meredith Evans in 2002. Manchester University students expanded on her project beginning in July 2003. All reports are expected by March 2004.

While cheetah populations in the farmlands in NWF have never been high, the region supports a healthy prey base. Interviews show that NWF has seen a decline in cheetah sightings since 1990 from monthly sightings to less than yearly sightings in most of the regions' farms. Sub-division of land in the region has created a lower tolerance for predators, yet game populations have remained consistent or increased on properties participating in semi-annual game count census since 1996.

A strip count circuit was set up on a portion of the Soysambu farm on Delamere Estates to evaluate ungulate distribution over different vegetation densities. The count was set in an area of low human disturbance where a new tourism venture is being established. Ongoing monitoring of the area should show the impact of increased tourism activities of camping, bicycling, hiking and night drives. Results of the counts assist CCF in understanding habitat preference for prey species and other predators and scavengers. Morning, afternoon and evening counts also give information on game activity times.

Comparative research now evaluates habitat and prey species in the Machakos and Laikipia Wildlife Forums where cheetah sightings appear to be much more frequent. Using interviews and Forum conducted counts, the prey base and cheetah issues can be compared to that of the NWF. This comparative analysis will determine the feasibility of ongoing cheetah work in the Nakuru region, or where long-term efforts should be focused.

Initial evaluations lead CCFK staff to request authority to conduct more focused studies in the Machakos region. This area is not as subdivided as the Nakuru region and has fewer large commercial farms than the Laikipia region. Frequency of cheetah sightings and proximity of open land appear to make this region a prime area for dispersal of cheetahs. Recent problem cheetahs have given CCFK the opportunity to initiate relationships within a community where problem cheetah tolerance has been high.

### **Human Impacts on Cheetah**

Land use changes and an increase in human population and activity levels throughout Kenya appear to be causing disruption in migratory routes and 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 and poaching problems on communal land have reduced prey base throughout unmanaged ranchland. The cheetah tends to cover large home ranges, moving from parks and private sanctuaries to public land. This behavior brings the cheetah into increased opportunities for conflict with humans through livestock losses, especially where prey species are reduced or pocketed into areas near human settlements.

Livestock loss to cheetah is questioned in the farmer interviews. Cheetah in Kenya appear to be viewed as posing minimal threat to livestock compared to lion, leopard, jackal and hyena. However, some farmers and herders find it difficult to identify differences between cheetah and leopard. Additionally very little is done to alleviate predator conflict problems in a non-lethal manner. While many farmers say that they would encourage an increase in cheetah numbers, there is much to be done to understand the reasons for the decline in cheetah numbers over the last several years. A combination of poaching, loss of habitat and prey base, and predator intolerance threaten remaining cheetah populations.

The case study in the Kiu region of the MWF allows the opportunity to identify the pattern of cheetah movement and livestock losses due to 3 cheetahs in the region that have been opportunistically killing goats and sheep since August 2002. This problem has provided CCF with the opportunity to involve community members in research and awareness of cheetah. Herders and land managers have been assisting in recording cheetah sightings. A member of the community has taken a strong interest in the cheetahs and has been our contact with the other members of the community.

### **Predator Conflict with Cheetah**

In other studies throughout Africa, it is known that cheetah are negatively affected by conflict with other predators. Interviews show that there are perceived problems with large numbers of hyena and leopard in the NWF. It does not appear, however, that these predators are of a higher number than they were in the past. Lion numbers are low to non-existent in the region; they are seen occasionally in the southeastern area of the forum only, and there are occasional escapes from the confines of the Lake Nakuru Park. Trapping and relocation of problem leopard and eradication of hyenas creates an activity level across farms in an attempt to eliminate the problem. In order to understand the impact of these activities, it would benefit the cheetah project to encourage a better understanding of these activities, and their impact on the ecosystem.

In comparison, the Machakos region also has a low tolerance for leopard and hyena as well as less suitable leopard habitat. Lion are occasionally reported in the area, but are also not tolerated. The

Laikipia area has a higher tolerance for lion and larger populations of leopard and hyena. Machakos and Laikipia regions have more areas of open plains, but the small game population is similar to that of the Nakuru region. Ongoing interviews and more detailed habitat analysis will provide more information in 2004.

## **Education**

### **Eco-tourism**

In 2002, CCF initiated presentations to tour groups from Park East Tours (JH Safaris as ground operators) and FunSafaris (Vintage Travel as ground operators). In 2003, the East African Ornithological Society became the ground operator for Park East. Classic Adventure Safaris now use JH Safaris as their ground operator and have requested cheetah presentations. All three groups make the same donation per group to CCFK and the visitors are provided with an opportunity to purchase crafts made locally, and specifically with cheetah designs.

Despite travel warnings issued for Kenya, some groups still enjoyed their travels here. CCF presented information to 20 groups in 2003. CCFK staff took the exam for the Kenya Professional Tour Guides Association to receive status of bronze members in the organization. Ongoing work with tour groups and the association will raise the awareness of the plight of cheetah in Kenya.

CCFK also piggybacked onto a Friends of Conservation campaign to raise tourism awareness of the fragile ecosystems of Kenya. CCFK's campaign, the "GREAT CHEETAH CENSUS" requests tourists to submit photos of cheetah to assist with individual identification. Initially 2000 brochures were printed for dispersal into lodges and 2000 laminated brochures into vehicles. The focus area was the Mara, as it is the most frequently visited tourist destination. The large amount of interest in this project has prompted the need to print additional hotel and vehicle cards for dispersal into a larger audience including National Parks and Reserves and surrounding areas of Laikipia, Samburu, Tsavo, Amboseli, Nairobi and Maralal. Funding is still needed to print the additional 4000 of each card.

### **School Education**

The Jomo Kenyatta Foundation assisted with half the costs of printing 10,000 primary and 10,000 secondary activity pages. The East African Wildlife Society (EAWLS) printed additional copies of each. These activity pages are available for distribution during CCF school programs and for use by other NGO's.

CCF staff visited more than 24 schools reaching more than 2000 students in the Nakuru and Gilgil municipalities (19 primary and 5 secondary schools.). The focus of school programs is to educate students of the plight of the cheetah, the role of cheetah as well as other predators in the ecosystem, and recognizing the difference between leopard and cheetah. A pen pal relationship was initiated between secondary Kenyan and Namibian schools.

A St. Lawrence University student on Independent Study with the Kenya Abroad program suggested an art and creative writing contest to reach a larger audience in awareness of the plight of cheetahs in Kenya. This project, "CHEETAH EXPRESSIONS," will provide the opportunity for children from targeted schools in 10 districts identified as holding cheetah populations. To assure a reasonable number of submissions in illustrative and creative writing categories, a limited number of schools will be invited to participate. Each school will be thanked for its participation with a gift of art supplies and top pieces will be placed in a traveling show. A committee of local and international members is reviewing additional details on locations of a traveling display of the competition in Kenya, US and UK.

## **Community Development**

CCFK continues to be a part of the development of a 14,000-acre conservation site on property of the Kikopey Group Ranch. This community-initiated project will provide an area for re-establishing biodiversity through increased security and land management. With donations from Susanne Garrison, 30 orphan children in the Kikopey community have been provided with uniforms and school supplies for 2003.

CCFK works with the Kiu community in tracking and identifying cheetah in the eastern region of the Machakos Wildlife Forum. Community meetings are held to discuss dealing with the problem cheetah in the area. Attempts to catch and translocate the problem animals have resulted in a community interest in these cheetahs. Many people have seen the cheetahs and are interested in their well being.

The Kiu Community interest prompted the development of the “SNAP-A-CHEETAH” campaign. Throughout the study, it has been difficult to know if people have seen cheetah or leopard. While questions about the animal behavior have frequently assisted in determining what cat has been seen, it frequently leaves CCFK with undetermined results. Many people say that if they had a camera they could show us the animal. CCFK would like to distribute 500 one-time use cameras into rural areas and request the submission of photos including cheetahs, other wildlife, livestock losses and general habitat. Prizes for participation will encourage the return of the cameras and prizes for best photos of cheetahs will aid in awareness of cheetah presence.

## **Higher Education**

CCFK continues its relationship with the St. Lawrence University program in Kenya. Betsy Nesbit and Leah Nelson each conducted their 4 week Independent Field Study by assisting CCFK with game counts and habitat analysis. Betsy participated in the biomedical collection of cheetah in the Masai Mara. Leah assisted in education work (specifically with the Cheetah Expressions concept development) and with the December Workshop.

Manchester University students Sarah Brooke and Bernadette Higgins joined CCFK and Delamere Research Coordinator for 10 weeks to expand on the vegetation analysis conducted by Meredith Evans last year. Carol Entwistle, program coordinator for the Greater Elementaita Community Conservation Organization (GECCO), coordinated the activities on the Soysambu and Kedong ranches to compare areas of past and present cheetah sightings.

## **Media**

SWARA magazine of the East African Wildlife Society ran several articles on cheetah conservation in 2003. Viewfinder, a PR organization for artists and filmmakers, continues to be a venue for distribution of information to media. While frequent requests from media crews are received, the current focus on human issues are not as viewer friendly as daily cheetah interactions, thus most film makers opt not to use CCFK as a part of their documentary at this time.

## **Volunteer Program**

Additional international volunteers included Patricia Williamson (USA) and Jeanne Christofferson (USA), Susanne Garrison-Clise (USA), Judy Gabey (USA), Terry Ross (USA), Katherine Herzog (USA), Elena Chelesheva (Russia), Rafael Dubois (UK), Anne D’Ath (UK) and Susan Deshaies (USA). These volunteers donated time and finances to CCFK and assisted in data entry, field interviews, education programs and game counts. Local volunteers include Meera Shah (Nairobi), Amanda Perret (Laikipia) and Cheryle Robinson (Nakuru), who are assisting in the development of CCFK education programs.

Students and volunteers are scheduled to arrive throughout 2004. Additional relations are being developed with Michigan State University for student internships encouraging the inclusion of a local student with each MSU participant. Ongoing relations with St. Lawrence and Manchester will continue. Volunteer applications are routed through CCF USA offices.

### **Funding**

2003 financial supporters include private donations, Cheetah Conservation Fund – Namibia, Cleveland Metroparks Zoo, The Bay Foundation, Park East Tours (USA)/East African Ornithological Society (Kenya), FunSafaris (USA)/Vintage Africa (Kenya), Classic Adventure Safaris (USA)/JH Safaris (Kenya), the Utah Chapter American Association of Zoo Keepers, Utah's Hogle Zoo, Tulsa Zoo, Cincinnati Zoo and Botanical Garden-Angel Fund and African Wildlife Foundation.

Total in-kind and direct contributions to the Kenya project for 2003 include PI salary and health insurance paid from CCF Namibia, and in-kind support from Delamere Estates and Jomo Kenyatta Foundation.

Current affiliated organizations include the East African Wildlife Society, Friends of Conservation - Kenya, Kenya Wildlife Service, Nakuru Wildlife Forum, Machakos Wildlife Forum, and Laikipia Wildlife Forum.

### **PLANNED KENYA ACTIVITIES - 2004**

In 2004, CCF Kenya will:

- Continue interactions with rural communities and commercial farmers to analyze the status of cheetah and the issues faced by farmers and cheetah.
- Work with the members of Wildlife Forums and KWS to assist in the development of accurate methods of wildlife census and habitat monitoring and to promote the concept of conservancies.
- Continue education programs for primary and secondary schools with a focus on teacher workshops and the "Cheetah Expressions" project.
- Conduct the adult awareness campaign "Snap-A-Cheetah" to promote rural participation in cheetah research.
- Continue giving tourism presentations as requested.
- Expand the "Great Cheetah Census" campaign.
- Develop options for local and international student intern programs.
- Continue relations with KWS, East African Wildlife Society and Friends of Conservation and establish other links within conservation organizations to promote conservation awareness through linked projects.
- Collect information on cheetah sightings throughout Kenya through interviews and links with East African Wildlife Society for census of cheetah populations.
- Assist KWS with ongoing biomedical sampling and measurements in the Masai Mara.
- Conduct follow-up workshop in July for linking individuals and organizations in compliance with the Global Cheetah Master Plan.
- Develop the tag-and-release program in Kenya.
- Expand the case study of the Machakos region.

### **BENEFITS TO KENYA**

Ongoing research in Kenya aims to develop a clear understanding of the farmers' problems with cheetah and to learn what can be done to reach a compromise between predator and farmer. This understanding is critical to ensure that cheetah habitat will be preserved for the future so that the species has a chance to survive. As the issues facing farmers in Kenya are better understood, program development enables information to be shared with students and adults both locally and abroad. Working together with KWS

and Kenyan NGOs links related programs to aid in the development of policies and techniques of land management that promote co-existence between humans and wildlife.

The development of programs 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 continue to thrive.

## **CCF KENYA RESEARCHERS**

### **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 concentration 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.

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### **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 Amedkar 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 Nakuru Wildlife Forum and CCF through mapping and vegetation analysis to aid in understanding the status of cheetah habitat outside of protected parks.



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