

# Conservation of Namibia's Cheetahs

Loss of habitat, declining prey bases, and competition with livestock/agricultural interests and larger predators are taking a heavy toll on wild cheetah populations throughout Africa.

Laurie and Daniel Marker-Kraus, co-Directors of the Namibia-based Cheetah Conservation Fund (CCF), said in their report for 1994: "The largest percentage of the world's remaining free-ranging cheetah are found outside of game reserves in Africa and are threatened with extinction due to growing human demands on resources. The cheetah's attraction to livestock farmland poses a direct threat to the species' survival. Significant local declines continue as farmers indiscriminately capture and remove a large number of cheetahs as 'problem' animals. They perceive cheetahs as having a severe negative economic impact on their livestock and wild game; therefore, their attitudes must be reversed if we hope to save this endangered species."

The CCF established its permanent base in Namibia since it is critical to the worldwide survival of the species to stabilize this, the largest gene pool. The Fund's primary focus is in areas outside of the protected reserves, working with the local livestock farming communities to develop ways to reduce conflict between humans and cheetahs and devise a cheetah conservation management plan which secures habitat for the species and considers land use needs.

The largest wild population of cheetahs (about 2,500) is found in Namibia; however, here their numbers have declined. Wild cheetahs from Namibia continue to maintain the world's captive population and have been a continuous reservoir of wild-caught animals for re-stocking areas of southern Africa, yet little is known about the behaviour or physiology of this population.

The CCF is collecting biological samples and developing an extensive database on Namibia's wild population. Over 160 cheetahs have been examined. Five male and one female cheetahs have been radio-collared and many more have been ear-tagged in the research area, which encompasses about 7,000 km<sup>2</sup> in the Waterberg region of the north-central part of Namibia. The cheetahs are tracked twice a week by fixed-wing airplane.

The CCF is currently finalizing a farm survey report to be distributed to livestock and game farmers, and other interested parties. The report will identify the priority needs for the cheetah and strategies for reducing conflict and will facilitate the development of policies and programs which strive to sustain cheetah populations and suitable prey populations, and thereby encourage a healthy, balanced ecosystem.

Grass-roots communication with farmers and wildlife and agricultural officials form an important component in the program's work. CCF presents information from its survey on wild-life and livestock management, farmer's attitudes toward predators, and non-lethal measures farmers employ to reduce

livestock loss to cheetahs at farmer association meetings throughout the country. The Fund encourages farmers to think creatively about solutions to conflicts by presenting livestock management practices employed by other Namibian farmers who have shown that cheetah problems can be dealt with successfully by using non-lethal techniques.

To promote cheetah conservation in schools, CCF continues to:

1. conduct interactive assembly programs which increase student awareness about their role in helping to conserve the cheetah;
2. distribute teachers' packets for cheetah education work in the classroom and activity sheets to learners to increase awareness about the plight of the cheetah;
3. attend educational workshops for teachers and teacher-trainers; and
4. sponsor and promote social and cultural programs which focus on environmental conservation.

Working cooperatively with organizations located in Botswana, South Africa, Zimbabwe and Zambia, CCF's programs are beginning to expand to other southern African nations. These countries have geographically connected cheetah populations and are important in the long-term strategy to conserve this larger gene pool.

Research conducted by CCF involves biological analysis, radio-telemetry monitoring and re-location. Between January 1 and December 31, CCF dealt with 72 cheetahs of which 29 (21.8) were tagged and 4 (3.1) were radio collared and then released back onto Namibian farmlands; two were radio-collared and re-located to the Phinda Reserve in South Africa and three were radio-collared and re-located to Zambia for re-introduction programs; 28 (19.9) animals were dealt with in captivity, of which two were cubs that were caught and sent to the Tygerberg Zoo in South Africa, and blood was received for analysis only from 8 (7.1) other cheetahs. Samples were collected from two animals that were trophy hunted, one animal that was hit by a car, one animal that was living in captivity and died, two animals that were shot, and one ear-tag and one radio-collar were returned to CCF from two research animals that were shot (one because it was catching game and the other for unknown reasons).

## Biological Analysis

The Fund has continued to develop its biological data-base on wild-caught cheetahs. Detailed information, including body measurements, ID characteristics, vital statistics, skin biopsies and blood samples, is obtained on each animal. CCF is working in cooperation with several researchers in the United States and South Africa to analyze the samples. Samples taken from wild-caught cheetahs are making a significant contribution in the assessment of the overall health of the wild population.

Animals that have died and necropsies conducted have been analyzed by Dr Linda Munson, a specialist in cheetah pathology at the University of Tennessee.

CCF works with two serology labs in a comparative analysis of infectious diseases, Dr Jenni Spencer's lab at the Department of Tropical Diseases at Onderstepoort and the Department of Biology at Medunsa in South Africa, and Dr Jim Evermann's Animal Disease Laboratory, College of Veterinary Medicine at Washington State University in the United States. CCF is facilitating these two labs in an attempt to correlate their results so that uniform and standard analysis can be used. This data is currently being analyzed for further publication.

Genetic analysis on the samples collected by CCF is being done at Dr Stephen O'Brien's laboratory at the National Cancer Institute in the United States. Preliminary findings were discussed in November when the Krauses were in the U.S.A.. The samples being analyzed will be looked at for family relatedness and regional genetic differences.

### **Re-location/Re-introduction of Cheetahs**

During 1994, CCF collaborated with several organizations on relocation and reintroduction of cheetahs. Re-introduction of predators is not simple and straight-forward. There are several factors which must be considered, including size of area, prey base and existing predator populations. These variables are difficult to measure and the success rate in re-location or re-introduction is quite low. CCF will only participate in re-locations accompanied by a monitoring program.

In February, two male cheetahs, both livestock killing "problem" animals, were re-located to the Phinda Reserve in South Africa where they were held in a boma for two months prior to release. Both cats were fitted with radio-collars and after release into the reserve monitored daily. They have since both died. The first was found dead in a meat poachers' snare in June. The second was killed in August by two male cheetahs which were dominant in the reserve. It was felt that if the first cat had not died in the snare, the two cats together could have held their ground from the other two cheetahs. Although both cats died, a great deal of useful information was gathered which will assist in future re-locations.

In August, in cooperation with the Zambian Department of Wildlife, Japanese AID and a private camp in the lower Zambezi National Park, CCF re-located three male cheetahs to the lower Zambezi National Park in Zambia. The three cats had been caught on a private fenced game farm in Namibia. All three of these animals were radio-collared in order to monitor their progress in re-location. They were held in a boma for six weeks and released into the reserve in October. During the month, the cheetahs continued to head in a southwesterly direction. In early December, two cats were found dead in snares near the boarder of the park and the third has not been found, but it has been assumed that it too was caught in a snare. Again, a great deal of useful information has been collected from this re-location. The Zambian cooperative group is committed to re-establishing a cheetah population in the Lower Zambezi and would like to try another re-location attempt in 1995.

In a re-location experiment in Namibia, CCF released a female with her three cubs into a new territory in CCF's research area. The female had come from another area in Namibia. Virology and disease analysis had been completed prior to release. The female was released in an area where there was plenty of wildlife, mostly oxen farms, and where many other cheetahs in the area are being monitored by CCF. This cat had not been a "problem" livestock catching cat.

It has been seen that most cats move out of a new area and will return to their old range after release. This group, a mother and young cubs, appears to be staying in this new area. This may be due to the age of cubs, as they were too young to travel far and yet were old enough that the female had developed a strong maternal bond and did not abandon them.

### **Farm Survey Report**

CCF spent two years surveying livestock and wildlife farmers to identify problem areas in livestock and wildlife management which are leading to the cheetah's decline. These farmers offer the greatest hope in the struggle to sustain a free-ranging cheetah population for future generations. The survey has identified the key problems causing conflict between cheetahs and livestock/game farmers, and has identified the priority areas to intensify research and conservation efforts.

Over 240 farmers were personally interviewed about their 385+ farms totalling over 2,672,000 hectares of commercial farmland. This represents over 14% of the country's commercial cattle farmland. Livestock numbers included 15% of the country's cattle on commercial lands and 1.4% of the small stock found on commercial farmlands. Of the farmers interviewed, 51% said that the main solutions to the long-term future for the cheetah on their farmlands included conservation education and awareness, maintaining large enough wildlife populations for the cheetah to reduce conflict with livestock, and improving their livestock management.

One comment which was repeated by over 95% of the farmers interviewed was that no one had ever told them of the world picture of cheetah and that they played such an important role in this species' long-term survival.

A report summarizing the survey results is almost complete. At present the report is being circulated for review and will be completed early in 1995. It will be distributed widely throughout the country. This report includes suggestions by the Namibian farmers and CCF for improved livestock management techniques which reduce loss to predators. Farmers are encouraged to become involved in the management of the wild cheetah population and to consider alternative solutions to livestock/predator problems. CCF continues to present information at farmer association meetings, and six talks were given during the reporting period.

The survey report will address the issues of captive breeding and the management of the wild population in order to ensure that all trade in cheetahs is sustainable and legal and that hunting quotas are enforced by the farming community themselves.

### **CCF and the Namibian Professional Hunters Association**

Many farmers are interested in the sustainable use of the cheetah. It is legal to trophy hunt cheetahs in Namibia. There is a quota of 150 animals, approved by CITES, and the Namibian Professional Hunters' Association has asked for the CCF's input. The Krauses made a presentation at the hunters' annual meeting and presented CCF's research findings and the importance of ethical hunting.

Since this meeting, a committee has been formed to develop guidelines for the professional hunters, and CCF has participated. A researcher from the United States, hired by the Safari Club International, visited Namibia in July to investigate the viability of the cheetah population. CCF assisted with this visit and provided CCF's research findings. From this visit, a compact has been developed by the Safari Club International which asks farmers to hunt the cheetah only as a part of sustainable conservation for the enhancement of the species. It is hoped that the hunting and farming community will follow the guidelines and help conserve the cheetah. CCF will remain active in the Professional Hunters Association as it relates to the cheetah.

## **Livestock Guarding Dogs**

In January, CCF and the Livestock Guarding Dog Program from Hampshire College (Massachusetts, USA) set up a pilot program on one of the farms in CCF's research area. Four Anatolian Shepherds, a breed of Livestock Guarding Dog from Turkey, were established with herds of sheep and goats. Several talks were given at Farmers Association meetings to familiarize the farming community with the program. A Hampshire student monitored the program as a part of her honors thesis for a five-month period. A report summarizing these first five months was presented in the CCF Newsletter.

In June, CCF and the Livestock Guarding Dog Program brought in a second student and six more Anatolian Shepherds. All were puppies of less than 15 weeks of age, and they were placed on six farms. In August, 11 Anatolian puppies were born at CCF's base, and the puppies were placed on farms the end of September. At present, 16 dogs are working on 16 farms and one dog is at CCF's base as a breeding bitch.

The Guarding Dog Program has made great progress and a network of farmers has been established who are committed to the success of the program, the protection of their stock, and the survival of the cheetah. There is considerable interest from the farming community in continuing the program. A breeding program will begin in 1995 with the dogs that farmers have now, as all the dogs come from different bloodlines. All dogs have been donated to the program and this will continue.

## **CCF Education Programmes**

CCF's involvement in education has grown over the past year. The Fund has continued to conduct its educational assembly programs at schools throughout the country and distribute educational activity sheets and informational materials to all student

audiences. In the past year, CCF has conducted programs at over 40 schools, reaching over 5,000 students.

CCF's Teachers Resource Guide, which has taken nearly a year in its development, has been completed and distributed to schools throughout Namibia. The 100-page, cross-curricular teacher's guide entitled "Cheetah: A Predators Role in the Ecosystem" emphasizes cheetah and general predator conservation. The resource guide is currently being used during teacher training workshops conducted by CCF. Teachers are introduced to the guide and are taught how to use it. These workshops have met with great enthusiasm and will continue to be an important component to CCF's educational program.

CCF's work with colleges remains an important part of its education programs, as these students will soon take on important roles as teachers, wildlife managers or farmers. Our most recent involvement has included giving presentations at Technikon, the University of Namibia, Rundu, Windhoek and Ongwediva Teachers' Colleges, and Neudam Agricultural College, as well as organizing a series of field trips to game farms for Technikon agriculture and wildlife management students.

## **International Cheetah Research and Education Center**

In October, a farm was purchased for CCF to establish an International Cheetah Research and Education Center and a permanent base of operations in Namibia. The farm, Elandsvreugde, is located in the Otjiwarongo area and will house CCF's growing research and educational activities. The purchase was made primarily sponsored by Cathryn and Carl Hilker and the Cincinnati Zoo's Angel Fund along with a few other private donors.

(Condensed from the Cheetah Conservation Fund 1994 report)