

**CONSERVATION STRATEGY
FOR THE
LONG-TERM SURVIVAL OF THE CHEETAH IN NAMIBIA**

**DR. LAURIE MARKER
EXECUTIVE DIRECTOR
CHEETAH CONSERVATION FUND
P.O. BOX 1755
OTJIWARONGO
NAMIBIA
PHONE: (264) 67 306 225
FAX: (264) 67 306 247
EMAIL: cheeta@iafrica.com.na**

GT27.E

**REPORTING PERIOD
JANUARY THROUGH DECEMBER 2004**

I. INTRODUCTION

The Cheetah Conservation Fund (CCF), founded in 1990, has as its mission “to be an internationally recognised centre of excellence in research and education on cheetahs and their eco-systems, working with all stakeholders to achieve best practice in the conservation and management of the world’s cheetahs.” CCF undertakes basic research regarding cheetah and their habitat; maintains a major public education programme and creates and disseminates education materials worldwide; conducts programmes of community upliftment and predator conflict resolution; assists in the management of captive and free-ranging cheetah throughout the world; and publishes scientific papers on its research findings.

CCF's base of operations is in Namibia, which has the largest and one of the few viable populations of free-ranging cheetah in the world. The cheetah's survival depends on a total ecological system of farmland management, prey species management, and habitat stability. CCF's Namibian focus is to work with livestock farming communities in order to develop ways to reduce conflict. This is achieved by devising a conservation plan that secures habitat for the species, while still accommodating farmers' land use needs.

CCF carries out scientific research programmes in areas such as cheetah population biology, cheetah ecology, cheetah health and reproduction and human impacts on the cheetah. CCF researchers develop, test, and promote alternative land-management practices such as conservancy development, non-lethal predator control, relocation of problem cheetahs, and eco-tourism. Additionally, CCF conducts both Namibian and international education programmes to raise awareness of the cheetah's endangered status. These illustrate ways in which the species can be protected and encourage worldwide support.

II. ORGANISATIONAL STRUCTURE

The Cheetah Conservation Fund is an international organisation with registered not for profit organisations in Namibia, the United States, Canada and the United Kingdom. In 1991, CCF became a Namibian Voluntary Trust and in 2002, completed the registration of the Cheetah Conservation Fund as a not-for-profit Namibian Section 21 Company. CCF's Namibian Board of Directors is comprised of leaders in the local community, business, and agricultural sectors. Additionally, an International Science Advisory Board assists in planning and advising on research projects. CCF's Executive Director is assisted in the management and operations of CCF by a core professional staff, short-term volunteers, and students.

CCF's International Research and Education Centre is the base for all CCF's activities. The Centre is located near Otjiwarongo, Namibia on the farms Elandsvreugde, Osonanga, Boskop (Khayam's Kopje), Cheetah View, Bellebenno, and Janhelpman, totalling 39,000 hectares. The farm base is in prime cheetah habitat and a wildlife friendly area, with neighbouring farmers who believe in conservation ethics. This ensures a large prey population, which is important for the cheetah population.

CCF is an active member of the Waterberg Conservancy, which encompasses over 150,000 hectares of private farmland surrounding the Waterberg Plateau Park - a national game park dedicated to the conservation of Namibia's rare and endangered species. The Conservancy's farmers cooperatively manage the Conservancy's wildlife for long-term sustainability. This in turn provides habitat and prey base for the cheetah.

III. PROGRESS DURING REPORTING PERIOD: January – December 2004

A. Facility Developments

During 2004, CCF developed some new infrastructure and conducted maintenance work on existing structures. A major development was the new 4km long water pipe that was laid from the Boskop farm to the main CCF Centre to Elandsvreugde. The pipe is a long-term solution to the continual water shortage suffered on Elandsvreugde farm. Instead of having to collect water from Boskop manually, the pipe sends water to four tanks on the top of a small hill on the border of Boskop and Elandsvreugde using engine power. From the top of the hill, the water reaches CCF's centre using gravity. The new pipeline was sponsored by the Jones Family from Northern California.

A new drain tank (cesspit) was built behind the clinic at the main Centre, which can handle about 1000 litres in volume. A similar trench was also built at the Lightfoot tented camp. Both pits were constructed because the old trenches were filling up too frequently. A new cesspit is currently under construction on Cheetah View – the farm that accommodates university student groups. Toilet and shower blocks are being built at both Lightfoot camp and Cheetah View.

An upgrade was made to the meat and slaughtering room to comply with new protocols on hygienic storage of meat for cheetahs. The walls and floors of the slaughtering area have been repainted and a drainage trench was built for easier cleaning of the area. The entire area was enclosed with fencing and shade cloth, and a tin roof was built to extend shade for the slaughtering and meat processing area. In addition, shelves were constructed to store clean feeding bowls.

The roads surrounding the main CCF premises were improved and drainage pipes have been built beside the roads intersected by water drainage areas. Two boreholes were cleaned and two new ones drilled, one each on Boskop and Elandsvreugde. About four kilometres of new fencing were built along the main road on Janhelpman, and improvements to the Bellebenno game camp are ongoing.

Finally, due to the high demand of pupils and education in general, CCF has built new bathroom facilities with hot showers, toilets and face washbasins at Cheetah View and Lightfoot Camp. Cheetah View is CCF's biology field station that accommodates tertiary institution's students for field research projects such as conservation biology courses. Lightfoot Camp provides accommodation facilities for school groups that want to learn more about environment and the cheetah in general. School visits of pupils to Lightfoot Camp amount to approximately 2000 learners a year.

B. Research

CCF conducts research to gather data on distribution, behaviour, biology, demographics, reproduction, the overall health of the Namibian cheetah population and livestock/cheetah interactions. Semen samples are used in ongoing research and collected in the Genome Resource Bank (GRB). An extensive database has been developed with new data continually being added. Samples are stored meticulously and serve as a reference database for future studies.

With the assistance of volunteers, CCF's Executive Director, Dr. Laurie Marker and Senior Research Assistant, Bonnie Schumann, work directly with farmers on cheetah issues. Farmers participate in the research through live capture of cheetah on their farms that allow for biological sampling and measuring, ear tagging and release. CCF collaborates with researchers and institutions from the United States, Europe, Namibia and South Africa whose experts contribute in areas of genetics, reproduction, veterinary medicine, pathology and conservation work.

1. Population Biology – Cheetahs

Between 01 January and 31 December 2004, CCF worked on 66 (34M.29F.3UNK) cheetahs. Of these 19 (14M.5F) were tagged and released back into the wild, 35 (15M.20F) were captive animals receiving annual physical exams (including 5 of CCF's cheetahs on loan to a guest farm near Windhoek). Seven (4M.3F) were kept at CCF. Of these, one was captured near Etosha (one other cheetah was shot and one died in the trap cage prior to CCF being called) and the other near Osire; both were about 10 months old. The Osire cub was emaciated and had a severely infected and broken front leg. Following treatment he has made a full recovery. One was only about 6 months old and found in a chicken cage on a farm; the owner agreed to let CCF remove her. Three (2F.1M) were caught near Dordabis with no mother. One of these arrived with an injured neck and broken foot, presumably from trap cage injuries, and is recovering following treatment. One female was a recapture. She was caught taking sheep on a farm and is a cheetah that CCF radio-tracked in 1998. The cheetah is estimated to be 13 years old, has cataracts, poor dentition, and since it was caught on livestock, it has remained at CCF. Three (0M.0F.3UNK) were skin samples only, collected from cheetahs killed in the eastern communal areas.

A necropsy was performed on one of the young cheetahs resident at CCF that was given euthanasia for health reasons. One other necropsy was performed on a cheetah run over near the Windhoek airport.

Multiple workups were done on cheetahs as semen collection was done on CCF's captive males and injured cheetahs were anaesthetised multiple times for treatment. Semen collection was done on the wild males that were tagged and released. As at the end of December 2004 CCF is housing 29 cheetahs.

In November, CCF transferred four male non-releasable cheetahs to Bagatelle, a game farm/guest lodge in the southern part of Namibia owned by the Jacobs. Over the years, several other cheetahs have been transferred to other facilities, and include 13 (9M.4F) being held at five facilities. As of the end of December 2004, CCF is housing 29 cheetahs.

1.1 Dart Rifle Donation

Telinject Germany recently donated a Vario 4V. 310 Tele-injection applicator. Fitted with a telescopic sight, CO2 cartridges, foot pump with hose accessories, and accompanied by darts, needles and syringe connectors, this beautiful piece of equipment forms a valuable addition to CCF's clinic so that an accurate shot is made when darting cheetah in large enclosures.

2. **Health and Reproduction**

2.1 Health Issues - Gastritis

Collaborative research continues with Dr. Linda Munson from the University of California at Davis, investigating faecal cortisol levels in relation to the effects of stress on captive and wild cheetahs and the levels of gastritis in captive and free-ranging cheetahs.

During this reporting period, 26 wild cheetahs were endoscoped and gastric biopsy samples collected, while ongoing monitoring of CCF's captive cheetahs was done when they were endoscoped during their annual exams in February this year. Dr. Arthur Bagot-Smith carried out the endoscopies. In addition, three captive cheetahs at CCF were endoscoped again to try answer questions relating to their health problems.

2.2 Necropsies

A full biomedical collection of two sets of samples, including vital organs, lymph nodes, bone, muscle, skin and reproductive tract are taken on all necropsied animals. The skeletons of these animals, when available, are cleaned, labelled and stored for future studies.

A necropsy was performed on one of the young cheetahs confiscated in October. She had to be given euthanasia after bone surgery failed to correct bone deformities caused by an unbalanced diet. One other necropsy was performed on a wild cheetah run over near the Windhoek airport.

2.3 Reproduction

During 2004, Dr. Crosier and CCF staff conducted 39 semen collections on cheetahs. This includes five semen collections conducted on captive cheetahs residing at Amani Game Lodge in Windhoek and four collections on captive cheetahs residing at Naua Naua Game Lodge. Eight collections were performed on recently wild-caught males and the remaining 22 collections were performed on captive CCF cheetahs, six of which were in conjunction with annual physical health examinations. Resulting from these collections, a total of 21 sperm samples were frozen for storage in the CCF Genome Resource Bank and 10 sperm samples were utilized for cryopreservation studies.

The CCF Genome Resource Bank contains a total of 129 sperm samples from captive cheetahs, wild-caught cheetahs, captive lions, leopards and an aardwolf.

3. **Large Carnivore Research and Ecology**

3.1 Waterberg Carnivore Project Namibia (WCPN)

The Waterberg Carnivore Project Namibia (WCPN) began in February 2004 in collaboration with CCF, by lead researcher Andrew Stein. Stein, a PhD candidate and Fulbright scholar stationed at CCF, is doing extensive research on leopards and brown hyenas in the Waterberg area. The project is a response to concerns of local researchers and farmers to address issues of large carnivore conflict and interaction between the co-occurring large carnivore species.

As a part of the large carnivore project, Andrew worked closely with CCF's ecologist, Matti Nghikembua, to determine areas of high carnivore activity via spoor tracking on all of the CCF farms. Monitoring of roads and waterholes continues in order to determine the areas of highest activity for leopards, cheetahs, and brown hyenas. Where tracks are found, a GPS location is acquired and the species, sex, and group structure as well as habitat are recorded in order to gain as much information as possible about the population dynamics, range overlap, and habitat use. In addition, all sightings and kill sites have been documented.

Through spoor tracking, areas of high leopard activity are targeted for trapping. During 2004, 11 leopards have been captured and biological samples taken before release. The first two captures were made at the southwestern corner of Elandsvreugde farm and the northeastern corner of Boskop. A vet determined that the first female was pregnant. The first four captured animals were considered to be too young to radio-collar, as their necks will continue to grow and it might not be possible to re-capture the animal to enlarge the collars. Consequently, a mother with her 8-month-old cub and a large male were captured. Both of these adult leopards have been fitted with radio collars and are tracked daily to establish their ranges along the base of the Waterberg Plateau.

Whilst in the process of leopard trapping, four brown hyenas were opportunistically captured and released on Osananga. One of these captures was a large adult female, while the other six were young individuals, two of which were recaptured. Their marked growth was staggering: one had grown a total 3.7 kilos in 3 months, which is a good sign that the brown hyenas in the area have plenty of food to sustain their populations. The first male captured was radio-collared and to date has been located on 15 occasions through radio-telemetry triangulation.

There have also been interesting findings on the hyena diet. At a den site at the base of the Waterberg, there were remains of the typical game species (i.e. kudu, oryx, hartebeest, duiker, and steenbok), but also co-occurring carnivores (i.e. jackals, bat-eared foxes, wildcats, and leopard) as well as the remains of an aardvark. Through preliminary diet analysis from hyena droppings, there seems to be a preference for kudu from which hairs are present in nearly 60% of the samples.

Population estimates and information on large carnivore conflict will be examined with hair-snares, and surveys of farmers, trophy hunters, tour operators and their clients into the economics of managing and maintaining large predators on farmlands.

In September, Stein developed and distributed, with assistance from CCF staff, his first seven-page WCPN report. The report outlines project objectives, activities, findings and future goals.

3.2 Cheetah Ecology

Marianne de Jonge, a Bachelor student studying wildlife management at the Van Hall Institute in The Netherlands, gained field experience at CCF during the latter half of 2004. De Jonge worked with CCF staff to research the adaptation of habituated captive animals to a free-ranging situation. Two captive cheetahs, Rosy and Daisy, were released in September into CCF's 4000-hectare game fenced area called Bellebeno. Born in March 2001, these sisters arrived at CCF in February 2002 after being confiscated. They had been held without permits in a 3x4m enclosure for probably close to six months.

Before being released, both received a full health examination and were fitted with radio collars. A "soft release" was done, with the gate to their camp opened, allowing them to exit on their own time. The two wasted no time venturing out, initially staying close to their home camp. De Jonge set up a field camp in Bellebeno and monitored the cheetahs every second hour during daylight hours. The cheetah's location, activity, distance travelled from last sighting, and habitat type were all recorded.

The sisters made their first kill, a one-year-old warthog, just three days after release. Given that they were probably only about six months old when first captured in 2001, this kill so soon after release was quite unexpected. Typically, cheetahs stay with their mother until 18 months of age. Those that are separated from their mother before 18 months usually do not survive in the wild, as they have not learned the necessary hunting skills. Daisy and Rosy proved that the kill was not a coincidence by continuing to take prey, adding duiker and oryx calves to their diet. During the 52 days of the study, the cheetahs made 10 kills on their own. Supplementary feeding was carried out in between kills and did not in any way deter them from making their own kills, as in some cases kills were made the day after a big supplementary feeding.

Despite having been in an electrified fenced area for over a year before release, it took only six weeks for the two to exit the game fence via one of the many warthog holes (CCF allows warthog and smaller game access along this fence line). Ranging out onto our neighbour's farm the two cats discovered their first livestock in the form of an unguarded goatherd.

For now, the two cheetahs have been retrieved and CCF is considering different options for their future. They have proven their ability to fend for themselves, but their habituation to people and their lack of discretion when it comes to prey selection make their total release onto farmland unpractical at this time. Should a reserve release become an option in the future, these two would now qualify for release into a controlled situation. CCF will further study re-introduction options on the Bellebeno game farm.

3.3 Cheetah Behaviour

In the wild, female cheetahs are solitary unless they are raising cubs. A female cheetah typically only seeks male company when ready to breed. Captive cheetahs are often housed in “unnatural” social groupings. Groups of females are often housed together, or together with males or sometimes they are housed adjacent to male or other female cheetahs. This could affect both the stress levels and the oestrus (heat) cycles of captive females.

Jessica MacManus visited CCF last year as an intern and subsequently decided to dedicate a year to studying cheetah behaviour and endocrinology. MacManus received a Fulbright scholarship for her work and will be conducting behavioural research on CCF’s captive cheetahs until July 2005. MacManus is investigating questions such as: Is there a linear dominance hierarchy? Are more dominant females suppressing oestrus in less dominant females? How do the stress levels of animals compare in high and low densities? Are oestrus cycles similar? Are amicable social groups found in high and low-density enclosures? Do amicable social groups cycle synchronously?

To answer these questions, daily behaviours are being observed and daily faecal samples are collected from two different groups of female cheetahs. The high-density group is an enclosure at CCF’s Education Centre, and consists of four cats in 4-ha pen. The low-density group is six cats in CCF’s 64-ha pen. From the faecal samples, the hormones cortisol and estradiol are extracted. Cortisol is a stress hormone and the estradiol level will indicate where in the oestrus cycle each cheetah is. These hormone profiles are being conducted at CCF’s endocrinology lab. Once these hormone profiles are created, they will be compared to the behavioural data. This will give us an understanding of how social dynamics may lead to physiological changes.

3.4 Cheetah Home Range Maps

Following up on the 10 year home range study of over 55 radio-collared cheetahs, CCF’s research assistant, Matti Nghikembua, is using the data that has been analysed in the GIS programme, Arcview, to complete home ranges maps. 350 maps (Jpeg format) were completed, and consist of cheetah movements on the commercial farmlands during the study period between 1993 and 2000. The maps consist of kernel, and minimum convex polygon (MCP) home ranges for all single males. Maps will be completed for all coalition males and females in 2005.

4. Ecosystem Research

As 70% of the country’s game inhabits farmlands, assessment of the Namibian farmland ecosystem for long-term habitat viability for the cheetah and its prey is part of CCF’s primary, ongoing research.

4.1 Game Monitoring and Prey Habitat Preferences

To assist in developing a game-monitoring programme for the Waterberg Conservancy, CCF continued its ongoing wildlife monitoring. The research was conducted on farms, and was

designed to understand patterns and trends of game density, movements, demographics and habitat utilisation.

EarthWatch, CCF volunteers and students assist with this research. The monthly monitoring involves visual road counts of game, tracking and counting spoor, categorising vegetation, game densities, game distributions and soil analysis. This information is correlated with data collected on rainfall and temperature.

A total of 43 game counts and 32 spoor tracking surveys were conducted on Elandsvreugde during 2004. All data has been entered into the database, and trends looked at over time. In addition, strip counts were conducted before and after the 24-hour Full Moon Waterhole Count held in July. The results of these and the annual Full Moon Waterhole Count have been analysed.

4.2 Full Moon Waterhole Count

CCF staff worked with Conservancy members to plan the 2004 Waterberg Conservancy's Full Moon Waterhole Count held on 31 July-1 August. CCF was responsible for conducting participants' orientation, preparing record sheets and identification guides and transporting counters between Otjiwarongo and CCF, as well as placing counters at most waterholes. About 50 counters participated in the waterhole counts consisting of youth volunteers from Khorixas, Otjiwarongo, and CCF supporting staff.

Before the Full Moon Waterhole Counts, CCF conducted six replicate strip counts at Cheetah View, Boskop, Elandsvreugde, and Osonanga. The strip counts were done three days before, and after the waterhole counts. The results of the strip counts and the 24-hour waterhole count were analysed by CCF staff and the results compared between the two methods.

4.3 Springbok Release in Elandsvreugde

In August, CCF released 250 springbok on its 1,400-hectare big field known as the "Little Serengeti". The springbok came from the south of Namibia and will be monitored to see if springbok will survive the conditions and form a sustainable herd given the predation and vegetation limitations in the Waterberg Conservancy area.

The decline of springbok in the north central Namibian farmlands has been blamed on the cheetah. Where as in the Otjiwarongo area, habitat changes from bush encroachment has been one of the main contributors to this decline. In addition, many farmers try to keep a small herd of springbok (20 or so) and this is too small of a group, behaviourally, to maintain the population. For this reason, the release of a larger number of specimens was selected. Moreover, following habitat enhancement in our Conservancy, it was felt that a springbok population could be brought back into the region again.

The released herd consisted of four different genetic pools bought from four different farms, in order to have a variation of genotype and phenotype qualities such as reproduction, reduced inbreeding, adaptability; etc.

Although all the springbok were released on the ‘Little Serengeti’, and the majority are staying, they have dispersed over an area of more than 10,000 hectare. Family groups of between ten and 30 animals are seen regularly in the field.

4.4 Mapping

All 14 grazing camps within Bellebenno were measured and demarcated by GPS, and maps for the camp layout were developed. Farm manager, Johan Britz, will use the maps for livestock management purposes.

4.5 Fixed-point Photography

To monitor long-term vegetation changes, CCF takes fixed-point photos. During 2004, fixed-point photography was done at 11 locations in Elandsvreugde, and Osonanga. All fixed locations were demarcated by GPS fixes in order to ensure that they are easily accessed in the future. All pictures taken are being developed, and catalogued.

4.6 Bush Encroachment Biodiversity Studies and CCF Bush Pty Ltd

CCF Bush Pty Ltd, a CCF sister organisation, held a brainstorm in February to come up with a name and logo for the fuel logs being produced from bush chips. The name Bushblok was chosen and registered with the Office for the Harmonisation of Internal Markets (OHIM) as part of the process of trademarking the name in Europe. A brand identity for Bushblok has been developed, using stylised ‘African’ flames and a photograph of CCF’s cheetah ambassador, Chewbaaka, set against a strong yellow background. Bushblok is packed in bundles of 12 (a requirement from Europe and South African distributors), and the reverse of the pack label carries a description of the project together with a response form for those customers wishing to support CCF.

CCF Bush staff worked to develop the environmentally friendly processing plant that will process the bush chips using extruders to produce the fuel logs. The final production glitches have been resolved, new packaging staff recruited, and the Bushblok logs are rolling off the production line with 30 tonnes produced by December 15.

Distributors in Namibia, South Africa and the UK have agreed to wholesale the Bushblok packs. Each distributor was selected based on its diverse range of retail clients; one UK distributor boasts a million customers per week, which has massive potential for CCF Bush. It was decided not to start the main sales drive until the plant produces quality lots in a consistent and reliable manner. However, initial sales enquiries are encouraging. Within Namibia, two distributors are being tried out, with product now on sale in Windhoek. Enquiries from several coastal towns have already been received. In South Africa, a national distributor is interested in stocking Bushblok. In Europe, an English distributor has ordered a 20-foot container to test the market, and a German distributor is interested in bulk orders for their entire European market. Price negotiations are in progress, with the first firm orders expected early in 2005.

Once distribution agreements have been signed, CCF Bush PTY will be able to start inviting local business entrepreneurs to apply for permits to supply the plant with chips (based on predator-friendly farming certification).

Additionally, CCF collected data to determine wood density for encroaching bush species during October. The calculations could assist the bush project to determine how much biomass of chipped wood can be obtained from a 1-hectare plot by each species. Due to the bush team's move to the Otjiwarongo bush plant during the data collection, data was obtained only for one species *A. mellifera*. The preliminary results of wood density were submitted to CCF's General Manager Dr. Brewer.

C. Human Impacts

Livestock loss to cheetahs is an economic and emotional issue. Farmers perceive cheetahs as having an excessive economic impact on their livestock and wild game industries. Many Namibian farmers have done little to alleviate their problems in a non-lethal manner through appropriate livestock and predator management. By addressing the farmer-predator conflict through a conservation management strategy that benefits both humans and cheetahs, CCF is ensuring the species' survival on Namibian farms and has raised greater awareness of better farm practices.

1. Livestock Guarding Dog Programme

CCF's Livestock Guarding Dog Programme (LSGD) has continued its success with 119 Anatolian Shepherds working with livestock on both communal and commercial farms at the end of this reporting period. Since 1994, more than 200 dogs have been placed as livestock guardians. Anatolian Shepherds provide a method of non-lethal predator control that protects the farmer's livelihood, while conserving predator species. Throughout the year, the dogs were monitored by CCF's Research Assistant Mandy Schumann, with the assistance of Research Assistant Matti Nghikembua, and Education Officer Gebhardt Nikanor, for bi-annual evaluation of all dogs and monthly evaluations for puppies. CCF's Research Assistant & Education Officer Matti Nghikembua developed a GIS map for all Livestock Guarding Dog placements done by CCF from 1995 - 2003.

During 2004, the Livestock Guarding Dog programme was supported by a grant from WWF Sweden. In addition, a grant was given by the Disney Wildlife Conservation Fund, to purchase a vehicle for the Livestock Guarding Dog programme. This vehicle will be purchased in early 2005.

1.1 Puppy Placements

This year two litters totaling 18 puppies were placed.

Of the first litter born at the end of June to Tyger, one puppy was flown to South Africa as part of a breeding exchange, and two were placed in Namibian farms. The remaining seven puppies were donated to Namaqua National Park in South Africa as part of a founder group for a pilot

project promoting the use of livestock guarding dogs on farmlands around National Parks. These puppies form part of an initiative by the South African National Parks (SANPARKS) to encourage farmers to stop using gin traps and poison around the borders of the park to try alternative livestock and predator management techniques. SANPARKS gave a generous donation for the puppies, which will go towards supporting CCF's Namibian Livestock Guarding Dog Programme.

The second litter of eight puppies was born on the 4th of September to CCF's Tylee and Omdilo, This was the first litter for both these dogs. Seven were placed on Namibian farms in early November, while one remained at CCF as a new breeding bitch. Follow up visits were conducted the end of November to vaccinate these puppies. Conservancies are given priorities for the placement of the puppies, and recommendations for placing livestock guarding dogs in Communal Conservancies were drafted by CCF.

1.2 Follow Up on Prior Placements

CCF staff conducted telephonic progress calls as well as communal and commercial farm visits to inspect the progress of Anatolians during 2004. As the dogs are working all across Namibia in cheetah country, the distances covered by staff to inspect and monitor the dogs is extensive, with some road trips covering 1000 km in one day.

CCF visited two communal farms in January, where one dog needed to be taken to the vet for a health check and another dog needed a follow-up blood smear to see if it had recovered from tick bite fever. In February, CCF visited a dog that was reported to be sick, but the dog turned out to be fine. During May, CCF conducted annual vaccinations for dogs on communal farms. In July, CCF staff conducted farm visits to check dogs in the communal areas of Ovitoto and Otjinene area.

A countrywide health survey of the Anatolians currently working with livestock commenced in October and November. Two CCF staff members and a US veterinarian volunteering her time conducted the survey. 7,895 km were travelled in 19 days. 68 Anatolian Shepherds and 9 mongrels were examined and blood and faeces samples were collected, while the current working status of the dogs was assessed. A photographic record was compiled of all the dogs. This survey will continue in 2005 until all the current working dogs have been assessed.

A total of eight dogs were relocated: three as pets and five were re-homed to different farms as working dogs. One pet dog was placed for outreach and education purposes with CCF's sister organisation, Cheetah Outreach, in South Africa.

Fifteen deaths were recorded during the 2004 Health Survey Update. Two dogs were given euthanasia after Squamous Cell Carcinoma of the tongue (SCC) was confirmed with pathology reports. Further dogs were identified as also possibly having this disease, including two of the nine mongrels examined. A cause for concern is the relatively high incidence of SCC of the tongue in both the Anatolians and the mongrels examined during the survey. Although this is considered a relatively rare disease in dogs, Namibian working dogs are exposed to a very high incidence of UV radiation due to the nature of their work and the environment.

Two dogs were given euthanasia due to age related causes. Boots was one of CCF's breeding bitches. She was 15 years old and was among the first Anatolian Shepherds to be brought over to CCF for breeding purposes. Over the years, Boots produced four litters totalling 47 puppies. CCF's imported breeding male Omdilo died after being monitored and treated by CCF veterinarians. A necropsy was performed but the cause of death was inconclusive. Of the 10 additional deaths recorded, causes of death ranged from leopard attack, snakebite, tick bite fever, head trauma, disappearance, shot by owner and cause unknown.

A further two dogs, one that was placed on a communal farm and one on a commercial farm, went missing and are presumed dead.

1.3 New Breeding male imported

As a part of a breeding loan arrangement with one of the Livestock Guarding Dog breeders in South Africa, CCF received a new breeding male. The puppy arrived in December as an 8-week-old pup and placed in the goat yard. The puppy appears to have a very nice disposition and has bonded well to the flock.

2. Farmers' meetings

CCF presented talks to the Omaruru, Sonop and Otjikondo farmers associations and the Otavi Mountain Conservancy, Sandveld and Namatanga conservancies concerning Predator Friendly Beef as well as an overview of CCF's research results and predator conflict resolution. Staff attended a Farmers Day on the farm Gelukspuit, belonging to Dr. Arthur Bagot-Smith and shared information with farmers. Staff also attended an information meeting for emerging farmers in the Ngarangombe Conservancy area at the request of the Ngarangombe Conservancy. CCF staff also attended the Outjo and Gobabis meat festivals, manning a stand and talking to farmers at both festivals. CCF staff attended the Otjiwarongo, Grootfontein and the Windhoek Shows this year. Show stalls were manned at each of the shows and staff visited cattle stands and cattle clubs handing out books and newsletters to farmers and talking to them about predator issues. Activities for children included quizzes and colouring in sheets, in addition the new Booklets for children were also handed out. CCF literature was also shared with numerous teachers and lecturers from the Polytechnic and UNAM.

CCF visited a commercial farm to talk to farm workers about predators at the request of the farm owner. General ecology, behaviour and identification, including spoor identification were addressed. A visit was also carried out to a resettled farm near Outjo to speak to a farmer and his neighbours concerning the correct identification of causes of losses, predators and their behaviours and livestock management to reduce losses. CCF agriculture and nature conservation students from Neudamm agricultural college and the Polytechnic of Namibia accompanied staff and participated in sharing information with farmers.

In addition, a visit was carried out to the eastern communal area to investigate livestock losses to cheetahs and talk to the farming community concerned at the request of the Okakarara Ministry of Environment officials. A second visit was carried out at the request of the Wild Dog Project

to address predator issues. Recommendations for placing livestock guarding dogs in conservancies were drafted by CCF for the community. Farm visits were also carried out in the northwest communal areas.

A CCF staff member visited the Namaqualand National Park in South Africa at the request of the park staff. Park staff and livestock farmers surrounding the park were addressed on the application of livestock guarding dogs to reduce losses to predators. The presentation was extremely well received and park staff were briefed and left with a power point presentation enabling them to share information with more farmers in the area.

A book titled *Integrated Livestock and Predator Management – A Farmers Guide* was compiled from the Integrated Livestock and Predator Management course presented last year. The English version is in print and already being handed out to farmers. The Afrikaans version is in the process of being translated. This document is available as an informative guide to integrated predator and livestock management for farmers, conservation and agricultural students.

Numerous farmers were consulted telephonically and information was posted to them. Through direct contact with individuals, farmer association meetings, and a bi-annual Farmer's Newsletter, CCF informs the community of its progress and encourages it to remain actively involved in all aspects of its programmes. The *Farm Survey* book published in 1996 by CCF is also given to all farmers CCF deals with, along with CCF's new book: *Integrated Wildlife and Livestock Management: A Farmer's Guide*.

During the first half of 2004, a newsletter was produced and mailed to over 4,000 people in Namibia, and internationally, updating them on CCF's activities and research findings. A second newsletter was produced and is being mailed in early 2005. In addition, articles were written for the press, Agriforum and Outjo Extension Newsletter.

3. CCF's Farm and Livestock

CCF's farm provides the opportunity to practice and experiment with the optimum methods of livestock and non-lethal farm management practices. CCF has active cattle and small stock (sheep and goats) farms. Each of the small stock herds has a breeding group of Livestock Guarding Dogs with them for protection.

As of 31 December, CCF had 350 head of cattle. CCF's goatherd included 178 animals and 281 sheep. There was one outbreak of pasteurella in January, but this was treated immediately and effectively on 20 goats in the first three treatment cycles, followed by a second flock of 18 goats in four treatment cycles.

CCF pastures donkeys and horses for feeding resident captive cheetahs. Nearly 80 animals, mostly donkeys, and a few horses, about 14 animals per month, were slaughtered over the six-month period to feed resident cheetahs.

This year, CCF has begun to dump entrails and bones from the slaughtered animals as well as old meat bones collected from the cheetah's pens in an area on the big field on Elandsvreugde for consumption by scavengers. Over the period from 26 March to 15 June, ten counts were

conducted to observe which birds were feeding on the entrails and bones. In total, 152 vultures, mostly white-backed griffon (*Gyps africanus*), and 162 Marabou storks (*Leptoptilos crumeniferus*) were counted.

This year 4000 bales of hay were harvested on CCF's 1300 ha field on Elandsvreugde. The hay was harvested in partnership with our neighbour Waterberg Farming, which took 50% of the production, while the other 50% is stored and will be used for CCF's livestock. *Cenchrus ciliaris* grasses were planted near the CCF Centre for future production of hay.

During the reporting period, several meetings were held with CCF's farm workers to help them understand more about CCF's programmes. CCF has additionally developed a medical aid benefit scheme for their farm workers. In addition, a meeting was held with the farm workers union to create a good working relationship with workers and CCF, and to establish correct channels of communication between employer and employees.

4. Associations and Conservancies

4.1 Large Carnivore Management Association (LCMAN)

CCF key staff and researchers attended LCMAN meetings in February and September this year. CCF's Research Assistant, Bonnie Schumann, continues to fill the position of LCMAN Secretary, also dispersing regional information received by CCF on cheetahs internationally to all members.

4.2 Waterberg Conservancy

The Waterberg Conservancy held one member's meeting during the year.

At the end of July, CCF staff coordinated the 24-hour full moon waterhole count for conservancy members. The results of the waterhole count were analysed by CCF students Obed Rukoro, a third-year Polytechnic Natural Resource Management student, and CCF Master's student, Ezekiel Fabiano. In addition, Fabiano's 2003 Waterhole Count results were presented to the members of the Waterberg Conservancy at their annual meeting.

4.3 Conservancy Association of Namibia (CANAM)

CCF's Executive Director, Dr. Laurie Marker, is the Chairperson for CANAM for the second year running, and CCF is an active partner in the Conservancies Association of Namibia (CANAM). During the last 12 months, CCF's Executive Director Dr. Laurie Marker, accompanied by a staff member, facilitated two meetings with the Erongo Mountain Conservancy and the Erongo Volcano Conservancy to resolve issues between the two. Marker also chaired four executive committee meetings for CANAM and helped guide the organisation.

CCF participated in CANAM's launch of a poster competition challenging learners with the topic: "Conservation is our future." The artistic results served to highlight the budding talent of Namibia's learners. The objective of the competition was to raise learner awareness on

conservation issues and the role and functioning of conservancies in Namibia. Three posters featuring the winning artwork were designed by CCF's Jen Newlin Bell. In addition, CCF assisted with CANAM promotions at the Otjiwarongo Environmental Show in September, and the Windhoek Show in October.

CCF represented CANAM at a national conference on conservation, hosted by the Ministry of Environment and Tourism, and coordinated meetings with NNF, WWF, and NASCO towards developing a closer partnership with communal conservancies. CCF has been active in details and collaborations of Cheetah Country Beef with MeatCo and CANAM members, and has supported a student to collect important information for CANAM.

4.4 Communal and Commercial Conservancy Relations

“Conservancies” in Namibia are institutional mechanisms to enhance group management of natural resources for sustainability and improve benefits. There are currently two broad approaches. The first is on freehold land, where owners have tenure of the land and conditional rights over wildlife (commercial conservancies). These owners voluntarily form freehold conservancies by agreeing to work together to manage their wildlife and natural resource-based enterprises for sustainable and improved economic benefits. The second approach is on communal land, where communal residents acquire conditional rights (as per freehold landowners) over wildlife and commercial tourism through a conservancy registration process.

CCF has played an active role in meetings dedicated to bringing Communal and Commercial Conservancies closer together. Participants from World Wildlife Fund (WWF), Namibia Nature Foundation (NNF), Ministry of Environment and Tourism (MET), United States Agency for International Development (USAID), Legal Assistance Centre (LAC), Rural Institute for Social Empowerment of Namibians (RISE), consultants and conservancy farmers attended the meetings, where participants discussed opportunities of partnerships at a national, regional and local level. A critical stocktaking paper was written by NNF and distributed to the participants. Another meeting is planned to create action steps for cooperation between the two types of conservancies.

A follow-up meeting took place during a CANAM meeting in September 2004. Action steps were created in preparation for the next steps. A consultant will be used to set out a complete road map of ways to bring the conservancies together and looking at land use issues for conservation. Follow up meetings continued in October to plan steps in 2005. The consultancy was scheduled to be completed in November 2004 if funding was secured. Funding did come forward to support this through The Nature Conservancy (TNC) from the USA, although not until December. Therefore, this deadline has been postponed to March 2005. Once the consultancy has been completed, actions will be put in place to create a working relationship between communal and commercial conservancies. CCF supported Devan McGranahan, a graduate of Grinnell College in the United States of America, to undertake a survey for CANAM that would be the base of the commercial conservancy way forward in the workshops planned for 2005. While based at CCF, McGranahan collected extensive data on commercial conservancies and their land use management.

In November, Dr. Marker attended a workshop on behalf of CANAM held by the Ministry of Environment (MET) on Strengthening the System of National Protected Areas. The vision of MET, which is supported by both CCF and CANAM, “advocates a system of integrating land and natural resource management that transforms a protected areas patchwork into a protected areas network, and create incentives for MET, conservancies, private landowners and tourism operators to work together as part of a bigger picture.”

The workshops in 2004 represent a critical and proactive step towards implementation of a science-based strategy to address land reform in Namibia. The workshop to be held in March 2005 will follow on these past goals. The Cheetah Conservation Fund has been a driving force in conservancy development in Namibia, providing technical support and representation on the CANAM executive board. CCF also has vested interest in land reform because the largest remaining cheetah population in the world currently resides on private lands in Namibia.

5. Cheetah Country Beef

Over the past year, CCF has started a Cheetah Country Beef initiative. The objective of the initiative is to certify farmers’ beef production if they farm using livestock management techniques that are non-lethal to predators and using predator-friendly land management techniques such as participation in habitat restoration, local conservancies, game monitoring, limits on stocking rates, removal of game fences and helping to conserve the cheetah. CCF’s partners in the project are Conservancies Association of Namibia (CANAM), MeatCo Namibia and Meat Board of Namibia. All partners are pulling resources together to make this project a success.

The goal is for CCF to create certification and marketing for Cheetah Country Beef and work to market it internationally. In this respect, all systems and processes are in place for certification, monitoring and payment of the premium. The criteria and affidavit are being reviewed by a lawyer in the United States. Meanwhile, suppliers in the European Union are being contacted and details of supplying Cheetah Country Beef are being discussed.

CCF has also been working hard on the Cheetah Country Beef eco-label. “Cheetah Country” is currently being trademarked in the European Union, South Africa and Namibia. Five thousand consumer brochures, kindly sponsored by Capital Press in Windhoek, Namibia, have been printed and distributed at farmer's conservancy and agricultural meetings. Point of sale posters, letterhead, business cards, sales packets and more have been designed and are waiting to be printed. The web domain www.cheetahcountry.com has been reserved and is currently being designed.

Throughout the process, farmers are continuously being updated and many are ready to sign up to be Cheetah Country farmers.

Cheetah Country Beef is scheduled to be released in Namibia by early 2005. The release will help sensitise European travellers to Cheetah Country Beef. It will also raise awareness for the

eco-label in Namibia. The main launch of Cheetah Country Beef in the European Union is scheduled for the middle of 2005.

6. Other Cheetah Country Initiatives

Several new business concepts are being discussed with corporate partners. The objectives of these initiatives are to extend the 'Cheetah Country' line of products, to raise awareness of cheetah conservation issues, to support Namibian job creation, and to help raise funds for CCF research, education and conservation programmes. Ideas currently being discussed include partnerships with a chocolate manufacturer and a leading Namibian singer.

In addition, CCF Kenya has set up a community crafts partnership with local artisans. Currently, we are working with an eco-marketing business called, Eco-Sys & Eco-Fun, based in Hong Kong. Their goal is to introduce conservation to the public with a difference. Eco-Sys not only does catalogue sales. They have shops in France, and sell to other shops including zoo and aquarium shops. In December, CCF Kenya's first order was filled and shipped to Hong Kong. In the future, CCF hopes to provide locally made handicrafts internationally.

D. Education Activities

1. Schools and Community Education

Public education and the development of an active grassroots constituency are integral components of CCF's overall cheetah conservation programme. CCF is educating farmers, teachers and the public about the need and methods to conserve Namibia's rich biodiversity, and the role of the cheetah and other predators in healthy ecosystems. Public education and the development of national pride in the cheetah are critical to its survival.

Between 1 January and 31 December, over 22,128 people attended a CCF educational programme, either at the Centre or through outreach programmes. This number includes students, teachers, youth group members and day visitors. This number does not include Peace Corps volunteers, farm or tourism shows or farmer outreach.

1.1 Education Outreach

In 2004, CCF's Education Outreach team visited 105 schools. The team gave presentations to 19,146 students. There was an average of 182 students per school. Each student walked away with a new cheetah activity book and a better understanding of the cheetah and its fight for survival. The schools visited were located in Tsumeb, Grootfontein, Swakopmund, Otavi, Outjo, Kamanjab, Omaruru, Otjinene, Karibib, Okakarara, Otjiwarongo, Kalkfeld, Okahandja, Gobabis, Windhoek and Rehoboth.

CCF's Education Outreach team visited 30 schools during the first half of the year. 75 schools were visited the second half of the year. Even though there was a difference in the number of schools, the number of learners presented to was close to the same with 9,680 during the first half and 9,466 the second half of the year.

CCF's Education officers were invited to judge the Windhoek Science Fair in September. One member attended the fair and helped with the judging. This is the second year in a row that CCF has been invited to judge science fairs around the country.

Students were generally excited to take part in CCF's programme, and the demand for presentations at schools continues to increase. Outreach programmes have increased greatly since 2003. In 2003, 6,380 students were given a presentation at their school. In 2004, that number jumped to 19,146. That is an increase of 12,766. CCF's outreach team will not only focus on increasing numbers of students presented to, but will work on enhancing the presentation to make the most of the outreach programme.

1.2 CCF's Field Research and Education Centre

CCF's Field Research and Education Centre continues to receive visitors from schools, regional youth groups, youth officials, tourists, teachers, health officials, farmers, conservation and agriculture extension officials, students and the general public.

The Centre provides on-site public education and student training to local students of all ages, and Namibian and foreign university students. It allows students to be exposed to CCF's integrated research programmes on the cheetah's ecology, habitat and prey base, and the demonstration of CCF's non-lethal livestock/predator management techniques. Participants are exposed to the issues affecting the survival of the cheetah by participating in various interactive activities and presentations, and to factors that affect conservation efforts at community level.

On average, CCF's Centre had two to three groups of day visitors each day, totalling 2,010 visitors during 2004. The majority of the day visitors were from the European Union and South Africa; however, more Namibians appear to be visiting.

CCF will work hard in 2005 to update and solidify the visitor's experience at the Centre. Visitors currently experience the Education Centre, five orphaned cheetahs near the centre, clinic, livestock guarding dogs and gift shop. Plans are in place to improve the flow of the tours. CCF wants each visitor to walk away with a positive experience and a much better understanding of the cheetah's fight for survival.

1.2.1 Youth Forums and Schools

Organised education programmes at CCF are designed mainly for groups accommodated at either CCF's Wilderness Camp or the Lightfoot Tented Camp. CCF hosts school and community groups, exposing them to different environmental education activities including a nature trail, team building activities, games, and other environmental awareness activities. Groups usually spend two nights with CCF. All participants are exposed to CCF research and conservation efforts through presentations, and to the Namibian farmland ecosystem through the nature trail. Team-building activities highlight the importance of team efforts in conservation. Role-play and drama are also included in the programmes and include scenarios of livestock and predator management.

CCF hosted 24 groups at the Lightfoot Campsite during 2004. These groups consisted of schools and community groups. The total number of visitors in these groups was 917. The groups came from the following towns: Swakopmund, Otjiwarongo, Grootfontein, Ondangwa, Rehoboth, Tsumeb, Okakarara, Khorixas, Oshakati, Gobabis, Otavi, Kamanjab and one international school group from Germany.

Youth Groups also joined CCF at the Lightfoot Campsite for weekends. Three youth groups visited CCF during 2004. Rehoboth youth group participated in the Centre programme as well as helped repair fences. Khorixas youth group participated in the Centre programme and helped clean cheetah pens. The Kamanjab youth group participated in the Centre programme and cleared old bones from the big field.

School groups and youth groups participated in a variety of activities. These activities helped explain the need for cheetah conservation. The groups watched the orphaned cheetahs at the Centre being exercised, watched educational videos, participated in physical activities on the Predator Preyground, had discussions and went on game drives. The groups left CCF with a better understanding of their role in saving the lives of cheetahs.

1.3 Community Outreach

1.3.1 Agricultural Shows

Each year CCF exhibits information at agricultural shows in Namibia. This year CCF attended three shows and distributed literature to various audiences. At the Otjiwarongo 'Conservation' themed Show, CCF joined a tent full of other conservation organisations. The Grootfontein Show was well attended by farmers from all over, enabling CCF staff to make contact with them. The CCF staff attended all 9 days of the Windhoek Show. Learners sought out the stand for colour-in sheets, while farmers looked for ideas on livestock management and predator control.

1.3.2 Time Out Camping Show

Each year, Time Out Camping, one of Windhoek's better-known camping retailers, holds a camping show at the Rambler's Soccer Field in Windhoek. This year, Time Out held a treasure hunt competition with a Ford car as the prize. CCF was invited to be the recipient of all profits from the competition. The CCF display stand was much admired and new contacts made during the week-long show are helping develop new conservation business initiatives.

1.4 CCF Predator Education Materials

In February, in conjunction with the Cincinnati Zoo and Botanical Garden, CCF published 15,000 copies of "Meet the Cheetah," an activity guide for lower primary students, and 28,000 copies of "Voice For Cheetah" for upper primary students, were printed in Namibia. The guides are being distributed to students in both the United States and Namibia. In Namibia, the guides are going to learners at schools where CCF's education staff gives presentations. Students in Cincinnati will also receive the guides when members of the Zoo's Cat Ambassador Programme

visit schools. The guides are full of fun activities such as puzzles, mazes, word finds, colouring and more. These activity guides are another set of tools used by CCF and the Cincinnati Zoo & Botanical Garden to educate youth on the importance of the cheetah and the cheetah's ecosystem.

In June, CCF published the updated edition of its *Teacher's Resource Guide* developed by Ron Gray, a teacher from Oregon who volunteered at CCF in July 2003. The 165-page book contains material for learners of all ages. The lessons, activities and resource information presented assists teachers in presenting environmental-based lessons in subjects such as science, math, history, geography, English, art and social studies. The lessons are designed so that students learn about cheetahs and the problems they face, as well as important ecological concepts. The book was an adaptation of CCF's original guide and Cheetah Outreach's Teacher's Guide. The Cincinnati Zoo's Angel Fund provided funding for the publication of the book.

Finally in August, CCF's new book, *Integrated Livestock and Predator Management: A Farmer's Guide*, compiled from the Integrated Livestock and Predator Management course presented in 2003, was published and is already being handed out to farmers. This comprehensive book tackles livestock management and care issues, as well as looking at predator identification and understanding predator behaviour to assist the farmer in reducing losses to predators. The book was compiled and edited by CCF's senior researcher Mandy Schumann. Dr. Arthur Bagot-Smith reviewed veterinary aspects. Environmental education individuals began assisting with the book compilation project along with a slew of researchers, farmers, conservationists, teachers, herders, designers and CCF staff and volunteers. The book's printing costs were sponsored by the International Cheetah Conservation Foundation in the US. Other financial assistance was provided by Capital Press in Windhoek and by the Wildlife and Environment Society of South Africa (WESSA) and the South African Development Community's (SADC) Regional Environmental Education Programme (REEP). This book is being translated into Afrikaans and as such will be available in early 2005. Translation costs were sponsored by the Hiemstra Trust in South Africa.

1.5 Conservation for the Future Art and Poster Competition

In June, CCF facilitated the Competition for the 54 winners of the CANAM and NACSO art competition at the Namibian Animal Rehabilitation Centre (NARREC) for a day of Future Art and Poster Competition. The theme for the day activities was conservation for the future. Topics such as conservancies, predators and ecosystems were also discussed. Children had fun doing artwork. Each school was given Teachers Guides and posters.

1.6 CCF promotional poster

In November, CCF printed A3 posters to distribute to surrounding businesses, community members, schools, information centres, lodges and more. The poster details CCF programmes and mission and encourages Namibians and international guests to visit the Centre. Posters have been distributed throughout Otjiwarongo and will soon be seen throughout the country.

1.7 Education Donation

The Brevard Zoo in Florida, as part of a grant from the American Zoo Association's Cheetah SSP, donated a 'Suitcase for Survival' of hand puppets, plush toys, games, posters, books and art supplies to Namibia's CCF education programmes and to cheetah projects in Botswana and Kenya.

1.8 Book donations

During 2004, CCF donated books that were sent to CCF from supporters in the United States to the Okakarara High School, Karundu Primary, Spes Bona Primary and will soon donate some to Paresis High School. The books were given to the school libraries so teachers and learners have access to them.

In August, CCF presented the Ministry of Basic Education, Sport and Culture with a variety of books and resources that will be donated to all Namibia's schools. The books were received by the Permanent Secretary of the Ministry of Basic Education, Sport and Culture, Loini Katoma, who has been an active supporter of environmental education in Namibia.

Every school in Namibia was presented with *African Critters* for their library collection. The books were written and donated by Robert Haas, and include a special foreword by CCF's Executive Director, Dr. Laurie Marker. This is the second time Haas has donated resources for Namibia's school libraries.

In addition, upper primary and secondary schools were presented with CCF's newly updated *Cheetahs: A Predator's Role in the Ecosystem Teacher's Resource Guide*. Lower and upper primary schools were presented with "Meet the Cheetah" and "A Voice for the Cheetah" learner workbooks. These resources were supported by the Cincinnati Zoo and Botanical Gardens and designed through a partnership between CCF and the Zoo.

This donation was made possible through a Memorandum of Understanding (M.O.U.) between CCF and the Ministry of Basic Education, Sport and Culture. The M.O.U. also identifies future collaborations in teacher training and further resource development and distribution. The resources will be distributed through the Namibian Institute for Educational Development.

2. Education and Training at CCF

2.1 Training Courses at CCF

In January, CCF welcomed 24 teachers and science professionals from eight countries by hosting a two-week International Applied Environmental Education Course on natural resource issues and applications to solving environmental problems. The course was sponsored in cooperation with the Smithsonian Institution, Environmental Education and Conservation Global (EECG), Wilderness Safaris and CCF.

In February, the Smithsonian National Zoological Park Institute conducted an applied environmental education course at CCF. CCF assisted with logistics, such as arranging

accommodation, assisting with preparations of meals, and providing transportation from Windhoek's Hosea Kutako International Airport, to CCF.

Eighteen Nature Conservation students and two lecturers from the Polytechnic of Namibia visited CCF in March to attend presentations held by CCF staff.

Dr. Crosier hosted Catherine Hughes and Ilse Bezuidenhout from the Wildlife Biology Resource Centre in Johannesburg, South Africa. The researchers travelled to CCF to learn semen collection and processing procedures and to share information about techniques for biological tissue collection and storage. CCF staff, Dr. Adrienne Crosier and Bonnie Schumann demonstrated semen collection techniques on two CCF cheetahs and both visiting researchers were successful at obtaining good quality samples. Other activities included sperm morphological evaluation, sperm acrosomal evaluation, blood sample processing, anaesthesia protocols and cheetah husbandry.

In July, the Second International course in Conservation Biology and Wildlife Management was held in Namibia under the sponsorship of the Smithsonian Institution's Wildlife Conservation and Management Training Program, the Cheetah Conservation Fund (CCF), the Namibian Ministry of Higher Education and Wilderness Safaris. Twenty-five participants attended the course from Namibia, India, Kenya, Malaysia, Mexico, Cambodia, Brazil and Algeria. The Smithsonian Institution's Dr. Rudy Rudran, course coordinator, and Drs. David Wildt and Jon Ballou joined local experts Dr. Laurie Marker, Director of CCF, and Dr. Hu Berry, Namibian ecologist. Dr. Eduardo Duque travelled from Argentina to conduct field exercises in animal tracking and ecology.

Participants began the course in Windhoek at the Ministry for Higher Education's Training Centre where they attended a series of presentations on topics such as biodiversity inventory and monitoring, conservation biology, protected areas and wildlife management, and animal ecology and behaviour. The participants then travelled to CCF to conduct the fieldwork portion of the course. A weekend in Etosha National Park, in coordination with the Namibian Ministry of Environment and Tourism, completed the fieldwork segment. Topics covered included vegetation analysis, animal census techniques, home range determination and protected areas management. As part of the training programme, Dr. Ulf Tubbesing, wildlife veterinarian based in Windhoek, Namibia, and his game capture team, conducted anaesthesia and translocation of two giraffe from the Cheetah Conservation Fund farm Bellebenno onto Waterberg Conservancy land. The participants were able to observe and assist in all aspects of the game capture and translocation.

In August, CCF hosted a group of 28 educators from the United States. The group was part of Miami University and Cincinnati Zoo. The group, Earth Expeditions, took part in a variety of activities. Each activity was an example of what can be done with school children in the United States. The activities were all based around environmental education. The group also took part in a teacher's summit with teachers from around the Otjozondjupa region. Earth Expeditions was a big success and has put CCF in touch with a core group of enthusiastic educators. Participants were accommodated at Cheetah View.

In September, about 20 third-year science students from the University of Namibia (UNAM) visited CCF. All students were doing majors in conservation biology courses. During their stay, CCF staff members exposed students to various aspects of CCF programmes such as conducting game counts, and vegetation surveys. Participants were accommodated at Cheetah View.

2.2 CCF Staff Education

In February, Dr. Hu Berry and Conny Berry held a Natural History training course for CCF staff. They held presentations on the Namibian flora and fauna, the Waterberg area and the CCF farmland ecosystem. The group toured CCF's nature trails, youth camps and habitat restoration sites as course activities. The course provided staff with valuable information on methods of presentation for enhancement of the visitor and student experience.

During April, Dr. Steve O'Brien, from the National Cancer Institute and active CCF board member and Science Advisor, gave three lectures while visiting Namibia and CCF. He gave talks to the medical practitioners in both Otjiwarongo and Windhoek, where there were over 200 people in attendance with standing room only. These talks were on HIV and AIDS. In addition, he gave a lecture on conservation genetics and systematics, the HIV virus and human genes at the University of Namibia.

Dr. Laurie Marker, CCF's Executive Director, attended her graduation ceremony in May after finishing her Ph.D. from Oxford University in 2002. She also kicked off her UK Tour.

Josephine Henghali, a CCF research assistant, is analysing her data and writing up her Master's thesis entitled, "Patterns of biodiversity loss and conservation attitudes in Ohandwena and Oshikoto regions of Namibia" to the University of Namibia. Henghali's two-year study was sponsored by the African Wildlife Foundation and CCF. She will be submitting her thesis in January 2005.

Mandy Schumann, a CCF research assistant, will be submitting her Master's thesis in Nature Conservation entitled "Predator Conflict Resolution within Namibian Conservancies," to the Port Elizabeth Technikon's Saasveld campus later in 2005.

CCF is sponsoring Research Assistant Ezekiel Fabiano for a Master's programme through the University of Natal in Pietermaritzburg, South Africa. Fabiano has completed the course work aspect of his studies. He is back at CCF to conduct the field component of his Master's thesis entitled "Evaluating the use of spoor tracking and mark-recapture to estimate cheetah density in North Central Namibia farmlands." This project builds on Raili Hasheela's (see In-Service Training) and uses CCF's radio tracking and tag and release data.

Research Assistant, Amy Dickman, left CCF in August to enter a Master course at Oxford University in the United Kingdom. Dickman and Marker continue to work on several journal papers together.

Additionally, staff members conducted weekly computer training sessions with Sesilia, the CCF cook, to learn Microsoft Word and Excel to train her to assist with the kitchen inventory and ordering process.

2.2 CCF In-Service Training

CCF provided six-month in-service training to three Polytechnic of Namibia students from January to December 2004. Jonas Nghishidi, a second year Nature Conservation student, completed an ecology project on the distribution dynamics of two common orb web spider species at Elandsvreugde. Berta Helondo, a third year Agriculture student completed a grazing carrying capacity project at farm Bellebenno. Both projects contributed to CCF's understanding of local biodiversity, and grazing conditions within the context of livestock management and the bush project. CCF's research assistant Matti Nghikembua was responsible for the students on a daily basis, and provided assistance with their fieldwork, data analyses, and with the writing up of their reports. In addition, assistant farm manager Engelhardt Awaseb helped on most of the fieldwork for Berta's project. Obed Rukoro, a third year Nature Conservation student, completed a wildlife and habitat management project in Bellebenno. The student was exposed to methods of field research by conducting a vegetation and wildlife census within Bellebenno game camp. His project contributed to CCF's understanding of local biodiversity and grazing conditions within the context of small conservation areas such as game farms. All written copies of the students' reports were submitted to the CCF Director.

CCF's research assistant Matti Nghikembua was responsible for the students on a daily basis, and provided assistance with fieldwork, data analyses, and report writing.

Raili Hasheela, an employee of the Ministry of Environment and Tourism (MET) arrived at CCF in January to complete her Master's research on the effectiveness of using spoor count methods for estimating cheetah abundance. Raili completed her Master's research under the direction of CCF's Dr. Laurie Marker on the "Reliability of the Spoor Count Method for Determination of Species Density with Specific Focus on the Cheetah" and submitted her thesis at the end of December. Raili is completing her Master's of Science in Environment and Development at the University of Natal in South Africa and utilised CCF's data on spoor and game counts. This study assessed the reliability of spoor tracking methodology to estimate predator density compared with ungulate density at CCF. Such an assessment will prove useful by contributing to the understanding of the relationship between the cheetah and its prey.

CCF recently partnered with the Salisbury Secondary School in Connecticut, in the United States of America, to sponsor a local Otjiwarongo student's studies there for six months. This scholarship came about through one of CCF's past EarthWatch volunteers, Katherine S. Miller. CCF staff led the search and then interviewed candidates. Early in 2004, Burton Julius Gaiseb, a Spar employee and former student at Paresis Secondary School in Otjiwarongo, was chosen for the scholarship. Gaiseb first learned about CCF when education officers visited his school in 2000. When the scholarship search began in 2004, Gaiseb's principal recommended him. On 23 November, Gaiseb boarded his first airplane and began his journey to the United States. He had never been out of Namibia before. Gaiseb is now studying at Salisbury Secondary School.

2.3 International Students Intern at CCF

Kerstin Kristoferson, of Stockholm University in Sweden conducting her graduate thesis research, and Devan McGranahan, graduate of Grinnell College in the United States of America, were both based at CCF, while studying conservancies and the management of Namibia's natural resources.

Per Jacobsson, a Master's student from the University of Stockholm, Sweden, conducted a study on the CCF giraffe population. Jacobsson began his study by making a giraffe identification guide then he looked into population demography, feeding preferences and movement patterns. His study will estimate the carrying capacity of giraffes in the Bellebenno Game Reserve. Results have showed that there are 29 giraffes: 15 males, 10 females and 4 unsexed calves, and that they feed on Black hook thorn, *A.mellifera*, Camel thorn, *A. erioloba*, and the Shepherd's tree, *Boscia albitrunca*.

Hanne-Elise Toorman, a wildlife management student from Belgium, conducted scent lure trials at CCF. Six different scents were used with CCF captive cheetahs to monitor rubbing behaviour to collect hair. Scent lures have been used successfully in other carnivore census studies. Scent lure stations in the wild could be used for cheetah population estimates using DNA from hair.

Other international interns assisted in carried out several CCF-guided projects. Ronit Kobrinski worked with Dr. Marker in a protocol to measure the skulls from CCF's cheetah skeletons that have been collected over the years. The purpose is to look at the asymmetry of CCF's large collection of skulls and past genetic research done on this topic. Jordyn Boesch, a veterinary student from Cornell compiled an extensive database of causes of deaths of captive cheetahs from the International Cheetah Studbook. In addition, two Global Graduates, an internship programme from Oregon/Washington state universities, assisted in Livestock Guarding Dog and cheetah care, as well as individual project. Laura Gayton, assisted in updating CCF's captive cheetah feed record database, and compiling the Livestock Guarding Dog survey report. Bradford Baker, assisted in Environmental Education and training as well as with on overview of a more extensive recycling programme for CCF.

3. Collaboration with other Institutions

CCF's Research Assistant Matti Nghikembua continued to provide advice to the NEEN committee in his capacity as NEEN member. He attended the 2004 NEEN annual AGM during February, when general elections for committee members were held. CCF staff did not stand for the secretarial post this year, but Matti Nghikembua continued to provide advice to the committee and attended a committee meeting in March in his capacity as a member of NEEN.

Nghikembua also represented CCF at a workshop on the Curricula Development for UNAM Masters of Science Rangeland Management in September, and at the Worcester Polytechnic Institute (USA) presentations held in May at the Polytechnic of Namibia. The presentations were done by students from the WIP, and supervised by professors Susan Vernon-Gerstenfeld and Arthur Gerstenfeld. Informal talks were held with both professors in connection with starting programmes with CCF and they contacted CCF with ideas on the programme.

CCF was also invited to take part in the United States Peace Corps NGO day in Okahandja in November. Over 50 Peace Corps volunteers participated in the training. A CCF stand was set up and education materials were handed out. The Peace Corps volunteers are now equipped to share the needs of the cheetah with the whole of Namibia.

E. Eco-Tourism

For years, CCF has attended the Otjiwarongo Tourism Forum meetings, and encouraged the town to adopt the cheetah as its mascot. The town has now formally launched itself as 'Cheetah Capital of the World', and has commissioned new street signs each with a cheetah logo.

In 2004, the town launched the first Cheetah National Arts Festival in July with a line up of local and international musicians, photographers and artisans. The Festival organisers under-estimated the marketing necessary to attract large audiences, but the support (and promised support for the future) from a diverse range of artists and corporate sponsors is encouraging for next year. In 2005, the organisers plan to hold the Festival in May.

CCF's own eco-tourism work has developed a tremendous amount in 2004. The booking procedure for pre-arranged guests has been structured, pre-arranged activities have been aligned to the research CCF carries out, staff members have been trained as guides for these activities and CCF has successfully advertised itself as being open to the public through media, posters and guide books.

Nuevas Ideas, a Windhoek based booking agency, continues to act as CCF's agent. 2004 was the first full year Nuevas Ideas acted as CCF's booking agent. Throughout 2004 CCF and Nuevas Ideas held four meetings as well as countless communications in order to solidify the working relationship. Due to these meetings and communications, CCF's eco-tourism visitor numbers have grown. In order to add to these numbers Nuevas Ideas represented CCF at various tourism shows and has distributed information to a number of tour operators.

A total of 49 pre-booked eco-tour groups (400 people total) visited CCF in 2004. These groups consisted of families, photographers, journalists and individual travellers. The groups ranged in size of 1-30 people.

A total of eight pre-booked zoo/conservation eco-tour groups (94 people total) visited CCF in 2004. These groups included Cincinnati Zoo, People's Trust of Endangered Species, a group from various zoos in the United States of America, Endangered Encounters, St. Louis Zoo, Earth Expeditions, Philadelphia Zoo and members of CCF's Northern California chapter.

All groups took part in a variety of pre-arranged activities. Activities included CCF's education centre, cheetah runs, wilderness walks, cheetah monitoring camp drives, game drives, informative discussions and Chewbaaka exclusives.

In addition to the pre-arranged eco-tour groups, CCF had many day visitors who arrived to view the facilities (see Education). These groups enjoyed seeing the five cheetahs housed close to the

main facilities, a tour of the education centre, tour of the clinic, a visit to CCF's livestock guarding dog pens and the wonderful view on the veranda outside the gift shop.

CCF will continue to host pre-arranged eco-tour groups and day visitors. Staff members are currently being trained at various tour guide courses. An intern from the Polytechnic of Namibia's tourism school will be joining CCF in January 2005 and continual updates and procedure changes will be implemented to make CCF eco-tourism a true success.

F. International Programmes

CCF assists in international programme development and adapts model programmes developed in Namibia for use in other countries, distributing its materials and information throughout Africa and the rest of the world. CCF's Dr. Laurie Marker is a member of the Core Group of the IUCN's Cat Specialist Group, and maintains international communications on the status of cheetah populations worldwide, including their relationship with man, and threats to their survival.

1. Cheetah Conservation Fund - Kenya

During January of this year, Mary Wykstra, CCF Kenya's Program Director, spoke at the Cleveland Metroparks Zoo and the Hogle Zoo in Utah while on a US visit.

In June, CCF Kenya organised the travels of several international cheetah collaborators who, along with Mary Wykstra, CCF Kenya's Program Director, attended a weeklong workshop in Tanzania for cheetah censuses techniques. Visiting Mary in June included Drs. Laurie Marker and Arthur Bagot-Smith and Amy Dickman, from CCF Namibia along with the CCF Botswana researchers.

A national awareness campaign, Cheetah Expressions 2004, is a creative arts competition for school children that took place in August. This has been turned into a display that will be taken on tour to the USA and UK in 2005.

Along with the Bay Foundation, Hogle Zoo, the Utah Chapter of AAZK and the Cleveland Zoo, Susanne Garrison, CCF USA's Washington State Chapter Head has been one of the main supporters of CCF Kenya Project.

1.1 Research

The Kenyan Ministry of Education has granted Mary Wykstra a 3-year extension for cheetah studies in Kenya. Thanks to the affiliation and collaboration of work with the Kenya Wildlife Service, our Kenya team has collected a significant amount of data in the last 3 years. Cosmas Wambua, Research Assistant, and a variety of students and volunteers have assisted in the data collection, analysis and networking.

Lumumba Mutiso, a farmer who lost goats to cheetah in 2002, joined CCF Kenya staff as the community development officer. His connections in the Kiu community in the Machakos

Wildlife Forum have been a great benefit to Mary and Cosmas in 2003. Lumumba's primary income has been as a farmer for the last several years so he truly understands the issues facing a small-scale farmer in this area. He has been assisting CCF Kenya in locating the cheetahs that pass through this highly sub-divided area and will continue to be our voice in the community.

This year, Cheetah Conservation Fund Kenya (CCFK)'s priority has been on developing partnerships with Kenyan based NGOs to accomplish its goal of censusing Kenya's cheetah population. CCF has worked closely with the Kenya Wildlife Service as well as the East African Wildlife Society. These organisations have been writing joint grants to support this research with CCF taking the lead as the coordinating body.

Therefore, the project officers have been looking through KWS predator conflict and occurrence books to come up with areas of cheetah presence/ absence. Field surveys have also been conducted in some of the parts in the southern region of the country. These include: Tsavo area, Chyulu, Lake Magadi-Shompole-Amboseli and Nakuru areas. This project aims at determining cheetah's areas of presence/ absence as well as its population estimates. Two EAWS interns assisted with data searches, field surveys and interviews for estimating cheetah numbers and areas of highest density to establish a list of priority areas and needs for ensuring the survival of cheetahs in Kenya.

As a part of the census, The Great Cheetah Census is a photographic campaign aimed at collecting pictures that can assist in identifying individual cheetahs throughout Kenya. With sponsorship from the Cincinnati Zoo Angel Fund and Vintage Africa Ltd., a massive campaign has been launched requesting submissions of photographs from tourists. Brochures were distributed to lodges and hotels with the aim of targeting all ranges of photographers travelling in Kenya. Photographs will be placed in a database where they can be used to show the different individual cheetahs seen by tourists.

On a more local level an additional campaign, *Snap-A-Cheetah*, has received donations of 550 cameras from a variety of people and organisations. The Hinsbrook Bank and Trust (USA) donated 500 cameras, which were transported to Kenya by a group of tourists from Utah's Hogle Zoo. Additional cameras were donated by Jason and Cory Peterson (USA), Nature Encounters (Canada), Rafael Dubois (UK), and Louisville Zoo (USA). These cameras are being passed out in rural areas where there may be opportunities for people to see cheetahs. This part of the project was launched due to confusion between the spotted cats - especially cheetah and leopard. Each participant of this project will be given a reward for the return of the camera. Vintage Africa, Ltd will print T-shirts for CCF Kenya to distribute as a part of that reward. Participatory programmes have allowed CCF researchers to cover a larger area as well as raising the awareness of people at all levels of the issues facing cheetah survival. These pictures will be added to our other census information to assess cheetah numbers in Kenya.

1.2 Education and community outreach

Several local Kenyan residents have been helping in developing and promoting education activities in Kenya. Additionally, several CCF international volunteers made it possible for the Cheetah Expressions art and creative writing contest to be a success. This project targeted on

schools in eight districts identified as having cheetah populations. A limited number of schools were invited to participate to assure a reasonable number of submissions in illustrative and creative writing categories. Over 600 entries were submitted and have been judging has been finalised. Each school was thanked for its participation with a gift of art supplies and top pieces will be placed in a travelling show. A committee of local and international members are currently reviewing details on locations of travel in Kenya, US and UK.

In October, CCF Kenya had a table at Kenya's NATURE FAIR held at the Arboretum in central Nairobi. This was an ideal opportunity to talk to the Kenyan "city folk" and sensitise them to the plight of the cheetah. CCF's table and board display was very popular and attracted a steady flow of visitors and found all age groups keen to learn more about the cheetah. The results of our board games showed that most Kenyans confused the cheetah with the leopard, and that few of the students had ever travelled as far as Mombasa, let alone Samburu or the Mara and most Kenyans through our table had never seen a cheetah. It was difficult for them to see the relevance of this endangered predator in their lives or their importance in the ecosystem. CCF staff presented information through a "Cheetah Benefit Tree" to show how much the cheetah helps Kenyans through the tourism industry, providing business and employment opportunities, as well as assisting the Government to provide essential services and infrastructure for the Nation.

2. Iranian Cheetah Conservation

In early 2004, Dr. Laurie Marker participated in an International Workshop on the Conservation of the Asiatic Cheetah. She met with Iranian government officials, conservationists from around the world, Iranian camel herders and small-stock farmers to seek solutions to the problems they face with the last few remaining cheetahs (less than 50) left in Iran. The workshop served as an opportunity to examine past efforts, assess the status of the species and plan long-term conservation strategies with stakeholders across the Iranian cheetahs' range.

The last stronghold of Asiatic cheetah is found on the edge of Dasht-e Kavir, a large area of desert and shrub steppe. The main threats to its survival are habitat disturbance and degradation, illegal killing and poaching. The project, "Conservation of the Asiatic Cheetah, Its Natural Habitat and Associated Biota in the I.R. Iran" has been running since September 2001 in collaboration with the Wildlife Conservation Society (WCS), the International Union for Conservation (IUCN) and CCF. The project is funded by a grant from the United Nations Development Program (UNDP) GEF.

3. Cheetah Conservation Botswana

CCF continues its support to Cheetah Conservation Botswana, under the direction of Rebecca Klein. In 2004, Cheetah Conservation Botswana (CCB) developed into a fully operational project under the direction of Rebecca Klein. Their first research camp was completed at Jwaneng Game Reserve, thanks to the generosity of Jwaneng Mine, who requested that their resident population of cheetah in the reserve be monitored. The mine provided a camp and built four transit stations for temporary holding of cheetah to be relocated.

CCF made recommendations in the survey design to estimate density and attempting capture of any new cats in the reserve. A community development officer, Mmusi Tutwane, was hired. He comes to the project with an ideal background as a guide, ranger and educator for the Wildlife Department, Conservation International and Mokolodi Nature Reserve. Several communities surrounding Jwaneng have been visited to assess the level of cheetah conflict and gather cheetah sightings to be used to estimate numbers.

In September, Ghanzi in the West was visited. This is an area of commercial farming interests, both cattle and game. CCF Namibia staff will assist with community workshops in 2005.

CCB has also been attending farmers meetings and festivals to spread the word on the plight of the cheetah and ways to protect livestock and minimise conflict with cheetah. CCB was present at the first workshop organised to discuss predator problems on farmlands, which was attended by conservationists and members of the farming community.

4. Cheetah Conservation in Tunisia

CCF's Executive Director, Dr. Laurie Marker, visited Tunisia to attend the fifth annual meeting of the Northern African or Sahal Saharan Interest Group (SSIG) to bring back native antelope species into the region. Biologists from Ethiopia, Morocco, Senegal and Tunisia were present at the meeting. Dr. Marker was invited to join this group to bring cheetah ecology back into the process so that cheetahs have enough prey.

The antelope species have declined drastically in these countries, some of which still have cheetah populations now drastically endangered. A survey was recently conducted in Niger where spoor of cheetah were found. A similar survey is planned in Algeria in 2005 in which CCF will be participating.

5. Captive Cheetah Management - International Cheetah Studbook

The 2002 International Cheetah Studbook was completed by CCF, and is the twelfth edition of this annual registry. The Studbook is a comprehensive register of all known captive cheetahs in the world held in both zoological gardens and private facilities. The studbook, which is updated yearly, provides information about existing animals, births, deaths and transfers of cheetahs thus providing information to cooperatively manage the captive population and creating the preconditions for selecting breeding animals. Dr. Laurie Marker, along with CCF research assistant Bonnie Schumann and volunteers, analysed data for the 2002 International Cheetah Studbook. The 2002 Studbook shows that the captive cheetah population on 31 December 2002 was 1340 (695M.644F.1UNK) animals in 52 facilities in 243 countries in eight regions.

CCF also analysed mid-year questionnaires from international cheetah facilities and worked on the 2003 International Cheetah Studbook. A year-end questionnaire was sent to facilities. The 2003 studbook is nearing completion for distribution in mid-2005. CCF UK has been supporting the publication of the International Studbook for the past three years. This support is vital to keep communications open between all cheetah facilities in the world.

G. CCF Organisational Activities

1. Development and International Fundraising

1.1 Namibian Trust

Held the CCF Section 21 Annual General Meeting in April.

1.2 Annual Celebration of Speed and Elegance in Namibia

The sixth annual CCF fund-raising gala dinner and auction was held at the Windhoek Country Club on 24 July 2004. The evening, ‘Reflections, a Celebration of Speed and Elegance,’ was attended by a record 430 guests and raised over N\$110,000 for continued support of CCF programmes. The evening’s guest speaker was Dr. T. Tjivikua, Rector of the Polytechnic of Namibia. Sharon van Rooi and her jazz band and the Katatura Youth Choir entertained the guests.

Each year CCF presents awards to various individuals to their contribution to cheetah conservation. The **2004 Cheetah Conservationist of the Year Award** was presented to Ann van Dyk whose years of dedicated work in South Africa exemplify how conservation has evolved. Van Dyk is the founder and director of the DeWildt Cheetah Breeding Centre in South Africa, which is one of the most successful breeding centres in the world. Cheetahs are notoriously difficult to breed in captivity, but the DeWildt Cheetah Breeding Centre has successfully bred over 600 animals since the early 1970s.

The **2004 Cheetah Conservation Commercial Farmer of the Year Award** was presented to Dr. Arthur Bagot-Smith, veterinarian and cattle breeder. Bagot-Smith is an award winning cattle farmer and has assumed leadership roles in both the Simbra and Simmentaler associations. In addition, he is Chairman of the CCF Board of Trustees. He participates in CCF’s farmer based activities as well as cheetah scientific meetings in Namibia and abroad, and collaborates in CCF’s ongoing research. He has participated in workshops for communal farmers on dog nutrition and health as well as lecturing on cattle and small stock health.

The **2004 Cheetah Conservation Educators Award** is a new award to recognise teachers’ outstanding contribution to environmental education and especially predator conservation. The award was presented to Mr. Ludwig Swartz, a teacher from the Rogate Primary School in Otjiwarongo. Swartz has been teaching for 13 years and has been involved with CCF for nearly as long. Swartz considers himself a spokesperson for the cheetah at Rogate School.

A **special award** was presented to Dr. Rudy Rudran, Head of the Training and Education Division in the Department of Conservation Biology of the Smithsonian Institution’s National Zoological Park in USA. Dr. Rudran was at CCF overseeing his 100th course entitled “Conservation Biology and Wildlife Management.” He has taught over 2,000 conservation students since 1981, and conducted courses in more than 15 countries.

The **2004 Cheetah Conservation Communal Farmer of the Year Award** was accepted by Dawid Goagoseb on behalf of the Grootberg Farmers Integrated Livestock Improvement Scheme. In August 1995, several Grootberg farmers formed a cooperative livestock management scheme, and over 185 scheme members now work to improve the quality of the community's livestock through the development and distribution of quality rams. Further project objectives include the training of community members in livestock management and selection, and the marketing of culled animals.

1.3 USA Foundation and Fundraising Activities

In February, Dr. Laurie Marker visited the West Coast for fundraising activities in Portland (OR), Wildlife Safari in Winston (OR) and Hakone Gardens in the Bay Area (CA).

In May, Dr. Marker was a keynote speaker at the AZA Eastern Regional Conference in Louisville (KY), which was followed by a successful event in Lexington (KY), organised by Allison Rogers (the new Kentucky Chapter Head) and sponsored by Congressman Hal Rogers.

In addition, a meeting was held in Cincinnati, Ohio in May for all the CCF Chapter Head and Supporter Symposium. The meeting was held to bring together the different support group leaders from throughout the US and Canada, to learn more about the activities each group was involved in for fund raising for CCF and to work towards more activities in the future building on each groups successes. CCF USA will be moving its headquarters to Cincinnati in July of this year and this provided all of CCF supporters to meet with the new team.

In September and October, Dr. Laurie Marker conducted her annual US fundraising tour. During the six weeks of travel, she was in 19 cities in 11 states. Marker gave 16 major lectures, met with many research collaborators, media representatives, congressional representatives, and CCF friends and supporters.

Lectures include one of the keynote speakers at the Association of Zoo and Aquarium Docents (AZAD) conference in Philadelphia, guest lecturer at the Worcester Polytechnic in Massachusetts, the Oregon Zoo, the National Geographic Society in Washington DC, the Safari West in California, and one of the invited conservationists at the Wildlife Conservation Network in California. Many private events were organised by CCF Chapters through out the country with highlights in Boston, Washington DC, Virginia, Santa Cruz, California, Seattle, Washington, and Portland, Oregon. During her travels, Marker also spent a day with several congressional members in Washington DC, attended the American Zoo Association (AZA) annual conference and was able to spend several days at CCF USA's new headquarters at the Cincinnati Zoo. In addition, several of CCF's board attended the special lunch when CCF's international patron, His Excellency Dr. Sam Nujoma, the President of Namibia was given a Conservation Award in New York. A telephonic board meeting took place, and several of CCF's board members travelled with Marker, or attended the CCF fundraising events.

1.3.1 CCF USA Chapters

To assist in supporting CCF's goal, to save the wild cheetah, Chapters of CCF have been developed in several key states. Chapter Heads and members have worked in developing an important network of donors and CCF friends. Some Chapter Heads have been EarthWatch volunteers or interns at CCF Namibia, and therefore have worked closely with the field staff and understand the issues facing cheetah survival and the needs of the organisation to accomplish its goals. Without this network of friends, CCF would not be able to fund much of the research, conservation and education that is a part of this report.

Salt Lake City Utah's Hogle Zoo, a long-time supporter with their annual Cheetah Cha Cha event (amongst other supportive activities on CCF's behalf) continues to raise their CCF profile. They now serve as CCF's official Utah Chapter under the leadership of Liz Larsen. Their special point of focus is supporting CCF's work in Kenya and CCF Kenya Programme Director Mary Wykstra

The present 13 USA Chapters with respective Chapter Heads are: Arizona-Claudia Whitehead; Florida-Susan Deshaies; Colorado-Pippa Conrad; Kentucky-Allison Rogers; Massachusetts-Arthur Gerstenfeld; Montana-Stella Capoccia; Northern California-Terri Jones (back up from Steve Flaherty); Ohio-Cathryn Hilker; Oregon-John van Allen with Melissa Shell with backup from CCF Oregon Outreach/Chapter Founder Teresa Delaney; Texas-Delene Miller; Utah-Liz Larsen (Hogle Zoo); Washington DC-Kay Drucker (with Beth Wallace, backup Heather Kaye-Jacobs, Chapter Founder; Washington State-Susanne Garrison. Leona Graham, CCF's International Programme Director serves as USA Chapter Coordinator with backup from CCF USA Cincinnati support team of Interim Operations Manager Lynda Gearheart and Program Manager Penny Jarrett. Leona also coordinates Laurie's Tours in cooperation with CCF USA staff. A contact list of USA Chapter Heads is available on the CCF website: <http://www.cheetah.org/?nd=usa>. Several other possible chapters are in formation in the USA, as well as possible branches of CCF in many other countries.

1.3.2 CCF UK and Cheetah Conservation Fund Canada

Both CCF UK and Cheetah Conservation Fund Canada have been active in their support of CCF Namibia activities. CCF UK's Trustees Peter Stewart, Andrew Mitchell, Nick Lindsay and Alan Lester and CCF's International Programme Director Leona Graham, supported by CCF's partners in the UK, Friends of Conservation UK, are planning CCF Executive Director's visit to the UK in May 2005. Presentations in Chester, Guildford, London and Marwell Zoo have been confirmed.

Cheetah Conservation Fund Canada, led by a small executive board: Jonathan Ward, Dianne Girard and Carol Petersen, with other management team members Dhun Ward, Robin Stewart, Kim-Ellen Hurst and Rose LaVerde, has finalised its not-for-profit status and is in final process of receiving its charitable status and will be able to move forward in 2005 for assisting in raising funds and activities that will support CCF's goals.

1.3.3 Grant, report writing, and database

A past EarthWatch volunteer, Patricia Tricorache, has been assisting in grant and report writing for the past year. She continues in these tasks from her base in the US and plays a key role in CCF's development programme.

1.4 UK Fundraising Activities

In May, Dr. Laurie Marker conducted a UK tour, sponsored by CCF UK Trustees Peter Stewart, Andrew Mitchell, Alan Lester and Nick Lindsay with backup from CCF's International Programme Director Leona Graham based in the UK. The tour was launched with a presentation at Oxford University, included the Dragon School, and Special Awards dinner held at St Margaret's Hall. This was followed by a fundraiser in Guildford, sponsored by Trustee Peter Stewart, and an event in London sponsored by Friends of Conservation (FOC) UK. CCF USA supporter Susan Babson also generously participated.

1.5 South African Fundraising Activities

In May, CCF received a grant from the Wildlife Society of South Africa (WESSA) and the Southern African Development Community's (SADC) Regional Environmental Education Programme (REEP). The funds are earmarked to assist with printing costs of CCF's newly developed book *Integrated Livestock and Predator Management: A Farmer's Guide*.

1.6 Life Conservation Award to Namibian President

On 23 September, CCF presented His Excellency Dr. Sam Nujoma, the President of the Republic of Namibia, the 2004 Life Conservation Award at the Explorer's Club in New York City. His Excellency was presented this award during a luncheon event that brought together over 80 Friends of the Cheetah from throughout the United States. Guests included a cross section of businesspeople, scientists, and media representatives, most all of whom have visited Namibia.

Dr. Cathryn Hilker, founder of Cincinnati Zoo's Cat Ambassador Programme, brought along Sahara, a 4 year-old hand raised cheetah, and Alexis, an Anatolian Shepherd dog. The Master of Ceremonies of the day's event was Barbara McCullough, famous Broadway singer known for her starring role in "The King and I," who welcomed the guests by singing "Colors of the Wind". Brad Little, known for his leading role in "Phantom of the Opera" presented the Namibian President with another song.

The Award was introduced by Mrs. Annie Graham, CCF USA's Board Chairwoman, and presented by Dr. Laurie Marker. President Nujoma's acceptance speech commended CCF's work for "instrumental in several important education and training programmes as well as economic development projects including one that is now opening up bush encroached habitats and utilizing this resource in a sustainable manner to produce a fire log for international markets, thus putting many people to work in the name of conservation." Dr. Nujoma urged CCF to continue on the same path of hard work.

1.7 Other Fundraising Activities

In May, CCF and Coffee For The World launched “Okuti Kawa” in a package that features cheetah images and a poem selected from a writing contest held by CCF in Namibia. ‘Okuti’ is an Otjiherero word meaning ‘savannah’ or ‘wild fields’ and ‘Kawa’ is used on every Coffee For The World bag label, as it is a common African word for ‘roasted coffee.’ This is Coffee For The World’s newest addition to their conservation-themed coffee bags. Coffee For The World is an organisation dedicated to exceptional coffee that makes a difference for the world. Bag labels feature conservation organisations and donations from each bag sale support the featured conservation efforts. Coffee For The World already has bags that support projects for the Nile River, mountain gorillas, snow leopards, rhinos, tigers and now cheetahs. CCF’s Okuti Kawa can be bought online at www.coffeefortheworld.com

2. CCF USA Administration

2.1 CCF USA HQ Transition from California to Ohio

After over 10 years of close partnership between CCF and the WILD Foundation, during which time CCF USA grew from a project under WILD into its own full fledged world class conservation organization, CCF USA Headquarters finally moved to the grounds of Cincinnati Zoo in July 2004. The exemplary leadership of WILD’s President (and CCF USA’s President) Vance G. Martin was critical in CCF’s development, for which CCF pays lasting gratitude. Many dedicated staff served under WILD/CCF’s banner during these formative years, starting with Heather Rowe, Leona Graham (now CCF’s International Program Director), Lee Swoboda, Rena Powell and finally, Shelley Harrison, under whose care CCF USA was passed onto the Cincinnati team. Special thanks also due to WILD/CCF staff Valerie Purvis, Paddy Rees and Rita DePuydt.

This well-planned move of CCF's USA HQ to the grounds of the Cincinnati Zoo has been some time in the making, and its successful conclusion is very much due to the excellent leadership of Cincinnati Zoo's supportive CEO, Gregg Hudson, and his dedicated team, long-time supporters of CCF, not the least of whom is CCF USA Board member Dr. Cathryn Hilker, Head of the Zoo's Cat Ambassador Program. Carl and Cathryn Hilker spearheaded the purchase of CCF’s first farm, enabling the original development of CCF’s Research and Education Centre in Namibia. CCF's new USA Headquarters includes, for the first time, its own building. Lynda Gearheart presently serves as CCF USA's interim Operations Director. The immense support from Cincinnati Zoo has been very welcomed by CCF.

A meeting was held in May with US Chapter Heads and some major supporters, as well as Cheetah Conservation Fund Canada representatives. The event was held at Cincinnati Zoo, sponsored by a team headed by CEO/Director Gregg Hudson and organised by the new CCF USA Programme Manager, Penny Jarrett and International Programme Director Leona Graham.

Judith Walls, a repeat volunteer at CCF Namibia, is based in the US and will continue to coordinate the Volunteer Programme between international and Namibian parties. She will work together with staff at CCF USA Headquarters at Cincinnati Zoo in relation to US volunteers.

Judith also works with Friends of Conservation (FOC) in the UK and Leona Graham in the UK for British volunteers. A new relationship has been developed with African Conservation Experience (ACE) and Judith will be the key coordinator for volunteers arriving through ACE.

2.2 CCF Corporate Image

CCF staff members have been working to develop a more consistent image, specifically the CCF logo. As a part of the administrative change, a new look for CCF has been created by the Cincinnati Zoo design team and new administrator specialist, Lynda Gearhardt from Daly Associates in Texas. Corporate imaging and use specification guidelines are essential to better integrate CCF's international offices and develop a more professional, consistent public image.

Since the launch of the new CCF logo in August, CCF has redesigned its outdated letterhead and other marketing materials, including a new look to the CCF newsletter, which was produced in August and mailed to over 13,000 people. The newsletter was available to distribute during Dr. Marker's lecture tour in September/October. In addition, a membership campaign was launched. As of December, many new members had joined CCF. In December, a year-end mailer was sent to over 10,000 who are on CCF's database, and 600 special letters were sent to CCF major donors from both Namibia and the United States. .

H. International Meetings and Conferences

1. Cheetah Census Workshop

In June, CCF's director, Dr. Laurie Marker along with, CCF's Chairman, Dr. Arthur Bagot-Smith, CCF research assistants Amy Dickman and Mary Wykstra attended a week-long census workshop in Tanzania. The purpose of the workshop was to develop methodologies and set priorities for a coordinated survey of cheetahs across Africa. There were two main sections to the workshop, an examination of methodologies followed by a priority setting exercise to select areas for surveys ensuring coverage in terms of habitat and regional representation.

2. Forum on Endangered Species and Sustainable Development

Dr. Laurie Marker was invited to moderate the African session of the 2nd Forum on Endangered Species and Sustainable Development, held in Angers France coordinated by the Zoo de Due la Fontaine. As moderator, Marker was asked to present a general overview of the biodiversity situation in Africa, as well as the main human factors having an effect on this biodiversity. Dr. Marker also gave a paper during the session entitled *Predators and Profit: Learning to Reconcile: Using the Namibian Cheetah as a Case Study*. The conference provided Marker with a good opportunity to meet with members and directors of several zoos from the European Union and United Kingdom. Marker was hosted by the Zoo de Due la Fontaine.

3. American Association of Zoo Docents (AZAD), American Zoo Association (AZA) and American Association of Zoo Keepers (AAZK)

Dr. Marker also presented a keynote address at the American Association of Zoo and Aquarium Docents (AZAD), annual meeting. CCF USA Program Manager, Penny Jarrett, staffed a booth at AZAD to encourage membership. Jarrett also set up at the American Zoo Association's (AZA) annual meeting. Marker, along with CCF Kenya's Mary Wykstra also attended AZA. Wykstra attended the American Association of Zoo Keepers (AAZK) annual conference, presented a paper and manned a CCF booth. These conferences were important to meet with potential collaborators and partners in cheetah conservation.

4. Society for the Study of Reproduction

Dr. Crosier travelled to Vancouver British Columbia in August 2004 to attend the 37th annual meeting of the Society for the Study of Reproduction. There, she presented an abstract titled *IMPROVED ACROSOMAL INTEGRITY OF CRYOPRESERVED CHEETAH (ACINONYX JUBATUS) SPERM AFTER CENTRIFUGATION THROUGH ACCUDENZ*. The abstract had been submitted in collaboration with Dr. Pukazhenth, Ms. Henghali, Dr. Howard, Dr. Marker and Dr. Wildt.

I. Scientific Papers

During 2004, several papers have been submitted or accepted in scientific journals.

- **Notes on the spatial ecology of caracals *Felis caracal* with particular reference to Namibian farmlands**, by L Marker & A. Dickman, (in press), Journal of Ecology.
- **Human Aspects of Cheetah Conservation: Lessons Learned from the Namibian Farmlands**, by L. Marker & A. Dickman (in press), Journal: Human Dimensions of Wildlife.
- **Using livestock guarding dogs as a conflict resolution strategy on Namibian farms**, by L. Marker, A. Dickman & M. Schumann, (in press), Carnivore Prevention News.
- **Factors affecting leopard (*Panthera pardus*) spatial ecology, with particular reference to Namibian farmlands**, by L. Marker & A. Dickman (accepted), South African Journal of Wildlife Research.
- **Perceived effectiveness of Livestock Guarding Dogs placed on Namibian Farms**; by L. Marker, A. Dickman, & D. Macdonald (accepted), Journal of Rangeland Management.
- **Survivorship of Livestock Guarding Dogs and implications for human-carnivore conflict resolution**, by L. Marker, A. Dickman, & D. Macdonald (accepted) Journal of Rangeland Management.

- **Factors influencing the spatial distribution of cheetahs (*Acinomyx jubatus*) on north-central Namibian farmlands** by L.L. Marker, A.J. Dickman, R.M. Jeo, M.G.L. Mills & D.W. Macdonald (submitted) *Journal of Zoology*.

J. Media and Public Relations

1. Media

In March, CCF drafted its first “Guidelines for Media Communication” protocol, which outlines CCF staff and volunteer responses when dealing with members of the media. It provides detailed guidelines for interacting with media representatives, the procedure for interviews and quotations, and soliciting media communication, writing articles and press releases.

CCF actively promotes itself via the media and has received extensive coverage during 2004. CCF’s work was highlighted in a cover story on cats in *Time* magazine, and a two-page story on Laurie Marker was published in *Philanthropy* magazine. Several local Namibian news stories were printed on the gala dinner and award recipients along with stories on the book donation to Namibian schools, CCF’s special conservation award to the Namibian President, the annual health check-up and semen collection of cheetahs, and the several workshops conducted in cooperation with the Smithsonian and Miami University. A CCF Namibian TV special was filmed and aired. The special featured CCF’s Bushblok project, including vegetation studies underway, and highlights of the Livestock Guarding Dog programme.

Several TV documentary programmes were filmed at CCF during this reporting period. In February, a German film crew visited CCF to make a film on working dogs. They visited a communal dog owner for interviews and filmed the dog at work. During the same month, Dr. Bagot-Smith, CCF’s Chairman, participated in an interview on CCF and conservation in Namibia. The German radio station of the Namibian Broadcasting Corporation (NBC) conducted the interview. A March article by Maryann Mott was featured in *National Geographic News Online* on “Fierce Dogs Protect Livestock, Cheetahs in Africa”. In early November, a TV crew from the British Broadcasting Corporation (BBC) filmed at CCF for their new series called “Animal Park in Wild Africa”, starring Ben Fogle and Kate Humble. The several part series will be aired in 2005. Also in November, a film crew from Interspot Film in Austria filmed at CCF as a part of their 12 part series on “the future of endangered species”, starring Dr. Helmut Pechlanor, who is the Director of the Vienna Zoo (the world’s oldest zoo) and the President of World Wildlife Fund (WWF) Austria. This program links the animals that people see at zoos and on TV with the realities facing them in the wild, and showing what the international community is doing to ensure their survival. In December, a film crew from the ARUO TV in the Netherlands along with presenters produced a documentary about CCF for WWF Netherlands. Film crews typically do documentary pieces on CCF’s integrated programmes and of conservation, research and education, all geared around the survival of the cheetah and its ecosystem, also linking economics into conservation for the local communities.

While in the United States, Marker was interviewed by several newspapers and radio stations in Oregon, California, Texas and Massachusetts. TV interviews were done in Oregon and Texas, and magazine interviews were given to *Philanthropy* magazine, *Scholastic Magazine*, and 60

Minutes. In addition, CCF was highlighted on BBC radio about its Cheetah Country Beef initiative.

In May, CCF published the 20th edition of its International newsletter. The 16-page newsletter is being distributed to individuals and institutions throughout Namibia, Kenya, Botswana, and around the world. This issue of the newsletter featured articles on the Director's trips to Iran and Tunisia, rescued cheetah cubs, cheetah health and reproduction, educational outreach, livestock guarding dogs, international news, business initiatives, community news and staff profiles.

2. Public Relations

2.1 CCF Fact Sheets

Since July, CCF staff members have been working to develop a series of "fact sheets." These A4 pages outline and describe various CCF programmes, initiatives and projects. The series of 12 will be available for donors, members of the media, special groups, volunteers, farmers, teachers and community members. The sheets will serve as a comprehensive tool for communication and education.

2.2 Cheetah Country logo launched

In August, CCF finalised the "Cheetah Country" logo for various CCF projects and products. This oval logo, in the form of a stamp image, will be used to identify ownership in business initiatives and products. The logo is currently being used on packaging and promotional material for Bushblok and Cheetah Country Beef. The phrase "Cheetah Country" is also currently being trademarked.

K. Visitors to CCF

CCF was delighted to host Dr. Stephen O'Brien, a recognised geneticist, in April of 2004. Dr. O'Brien is the head of Laboratory of Genetic Diversity at the National Cancer Institute's National Institute of Health in the US. His research of more than 500 scientific articles, contributes to human and animal genetics, evolutionary biology, retrovirology, and species conservation in areas as diverse as mapping the genome of the cat to the discovery of CCF5-32, the first human gene shown to block infection by HIV among its carriers.

Dr. Frank Joyce, University of Cornell alumni along with CCF's General Manager, Dr. Bruce Brewer and family visited CCF in August and gave a presentation to staff and volunteers about his work in Costa Rica. Joyce is the Resident Director of the Tropical Biology & Conservation Education Abroad Program with the University of California, at the Monteverde Institute in Monteverde, Costa Rica. He is also the president of the Monteverde Conservation League, which owns and manages the Children's Eternal Rainforest. Joyce has spent most of his recent life in Belize working in education, research and conservation. His talk covered the ideas of his scientific study on ants in acacia trees, mutualism, interactions, the onset of eco-tourism and general history of Central America

CCF's scientific board member and cheetah biomedical research collaborator, Dr. Linda Munson, visited CCF in October. In addition, three of CCF USA's board of trustees, Dr. Bill Miller and Pat Miller (CCF's past chairwoman) also visited CCF in October, as did Carl Hilker. In November, several members of CCF's Northern California Chapter visited CCF for several days and learned first hand about CCF's programmes.

Namibia's Ambassador to the European Union (EU), Professor Peter Katjavivi and wife Jane, who serves on CCF's Namibian board, visited CCF while on holiday in Namibia. Although Jane has visited CCF's Centre on several occasions, this was the Ambassador's first visit. Over the years, both have been very involved with CCF's conservation, education and research programmes. Tangeni Erkana, CCF's newest board member also visited CCF in August and got a first hand view of CCF's programmes.

In October, during their Annual General Meeting, the Namibian Veterinarian Association visited CCF for a day. During their visit they participated in a cheetah workup and endoscopies, assisted with diagnosing and treatment of one of the Livestock Guarding Dogs, and learned about all of CCF's programmes ecological research and conservation programmes.

Year-end visitors included Annie Beckhelling, the Founder of Cheetah OutReach, CCF's sister organisation in Cape Town, South Africa. Beckhelling visits CCF annually and this year brought Vanessa Bouwer, the Assistant Director of the De Wildt Cheetah and Wildlife Trust in South Africa. Together with Dr. Marker, the three made plans for closer links between the various education and research programmes for 2005.

Other guests visiting CCF included the Dean of Cornell University's Veterinary School, Dr. Don Smith. Smith gave a public presentation to the Namibian veterinarians in Otjiwarongo and then spent a couple of days at CCF learning about our efforts and to discuss future collaborations. A follow up meeting was held in New York during Dr. Marker's US trip.

Three special zoo/conservation groups visited CCF during the year. These groups included Cincinnati Zoo, People's Trust of Endangered Species and a group from various zoos in the United States of America. They took part in a variety of pre-arranged activities including an education centre tour, cheetah run, wilderness walk, cheetah safari, game drive, information discussions, sundowners and Chewbaaka exclusive.

L. Volunteer Programme

Volunteers are the backbone of CCF's programmes. In addition to international volunteers assisting CCF in various countries, CCF Namibia benefited from nearly 22,000 volunteer/hours in 2004.

CCF has been working with EarthWatch since 1996, and four volunteers participate on a monthly basis for a two-week period. During 2004, 48 EarthWatch volunteers assisted CCF, for a total of 4,320 volunteer/hours for the year.

Between January and December of 2004, CCF received 212 queries about volunteering. Of these, 35 people were accepted and started volunteering, contributing with nearly 10,000 volunteer/hours. Some are volunteers from our US chapters, or repeat volunteers, whilst others had experience in animal or veterinary care, as well as business and marketing.

New additions as CCF volunteers were David Bell and Jennifer Newlin Bell. The couple joined CCF in January after living for two years in a rural village outside of Opuwo in northwest Namibia as community development volunteers with the United States Peace Corps. Dave, who has a business and marketing background, is helping to develop the Cheetah Country Beef programme, and is assisting with various training and conservancy efforts. Jen, who has experience in journalism and design, is helping design and edit CCF publications and marketing material including Bushblok (for CCF Bush), the new *Teacher's Resource Guide*, and the *Integrated Livestock and Predator Management: A Farmer's Guide*. Dave and Jen's work at CCF Namibia amounted to over 2,600 volunteer/hours.

Other volunteers included two University of Miami volunteers who assisted CCF for a week each, totalling 90 volunteer/hours. Namibian volunteers included two students remaining at CCF for a period of six months each, and three Namibian students who worked two weeks each over the year-end holidays. Namibian volunteer/hours totalled nearly 5,000.

CCF USA volunteer Judith Walls has been assisting in the volunteer programme for the past two years, coordinating volunteers' comings and goings, and being the primary CCF contact. Walls has carried forward a very important part of CCF's efforts.

During 2004, CCF printed new certificates to recognize individuals for their continued support and dedication to the cheetah's survival. Certificates are given to departing staff and volunteers, EarthWatch volunteers, learners and local CCF supporting businesses. CCF also partnered with a group of EarthWatch volunteers to create a 'departing' packing for CCF staff and volunteers. The package, burned on a CD, includes several PowerPoint presentations (featuring the departing individual), CCF books and publications and other pertinent information. CD's are now regularly made and distributed to volunteers. Nearly 50 of these CDs have been distributed in 2004.

M. CCF Staffing

Early in 2004, CCF said farewell to two main staff members. Audrey Pickup, veterinary technician, completed her year's tenure and returned to White Oak Conservation Center in Florida. Amy Dickman, Dr. Marker's primary research assistant left Namibia however continues as a CCF research assistant from the UK while at the same time registering for a Master's programme with Oxford University.

CCF Bush Pty Ltd contracted a marketing consultant, James Young, in January to help develop and implement a strategic marketing plan for the organisation. James founded and managed a group of communications companies in London, which he sold in 1990 in order to dedicate his time to conservation. He specialises in developing new income generation initiatives, helping conservation organisations partner with the corporate sector, and formulating and implementing

marketing strategies and management systems. James has previously volunteered with CCF in 1998 and 2001 for short-term projects.

Engelhardt Awaseb officially joined CCF as Assistant Farm Manager, after completing a six-month probation period. He is involved in overall maintenance of the farm, livestock management and other agricultural-related projects. Engelhardt grew up on Cheetah View, now one of CCF's farms, where his father was foreman for 20 years. Engelhardt completed high school in Otjiwarongo, where he was the founder of the school's Environmental Club, and completed a three-year diploma in Agriculture from Neudamm College of Agriculture.

Italy//Awaseb joined CCF as a member of the Education staff. Italy had worked previously as a tour guide and is mainly responsible for hosting visitors and youth groups at CCF's Education Centre.

Terence Lisher began working for CCF as an office assistant in May. He became a permanent staff member in August. Lisher is now a cheetah keeper and works with CCF's non-releasable captive cheetahs in care and feeding. Lisher also assists with the care of CCF's Anatolian Livestock Guarding Dogs and is an assistant in CCF's cheetah behaviour study. Lister comes from Otjiwarongo, where he lived in a home full of birds, tortoises, chickens as well as dogs and cats.

Andrew Stein is a visiting researcher at CCF for a planned three-year Ph.D. study on the Namibian Leopard Project. He is studying the impacts of leopards on farms within the Waterberg Conservancy. Andrew is a Fulbright scholar through the University of Massachusetts. Andrew has a B.A. in Zoology and a Masters from the University of Massachusetts.

1.1 CCF Namibia Staff

Dr. Laurie Marker – Executive Director

Dr. Bruce Brewer – General Manager

Engelhardt Awaseb – Assistant Farm Manager

Italy //Awaseb – Education Officer

Johan Britz – Farm Manager

Tanya Britz – Accountant and Administrative Assistant

Dr. Adrienne Crosier – Reproductive Physiology (joint appointment with Smithsonian)

Josephine Henghali – Research Assistant

Terence Lisher - Cheetah Keeper and Research Assistant

Matti Nghikembua – Research Assistant & Education Officer

Gephardt Nikanor – Education Assistant

Bonnie Schumann – Senior Research Assistant

Mandy Schumann – Research Assistant

Bessie Simon – Janhelpman Supervisor

Max Simon – Maintenance Supervisor

CCF Namibia also employs 22 Namibian farm and domestic workers.

1.2 CCF Namibia Graduate Students

Andrew Stein – Fulbright Scholar (Leopard Research)
Jessica MacManus – Fulbright Scholar (Cheetah Behaviour)
Ezekiel Fabiano – CCF Intern and Master's student

1.3 CCF Kenya Staff

Mary Wykstra – CCF Kenya programme coordinator and Senior Research Assistant
Cosmas Wambua – Research Assistant - Kenya
Lumumba Mutiso – Community Officer - Kenya

1.4 CCF USA Staff

Lynda Gearheart – CCF USA Interim Operations Manager
Penny Jarrett – CCF USA Programme Manager
Leona Graham – CCF International Programme Director
Angie Larimer – CCF USA Book Keeper

IV. PLANNED ACTIVITIES: January - June 2005

During the next six months CCF will:

- Continue work with farmers on cheetah-related issues and reducing conflict towards cheetahs.
- Continue with tag-and-release programme and biomedical sampling.
- Collaborate with the Smithsonian Institution's National Zoo in reproductive physiology studies on male cheetahs at CCF's Centre.
- Collaborate with University of Davis and Namibian veterinarians on stress related disease research and collection of gastric biopsies.
- Conduct annual health exams and endoscopies on all cheetahs held at CCF Centre in February.
- Continue work with the Large Carnivore Management Association.
- Continue work with the Global Cheetah Forum.
- Work with USAID, and the Ministries of Agriculture, Environment and Tourism, and Trade and Industry on bush encroachment-related research and bush industry development. The first logs will be shipped internationally in 2005.
- Continue work with the Conservation Association of Namibia (CANAM), the Waterberg Conservancy, and communal conservancies in wildlife and habitat monitoring, eco-tourism activities, and promoting the concept of conservancies.
- Continue to expand the Livestock Guarding Dog Programme through breeding, placement and monitoring of dogs.

- Continue to expand CCF's community development programme with emphasis on community game guards and holding training workshops. Two workshops will be held in February in cooperation with the Namibian Nature Foundation.
- Continue to conduct educational assembly programmes in schools throughout Namibia, and distribute and evaluate student activity books in collaboration with the Cincinnati Zoo.
- Work with the Ministry of Basic Education, Culture and Sports in the developing and adoption of predator conservation in the national school curriculum.
- Host a three-week long Environmental Education course in cooperation with the Smithsonian Institution's National Zoo for April.
- Host four one-week long Community Ranger and Farmer Extension courses in cooperation with the Smithsonian Institution's National Zoo for June.
- Plan a three-week long teachers' training workshop in cooperation with the Cincinnati Zoo and the Miami University for August.
- Host University groups at Cheetah View in cooperation with University of Namibia.
- Continue with student internships in co-operation with Namibia's Polytechnic, the University of Namibia, and Oregon's Global Graduate Programme.
- Continue as a field station for EarthWatch and work with EarthWatch volunteers.
- Continue work with CCF's Namibian fundraising committee to recruit partnerships with local businesses.
- Travel to the US in March/April for fundraising and lectures.
- Continue developing CCF USA's base of operations for fundraising.
- Assist with the development of CCF UK – travel to the UK for lectures in May for the 2nd annual Cheetah Week.
- Plan CCF Namibia's annual fund raising dinner in July 2005.
- Assist Algeria, Iran and Kenya with developing cheetah programmes in their countries, as well as Botswana, Zimbabwe and South Africa.
 - Travel to Europe to begin discussions on northern Africa cheetah conservation activities in February.
 - Travel to Kenya and participate in the 3rd Kenyan cheetah workshop, in February.
 - Assist Botswana with community farmer's workshops, in February.
 - Assist South Africa with the development of a Livestock Guarding Dog programme.
 - Assist in a cheetah survey in Algeria.
- Attend an International Union for Conservation of Nature and Natural Resources (IUCN) Species Survival Commission (SSC) Cat Specialist Group Core group meeting in June 2005 in Brazil.
- Publish peer reviewed scientific papers on CCF's research.
- Continue to host national and international journalists.