

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

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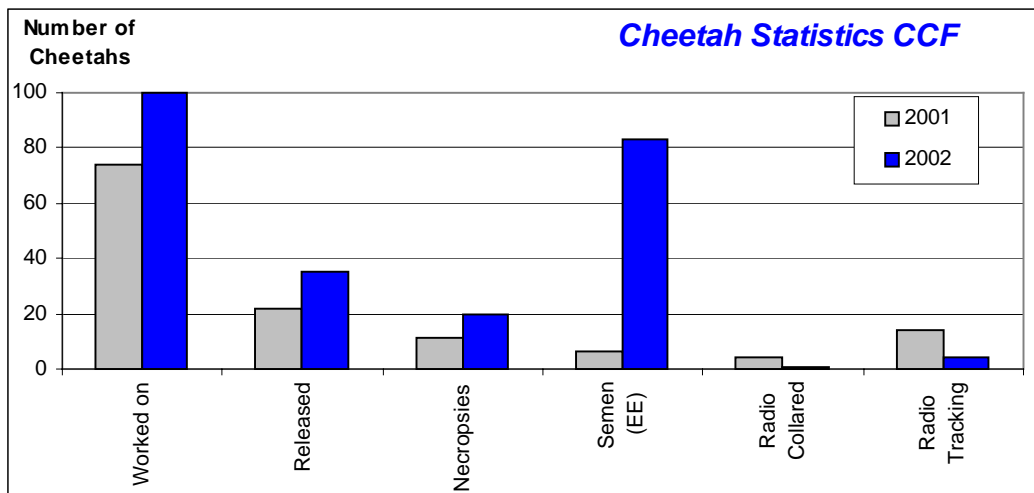
REPORTING PERIOD
JANUARY THROUGH DECEMBER 2002

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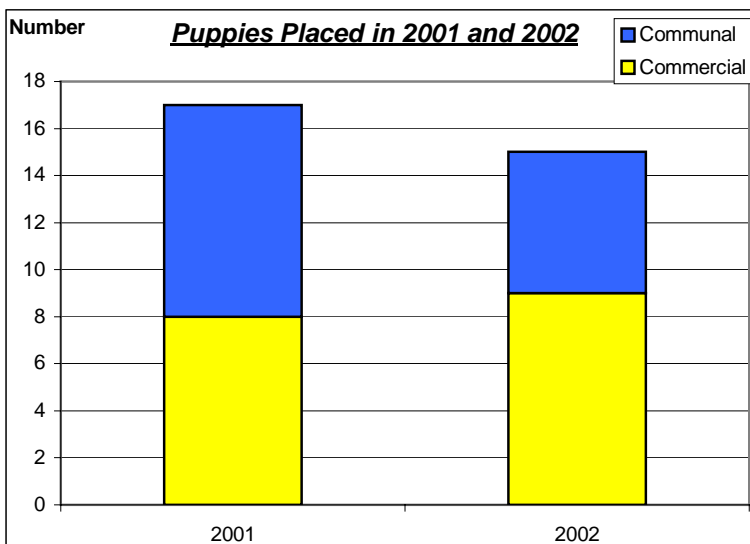
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EXECUTIVE SUMMARY

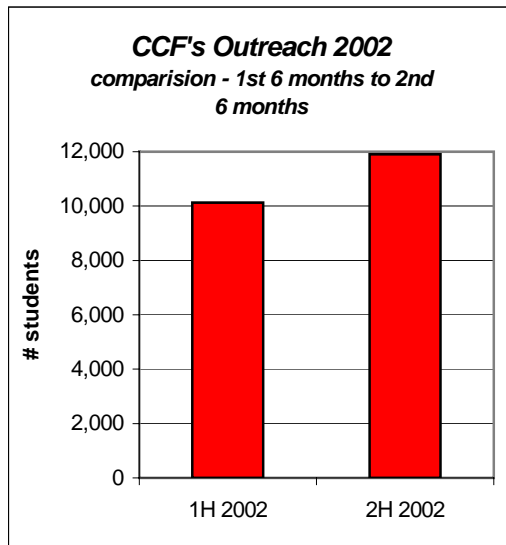
CCF has continued to be very active during the 2002. Collaborative biomedical research included conducting gastric biopsies and sperm collection on both captive and wild cheetahs, and developing a faecal hormone lab to monitor reproductive cycles. The sperm collection team went “travelling” this season, and CCF collected sperm from cheetahs housed at several farms and game lodges across Namibia. At the end of 2002 CCF is housing 23 non-releasable cheetahs.



Three litters of Anatolian Shepherd Livestock Guarding Dogs were born in 2002 and puppies placed throughout the year have been monitored. Two of the litters were born during December 2002 and these puppies will be placed in early 2003.



A puppy was imported from South Africa on a breeding exchange programme in July, but unfortunately the puppy was cryporcid and therefore not suitable for breeding. Plans have been made to place the puppy as a working dog in early 2003 and to acquire a replacement breeding male.



CCF continues to be very active in attending meetings and conferences related to conservation issues as well as carrying out its education and community reach programmes. CCF talked to more than 22,000 students and learners during 2002 and conducted outreach to schools all over the country. Staff also attended a number of regional agricultural shows throughout the country.

In addition, the Education Centre had more than 3,000 visitors, including day visitors, learners and youth groups.

Several Namibian and international students have conducted their research and in-service

training at CCF, in addition, several CCF staff members haven taken various work-related courses. Numerous research papers have been submitted to journals for publication. Training was provided at CCF for University of Namibia students as well as students from Round River Conservation Studies and students from the USA and South Africa. At present, one CCF staff member is participating in an under-graduate and another in a graduate degree course. Two staff members completed their studies, one a Ph.D. and the other a B-Tech.

CCF's bush project has been formally incorporated as CCF Bush Pty Ltd, a Namibian company not for gain. Contract harvesters have been employed and around 70 hectares of bush was felled. Extensive chipping trials will begin in early 2003. In the meantime, CCF conducted collaborative biodiversity projects on designated research plots.

CCF's research and conservation programme in Kenya has continued to lay solid groundwork in research, education and outreach of conservation of cheetahs and its habitat. CCF also continues to work closely with individuals and organisations worldwide and in particular with groups in Iran, Botswana and South Africa on cheetah conservation.

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 sustainable 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 encourages worldwide support.

II. ORGANISATIONAL STRUCTURE

The Cheetah Conservation Fund is an international organization with registered organisations in Namibia, the United States, Canada and the United Kingdom. In 1991 CCF became a Namibian Voluntary Trust, with a Namibian Board of Directors comprised of leaders in the local community, business, agriculture and government sectors. In 2002, the Namibian Board completed the registration of the Cheetah Conservation Fund as a not-for-profit Section 21 Company. In 2002, CCF Canada registered as a charity in that country. Additionally, there is an International Science Advisory Board that 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, Bellebeno, and Jan Helpman 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 200,000 hectares of private farmland surrounding the Waterberg Plateau Park - a national game park dedicated to 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 2002

A. Facility Developments

Through a grant from Annie and Bob Graham, the farmhouse and workers houses on Khayam's Kopie (Boskop) were renovated and two farms, Bellebeno and Jan Helpman, adjoining CCF were purchased. CCF professional staff and research associates moved into Boskop in February. Bellebeno is a game farm and Jan Helpman a livestock farm. Over 200 head of cattle were bought and placed on Jan Helpman, half of them as a short-term loan by Dr. Laurie Marker. CCF's cattle from Cheetah View were moved to Jan Helpman to consolidate livestock management. Additional grazing has been leased to neighbouring farms on Boskop and Jan Helpman.

In addition, three workers houses were built on Elandsvreugde for farm staff, complete with running water and generator power. Electrical and water systems both on Elandsvreugde and Boskop were upgraded.

With the assistance of Raleigh International, new cheetah holding pens were constructed and one large pen was split into two.

Through a grant from Dr. Bruce Brewer, the main CCF dam was enlarged – this dam feeds the Centre's main borehole and, as such, is critical.

B. Research

CCF staff conducts field research to gather data on distribution, behaviour, biology, demographics, livestock/cheetah interactions and health of cheetahs. Farmers participate in the research through live capture of cheetah on their farms, assist in collecting biological samples and measurements, ear tagging, radio collaring and release. They also report on other cheetah/livestock interactions.

CCF collaborates with international researchers and institutions, such as experts in genetics, reproduction, veterinary medicine, pathology and conservation. An extensive database has been developed with new data continually added. Several papers have been accepted for publication, including one in the *Journal of Mammalogy*, titled Morphology, Physical Condition and Growth of the Cheetah and two by *Biological Conservation* titled

Aspects of the management of cheetahs, *Acinonyx jubatus jubatus*, trapped on Namibian farmlands and Demography of the Namibian cheetah, *Acinonyx jubatus jubatus*.

1. Population Biology

Between 1 January and 31 December 2002, CCF worked on 100 (59M.40F.1UNK) cheetahs. Of these, 35 (19M.16F) were tagged and released back into the wild, 45 (29M.16F) were captive animals receiving annual physical examinations at CCF and other captive facilities in Namibia, and 20 (11M.8F.1UNK) were necropsies. In addition, one tagged cheetah was reported shot but no necropsy could be performed.

A veterinarian confirmed two female cheetahs that were tag-and-released, pregnant; one had 15-month old cubs and the other was caught at a play tree. A third female was lactating and released back on the same farm she was caught the next day.

CCF now houses 23 cheetahs (versus 17 at the end of 2001—2 resident cheetahs were euthanased and one died of a chest infection in 2002; 9 new cheetahs are now housed at CCF). New resident cats include a mother and two male cubs that are considered non-releasable, as the female is very old with extremely worn canines came from a guest lodge where they were caught. Two other adult male cheetahs were also collected from this guest lodge; one was in such poor condition it was euthanased, but the other male was tagged and released back into the wild. Two other males that are now housed at CCF were collected from a different guest farm that could no longer house them due to pending new legislation on minimum enclosure sizes. Four cheetahs are being held temporarily at CCF, which were found to be wearing CCF ear tags. They had been caught and sold by a game farmer in 1998, about 6 months after being tagged-and-released by CCF. These cheetahs are to be re-housed once their owner rebuilds facilities. However, CCF questions whether new housing will be built and is therefore now assuming responsibility for them.

CCF unsuccessfully applied for two export licenses to the Tswalu Game Reserve in South Africa for some of its resident cheetahs. Other cheetahs held at CCF cannot be released back into the wild, and are only suitable for export to captive facilities, which is not currently allowed in Namibia.

CCF's captive cheetahs were used for testing scent-baited hair snares to possibly use for in wild cheetah census methodology, as currently, there has been no census technique developed for use on wild cheetahs. The use of scent-baited hair snares, combined with mark-recapture genetic analysis has been a successful census technique for other wild cats. Round River students used CCF's captive cheetahs to test three commercial scent lures: Tomcat, Canine Call, and Weavers Solution, and also tested Eternity and Obsession by Calvin Klein, canned pink salmon, canned sardines, cheetah anal secretions, and female and male cheetah faeces. All scent lures were tested on 14 of CCF's wild-caught cheetahs. Scent-baited hair snare trials resulted in very little hair deposited for any scent lure used nor was rubbing behavior observed in wild-caught cheetahs that has been reported in other wild cats, or captive cheetahs. These results

suggest that alternative methods should be tested and implemented for census of Namibian cheetahs.

2. Health and Reproduction

In January, veterinary technician, Jane Fink, joined the CCF team for one year through support of White Oak Conservation Center. Her duties included training Namibian students and in particular, a Master Degree student from University of Namibia, Josephine Henghali. Procedural protocols for the clinic were established, as well as long-term relationships with new vendors for clinic supplies at discounts. The Columbus Zoo donated a cold sterile tray and instruments for the clinic.

Of the 45 captive cheetahs worked on, 23 were resident cats at CCF, some of which were worked on multiple times. All CCF's captive cheetahs received annual physical examinations in February where they were vaccinated and all were endoscoped.

In October, CCF organised and hosted an Anaesthesia and Immobilization workshop that was facilitated by Dr. Tubbesing, a veterinarian from Windhoek. In addition, an EKG machine was obtained for CCF from Dr. Tubbesing.

2.1 Health Issues – Gastritis

In collaboration with Drs. Linda Munson and Karen Terio from the University of California Davis, faecal cortisol levels in relation to effects of stress on captive and wild cheetahs, and the level of gastritis in these animals, are being determined.

Internationally, cheetahs suffer from gastritis, an inflammation of the stomach that is caused by spiral bacteria and impacts negatively on the animals' health. Stress is implicated as one of the possible causes of this disease. The research will provide a greater understanding of the disease and how it affects captive animals.

Research collaborator, veterinary pathologist and member of CCF's Scientific Advisory Board, Dr. Munson and veterinarian Dr. Scott Citino, President of the US Zoo & Wildlife Veterinary Association from the White Oak Conservation Center, visited CCF in January to endoscope all resident cheetahs and train five local veterinarians, as well as CCF staff, on the procedure. The Morris Animal Foundation has funded the gastritis study on wild cheetahs, and Olympus donated an endoscope and light source to conduct the research. In 2002, 30 gastric biopsies were collected on resident cheetahs, and 22 were collected on free-ranging cheetahs that were tagged-and-released.

2.2 Necropsies

Necropsies enable thorough examination and collection of internal organs and tissues, to facilitate certain studies on overall health and diseases that would not otherwise be possible. Therefore, CCF asks to have access to dead cheetahs, whether as a result of trophy hunting, by hits, or shot by farmers.

In 2002, CCF performed 20 (11M.8F.1UNK) necropsies. Nine cheetahs were shot by farmers or killed by herders for suspected livestock predation and a further two cheetahs were killed by domestic dogs; one of the cheetahs shot was due to a cage trauma wound – it had a broken leg. One other cheetah died as a result of capture on game farms/lodges, due to extended stay in a trap cage, one was hit by a car, and two were trophy hunted.

Three necropsies were on resident CCF cats. CCF euthanased two of its cheetahs: one very old female who had started seizing and was found to have a tumour behind its eye and a cancerous spleen, the other, a male, sustained a chronic foot injury which failed to heal. The third cheetah, a male, died of an undiagnosed chest cavity infection.

Dr. Laurie Marker worked with Dr. Munson in April, as well as with Drs. Warren Johnson and Steve O'Brien on several papers including the health status of the cheetahs. Three papers have been submitted for publication, of which two have been accepted for publication including Lymphosarcoma associated with Feline Leukaemia virus infection in a captive Namibian cheetah, and Dental anomalies and incidence of palatal erosion in Namibian cheetah; the last paper, A Serosurvey of viral infections in wild Namibian cheetahs has been submitted. Additionally, a genetics paper entitled: Patterns of molecular genetic variation in Namibian cheetah will be submitted for publication in early 2003.

2.3 Reproduction

Dr. Adrienne Crosier of the Smithsonian's National Zoo joined CCF in February. She arrived with Dr. Budhan Pukazhenthhi to continue developing a reproductive physiology lab at CCF and conduct semen cryopreservation studies. Dr. Crosier is a post-doc at the National Zoological Park with research collaborator, Dr. David Wildt, who is a member of CCF's Science Advisory Board. Dr. Crosier worked on expanding CCF's Genome Resource Bank (GRB) and trained CCF staff and UNAM Master's student, Josephine Henghali, in the basics of semen collection and processing, and evaluation of vaginal cytology samples.

To date, 86 semen samples have been collected, including 46 collections on CCF resident cheetahs and leopard, of which 23 samples were frozen for the GRB. A further 6 out of 10 samples on wild males were adequate to be frozen for the GRB. Dr. Crosier and CCF staff travelled to seven captive facilities in Namibia to conduct 25 reproductive examinations on captive male and female cheetahs, leopards and lions.

Of the cheetahs collected, 15 semen samples were used for a Glycerol Toxicity Cryopreservation Study. The results of this study were presented in a poster at the 9th International Symposium on Spermatology meeting held in Cape Town. The manuscript will be submitted for publication in early 2003. Dr. Crosier also used 13 cheetah samples for a Raffinose Cryopreservation Study, and also presented an abstract and poster of these results at the same conference.

CCF was partially sponsored by Olympis for the purchase of a new microscope, with the balance of the cost of the scope being supported by the White Oak Conservation Center. This new microscope will enhance CCF's reproductive physiology programme. Whilst in the US in December, Dr. Crosier travelled to White Oak Conservation Center to present her research and training accomplishments to keepers and veterinarians.

2.4 Endocrine Lab Set Up at CCF

In collaboration with Dr. Terri Roth of the Cincinnati Zoo and Dr. David Wildt of the National Zoo, a faecal hormone (endocrine) lab was developed at CCF. CCF supporter Susan Babson acquired the donated equipment, and the lab was set up in July 2002. CCF staff and volunteers have been collecting faecal samples from resident CCF cheetahs to be run in the lab.

CCF's Masters student, Josephine Henghali, was trained by Cincinnati Zoo's Dr. Monica Stoops, and has now run more than 25 plates of essays of estradiol hormone. The running of these hormones coincides with 30 days of cheetah oestrous cycle observations carried out on CCF's resident female cheetahs by volunteers and staff.

The faecal samples will be evaluated for oestrogen levels to determine if the females are experiencing normal oestrous cycles. In addition to the faecal hormone data, behavioural observation data also was collected to support the endocrinology data. Hormone cycles and behavioural observations will be correlated.

3. Cheetah Ecology

Since 1993, CCF has radio-collared over 55 cheetahs. The animals have provided information on home ranges, and often on a group of cheetahs, such as males in coalition or females with cubs. Radio-collared animals are tracked weekly by air. The data is used to show farmers actual cheetah movements on their land; for example, an individual animal may be seen over several farms. Since much data has already been collected, this research has been reduced. Analysis of this data is complete and a paper entitled Factors Influencing the Spatial Distribution of Cheetahs on North-Central Namibian Farmlands is in preparation for submission to a journal early in 2003.

Four (1M.3F) cheetahs were radio-tracked for most of 2002. Of the three females, one was collared in 2001 (when she was relocated with one cub) and she has subsequently had a litter of five cubs now seven months old, confirmed by visual from the air. Her collar is still transmitting; the other three signals were lost towards the end of the year. A fifth female cheetah was collared during 2002, but she died from an undetermined cause. One male cheetah that had been tracked for nearly three years was re-collared in 2002 and then was found death from an undetermined cause several months later.

In collaboration with Round River Conservation Studies, and utilising past radio-tracking data, plot-level habitat characteristics for male cheetah coalitions on two commercial ranches were identified. Using individual ranches as sample units, areas of high-use were

identified using radio-telemetry locations to calculate 30% probability kernels. Twenty-five randomly placed plots in both high and low-use areas on two farms and measured shrub density, height, ground cover, hunting visibility and relative prey abundance. Although shrub density did not vary significantly between high and low-use areas, hunting visibility and shrub height distribution was significant on both farms, and for one of the farms, high-use areas were found to have higher prey density. These data suggest cheetah may be utilising areas with higher prey density and better hunting visibility and there may be trade-offs between these factors, presumably as behavioural adaptations to maximise hunting efficiency. These findings support our previous findings and suggest that identification of specific habitat characteristics can prioritise ongoing habitat restoration and predator conflict mitigation efforts.

4. Ecosystem Research

Assessment of the Namibian farmland ecosystem for long-term habitat viability for the cheetah and its prey is a part of CCF's on-going research. The farmlands support a rich prey base, as 70% of the country's game inhabits these areas. CCF assesses the farmland ecosystem and monitors the wildlife prey base available to predators in CCF's primary research area.

4.1 Game Monitoring and Prey Habitat Preferences

To assist in developing a game monitoring programme for the Waterberg Conservancy, CCF began ongoing wildlife monitoring on its farms, designed to understand game density, movement, demographics and habitat utilisation.

Earthwatch volunteers assist with this research on a monthly basis. Monitoring involves visual road counts, tracking and counting spoor, categorizing vegetation, densities and distribution and soil analysis. CCF also tracks rainfall, daily temperatures and uses fixed point photography.

Data collected since 1995 has been analysed and a final manuscript entitled Assessing Ecological Impacts of Bush Encroachment on Namibian Farmlands has been submitted to a journal for publication.

4.2 Full Moon Waterhole Count

The Waterberg Conservancy held its 6th Annual August Full Moon Waterhole Count. Due to lack of rain, there were fewer waterholes this year. Mainly youth groups and farm staff assisted in the Waterhole count. The results are currently being analysed by CCF.

4.3 Bush Encroachment Bio-diversity Studies

CCF has been awarded a USAID grant to improve cheetah habitat through utilisation of the thickened bush that has overtaken the north-central Namibian farmlands, which covers much of the cheetah farmland habitat. Dr. Bruce Brewer, CCF's General

Manager, leads the project. Dr. Richard Jeo, Senior Ecologist, and Research Assistant, Matti Nghikembua have been actively conducting research on designated plots. CCF's Chairman, Dr. Arthur Bagot-Smith, represents the CCF Bush project on a nimbly formed government Wood Biomass Utilisation Committee.

The environmental impact assessment of the project served as a training opportunity for African environmentalists. Five government and non-government officials from Tanzania, Zimbabwe, Mali, Zambia and Namibia involved in environmental impact assessment in their host countries, came to Namibia to use the examinations of the CCF Bush project as a test case. Their assessment of the project was positive.

The project was formally incorporated as CCF Bush Pty Ltd, a Namibian Section 21 Company not-for-gain. Office and laboratory/shop facilities have been located in Otjiwarongo. Assets now include a chipper, tractor and a pickup truck. Contract harvesters were employed and approximately 70 hectares of bush was felled. Negotiations continue with USAID staff, preparing for the purchase of the refining plant.

A Namibian based experimental bush combine (bush thresher) was leased for harvest trial and to delineate the boundaries of 50 one-hectare experimental plots. These plots were later harvested at various rates using several methodologies in order to establish baseline economic data, such as yield per hectare and cost per felled ton. Extensive chipping trials to establish economic parameters will commence in early 2003.

During the course of the year, biodiversity projects were conducted at CCF farms in collaboration with Round River Conservation Studies and students from the Polytechnic of Namibia. CCF also conducted a trial to determine the moisture content of the harvested bush, and is working on developing a protocol for such a trial. CCF's Matti Nghikembua has completed his B-Tech, with a final paper entitled Habitat Correlates of Small Mammals Density and Diversity on Northern Namibian Commercial Farmlands.

In December, two Agriculture students (one from Neudamm Agricultural College and one from the University of Namibia) joined CCF on a temporary basis to assist with the fieldwork. The team has been active both at Cheetah View plots and on the economic plots on CCF's main farm, thus far collecting 43 plots for vegetation data. All students undergo extensive training on field research methods.

As a follow up to the National Forestry workshop in March, attended by CCF, the Ministry of Environment and Tourism's Forestry Directorate requested CCF to prepare a paper entitled The Cheetah Conservation Fund (CCF) Bush Project: Bush Encroachment, Cheetah and Local Biodiversity.

In addition, CCF participated in a wood fuel consumption survey in Otjiwarongo. About 15 households and businesses were interviewed and Round River Conservation Studies analysed the results.

C. Human Impacts

Livestock loss to cheetahs is an economic and emotional issue. While farmers perceive cheetahs as having an excessive economic impact on their livestock and wild game industries, many Namibian farmers have done little, from a management perspective, to alleviate their problems in a non-lethal manner. By addressing the farmer's conflicts with predators, CCF is devising a conservation and management strategy that benefits both humans and cheetahs, thus ensuring the species' survival on livestock farms. Over the years, CCF has seen great awareness and better farm practices.

1. Livestock Guarding Dogs Programme

CCF's Livestock Guarding Dog programme (LSGD) has continued to grow with over 144 Anatolian Shepherds working with livestock on both communal and commercial farms at the end of 2002. Anatolian Shepherds provide a method of non-lethal predator control that protects the farmer's livelihood, while conserving predator species. The dogs are monitored by CCF in a bi-annual evaluation, and monthly for puppies during the first six months. Two papers have been submitted to journals for publications, entitled Evaluating the Effectiveness of Livestock Guarding Dogs as a Method of Conflict Resolution and Survivorship of Livestock Guarding Dogs: Implications for Human-Predator Conflict Resolution.

1.1 Puppy Placements

Since 1994, 171 puppies have been born of which 154 were placed as livestock guardians. During 2002, 26 puppies were born, and 16 were placed with farmer's livestock. Some of these placements were from a litter born at the end of 2001. Fifteen puppies that were born in late 2002 will be placed in early 2003, of which 10 were born at the CCF farm, and five at the farm of Carla Meyer's who has been helping CCF to breed Anatolians. Of the puppies born and placed during the year, nine puppies were placed on commercial farms and seven on communal farms, one puppy died at birth and one went to South Africa for a breeding exchange.

As of January 2003, all puppies born will be sterilised at the age of eight weeks prior to being placed.

1.2 Follow Up on Prior Placements

CCF's Fanuel Ekondo visited adult dogs in communal farming areas, and completed vaccinations and check ups on puppies placed on communal farms. He also brought in all seven dogs placed with communal farms in 2002 for spaying and castration. CCF supports the medical costs of dogs living on communal farmlands.

A total of eleven dogs were returned to CCF or taken from their owners due to negligence or ill treatment. Nine of these were successfully re-homed, and two, which were

unsuitable as working dogs, were placed as pets. A further five dogs were reported to have died.

1.3 Collaboration with Other Breeders

In 2002, collaborations were developed with two Livestock Guarding Dog breeders in South Africa. In January, Mr. Cyril Stannard from the Grootfontein Agricultural Research Station in Middelburg, South Africa visited CCF for a week. Mr. Stannard is setting up an Anatolian breeding project and will be monitoring and researching the effectiveness of Anatolians working in South African farming conditions. The aim of his visit to CCF was to see the dogs working on Namibian farmlands and learn how CCF places and monitors the dogs.

During his stay, Mr. Stannard went along to three farm visits, providing him with the opportunity to speak directly with farmers who have received dogs from CCF. Mr. Stannard also visited the Uitkomst Agricultural Research Stations, a similar institution to his own. CCF agreed to a breeding exchange with Mr Stannard and an eight-month-old bitch was donated to his programme in exchange, at a further date, for a puppy unrelated to our breeding stock at a future date.

CCF staff visited Mr. Johan Steyn in Bloemfontein, South Africa, to deliver an Anatolian puppy and to see his breeding and working dogs. Mr. Steyn, who breeds and sells Anatolians, provided an unrelated puppy in exchange to CCF in 2002. Unfortunately, the puppy was not suitable for breeding, as it was found to be cryporcid at 5 months of age. The dog was castrated and will be re-homed on a farm as a working dog.

1.4 Donations

Dr. Crosier organised the donation of Hills Science Diet dog food for the LSDG programme. This was a one-time donation from Dr. Bill Schoenherr of Hills Pet Food, and Dr. Eric Van Heugten and Mrs. Kimberly Ange from North Carolina State University. Brigitte Darthch, the Windhoek based dog food distributor donated a bag of Science Diet puppy food to each puppy placed. The new owners also received a measuring cup, food bowl and a leaflet.

1.5 CCF's Farm - Livestock and Dogs

CCF's farm provide the opportunity to practice and experiment with optimum methods of livestock and farming management practices, and one of CCF's farms is an active cattle and small stock farm has livestock for Livestock Guarding Dog breeding. CCF has two major small stock herds (goats and sheep) each with breeding groups of Livestock Guarding Dogs. CCF's resident breeding male, Caesar, was treated twice for warthog wounds and had part of his tongue removed due to a cancerous tumour.

Two students from the Neudamm Agricultural College underwent a training programme on CCF's model farm to learn about farm management practices, including non-lethal predator control.

During the year, 19 sheep were donated to a neighbouring farmer for losses incurred on his small stock by cheetahs, 15 goats were sold at an auction and two young billy goats and one sheep ram were acquired. Additionally, a new breeding bull was purchased for CCF's cattle herd. At the end of 2002, CCF farming operations has, in total, 253 cattle, 147 goats and 193 sheep

2. Contact with Farming Communities

In the past year, CCF presented talks at the Etosha Southern Boundary Problem Animal Meeting, Etosha Conservancy, Helmeringhausen Farmer's Association, the Erongo Mountain Nature Conservancy, the Witvlei Farmer's Association, and the Namatanga Farmer's meeting. The talks provided a brief outline of CCF's research and focused on the correct identification of predators causing problems, and solutions including livestock management practices and non-lethal predator control. A staff member attended a course on Boer goat judging and did a presentation on Livestock Guarding Dogs, with particular reference to the Anatolian. CCF staff attended the Otavi, Otjiwarongo and Platveld Farmers Association Meetings, but did not do presentations

CCF attended this year's Agricultural shows in both the communal and commercial farming areas: Otjinene, Talismanus, Okondjatu, Okamatapati, Gobabis, Grootfontein and Otjiwarongo. These shows present an ideal opportunity to raise conservation awareness and promote good livestock management. In addition, independent farm visits were carried out to farmers who were experiencing predator problems with livestock or game. Numerous farmers were consulted by telephone and information was posted to them. In many cases farmers were put into contact with other farmers to share information on, in particular, the use of donkeys to protect cattle.

CCF staff also attended a meeting in Windhoek with representatives from MET, NARREC, REST and the Namib Rand Nature Reserve to discuss the sharing of information between organisations.

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. CCF's Cheetah Survival on Namibian Farmlands is given to all farmers who come in contact with CCF. In 2001, through grants from the Cincinnati based Cotswold Foundation and the International Cheetah Conservation Foundation this book was translated into Afrikaans and published in 2002.

During this reporting period, two newsletters were produced and mailed to over 3,000 people in Namibia, and about 800 internationally, updating them on CCF's activities and

research findings. The mailing costs for the newsletters were under-written by NamPost and an anonymous donor.

3. Large Carnivore Management Association

CCF staff regularly attends meetings of the Large Carnivore Management Association. The Group consists of members from MET, NGO's, farmers and veterinarians concerned with carnivore conservation. Issues that have been dealt with in the last year include legislation on carnivores, captive holding, the value of live animal exhibits at agricultural shows, trophy hunting, and guidelines for animal use in the film industry. CCF's Bonnie Schumann has been elected as the Association's Secretary for 2002.

4. Waterberg Conservancy

CCF remains active in the Waterberg Conservancy and hosted the Conservancy's AGM. CCF's Dr. Laurie Marker was elected as the ecology representative for the group. CCF continues to promote and support eco-tourism within the Conservancy. During the year, the Conservancy addressed the possibility of creating a sub-division for the East and West areas. In addition, CCF has been working with MET to develop a Rhino Conservancy. A group from MET's Rhino Custodianships programme visited CCF's lands to evaluate it for holding rhinos and recommended that CCF become a Rhino Custodian.

5. Conservancy Association of Namibia (CANAM)

CCF's Director, Dr. Laurie Marker, serves on the executive committee for CANAM as vice-chair. CANAM is an umbrella body for the promotion of conservancies in Namibia. Conservancies encourage sustainable utilisation of natural resources through co-operative management, based on sound conservation principles. During the reporting period, Dr. Marker attended six Ex-com meetings, and attended the AGM. In addition, two special meetings were held, one open to all conservancies to discuss game count methodologies. The other was an invited meeting to review the proposed new wildlife laws. Detailed recommendations were subsequently submitted to MET.

Conservancies and their wildlife management techniques will continue to be extremely important for long-term cheetah conservation. CANAM continues to grow and the new executive committee appears active and committed to seeing the organisation grow.

D. Education Activities

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.

1. Schools and Community Education

During 2002, nearly 25,000 learners and youth group members attended a CCF programme, either at the Centre or through outreach programmes. The number also includes daily visitors to the Centre.

1.1 Education Outreach

Over the last year, CCF talked to around 23,000 students and more than 700 teachers in the country, with May being a quiet period due to exams. CCF staff visited schools in Tsumeb, Otjiwarongo, Windhoek, Rehoboth, Okahandja, Okakarara, Grootfontein, Swakopmund, Walvis Bay, Opuwo, Ruacana, Outapi, Oshakati, Ongwediva and Talismanus.

Students were generally excited to take part and the demand for presentations at schools continue to increase, especially in rural areas. Interestingly, in rural schools Afrikaans was preferred to English. CCF will continue to teach mostly in English but several other Namibian languages are used.

In addition, CCF gave a presentation to 20 Peace Corp volunteer teachers; of which many agreed to help CCF with planning school visits in their various regions during 2003.

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.

CCF's Research and Education 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. Various issues are presented regarding factors that affect conservation efforts at community level.

On average, CCF's Centre had two to three groups of visitors each day, totalling close to 2,000 visitors during the year – the majority of the day visitors were from France, Germany, South Africa, France and the Netherlands, however, more Namibians appear to be visiting. Visitors are highly impressed by CCF.

1.3 Youth Forums and Schools

Organised education programmes at CCF are designed mainly for groups accommodated at the either CCF's Wilderness Camp or tented Camp Lightfoot. 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 by presentation and to the Namibian farmland ecosystem through the nature trail. Team-building activities are designed to 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.

During the year, four school groups stayed at CCF's campsites, 10 schools visited CCF on site for day visits, and 20 youth groups stayed at CCF. All these groups were accommodated at Light Foot campsite. A total number of 634 learners and 625 out-of-school youth took part in the Centre-based programmes coming from throughout Namibia, including Rehoboth, Windhoek, Khorixas, Tsumeb, Keetmanshoop, Otjinene, Oshakati, and international groups from UK and Germany.

The learners, youth, teachers and youth officials that have visited give positive feedback about their stay at the Centre. Many of the visiting youth report that it is not only their first opportunity to see wildlife, but their first trip outside their village and towns. For other youth members, who came from farms with high predator populations, CCF's education programme provides another perspective on the reality of farmland predators, as they often see cheetah and leopards, but mostly perceive them negatively. During a CCF visit, youth see the cheetah in a more positive situation and as the predators that are trying to survive in a difficult and limited habitat.

One key objective of the youth forum visits is to see how various activities can be coordinated and how they can contribute to environmental conservation. Apart from being exposed to CCF programmes and presentations, the youth are also asked to identify local and regional environmental problems, their causes and effects. Issues identified by the groups that affect conservation development include lack of commitment by youth and inadequate support from local businesses, community and authorities.

One of the greatest challenges CCF faces is assisting groups to obtain funding to visit the CCF Centre. Although the Centre is free of charge to student groups, it is unable to provide transport or food for the groups. Even this extra cost, preliminary for transport, is difficult for many youth and school groups to obtain due to the limited access to funding. The need for increased transport funding is vital to make the Centre accessible to more farmers and youth in Namibia.

1.4 Education Workshops

In June, Dr. Laurie Marker participated in a vision workshop on the needs for a science centre in Namibia. The workshop was held at Ongava in cooperation with the Smithsonian's National Zoo, Wilderness Safari's and Ned and Diane Twinning. Over 30 people attended the workshop including university professors, community and education officers and directors from Namibian NGO's, government officials, and tour companies.

The group was tasked to develop curriculum that could be used in Namibia for training conservation scientists and natural resource managers.

CCF hosted two teacher's workshops in 2002. In June over 30 educators attended a workshop held at CCF, including 13 educators from 4 countries, NGO environmental educators from NARREC and Namibian Environmental Educators Network (NEEN), and ministry representatives. The workshop was sponsored by the Cincinnati Zoo in collaboration with the Smithsonian's National Zoo, and Cheetah OutReach with the goal of how to integrate predator conservation and the role of predators in a healthy ecosystem into Namibia's schools and communities. A follow-up workshop was held in December with six of the teachers attending. The teachers joined CCF's education and community outreach staff to review the July teacher's workshop document and review curriculum that had been developed since July.

CCF staff also attended the annual Science Fair in Windhoek, sponsored by NamWater and by learners from various schools in Namibia. CCF was invited in order to exhibit the use of science in conservation to the learners.

1.5 Library Development

For the second year, members of CCF's Seattle, Washington (USA) Chapter, who have become special 'Friends of Rogate', donated over 200 books to the Rogate Primary School in Otjiwarongo. These book donations have provided the opportunity for the school to develop a library. The Namibian Broadcast Corporation (nbc) news crew was present to record the donations of the books.

2. Education and Training at CCF

In December 2002, CCF's Dr. Crosier travelled to the White Oak Conservation Centre in Florida to present CCF research and training accomplishments to the veterinary and keeper staffs. CCF's staff assisted in organising a Conservation Biology course to be held at the University of Namibia and CCF in January 2003. Ned and Diana Twining on behalf of the African Conservation Science Centre, will sponsor the course in partnership with University of Namibia, Smithsonian National Zoological Park and CCF.

2.1 CCF Staff Education

In December, CCF's director, Dr. Laurie Marker, completed her thesis and defence of her Ph.D. at Oxford University in the Zoology Department's Wildlife Conservation Unit, known as WILDCRU, under the supervision of predator specialists Drs. David McDonald and Gus Mills. Most all chapters of her Thesis entitled, Aspects of Namibian Cheetah (*Acinonyx jubatus*) Biology, Ecology and Conservation Strategies, have been submitted for publication in various journals.

CCF's Education Officer, Matti Nghikembua finished his B-Tech in Natural Resource Management at Polytechnic of Namibia. His final paper entitled Habitat Correlates of

Small Mammal Density on Namibian Commercial Farmlands (Cheetah Conservation Fund) was completed.

Fanuel Ekondo, Assistant Farm Manager, has completed his first year in a B-Tech programme at Polytechnic of Namibia in Agriculture.

Josephine Henghali, a Masters Degree student from the University of Namibia, completed more training in veterinary clinic procedures including animal handling and monitoring, faecal evaluations, procedure set ups, blood drawing and processing techniques, data entry and inventory control. She also was trained in how to collect, evaluate, process and store sperm, and is learning how to evaluate vaginal cytology using domestic dog and cheetah smears.

Gebhardt Nickanor attended an environmental education supplemental course in South Africa. Siegfriedt !Aebeb is enrolled in a community development correspondence course.

2.2 CCF In-service Training and Field School

A CCF hosts group from institutions of higher learning and assists in teaching at CCF's field school and provides in-service training for local and international undergraduate students.

Timoteus Shapaka completed his six-month training at CCF. He was a second year student from the Polytechnic of Namibia, enrolled in the National Diploma in Natural Resource Management (Conservation) programme. During his training, two research projects were completed: an ecology project on seedling survival and an animal behavior project on CCF captive cheetah. Timoteus assisted with Education Centre duties, game counts, and the bush project.

Melle Orford working in collaboration with CCF completed a Masters Degree in Environment and Development, in February 2002, at the University of Natal in South Africa. Her research involved a comparison by repeat survey of farmer-related threats to cheetah survival on specific commercial farms in central Namibia to measure changes in farmer-related threats to cheetah survival over time. Of the original 241 farmers interviewed by Laurie Marker in 1991, a sub-sample of 31 farmers in the Seeis, Hochveld and Omitara were re-interviewed between July and October 2001.

In January, Beata Muteka, a third year BSc Agriculture student from the University of Namibia completed her 3-week attachment training. In November, two University of Namibia BSc Agriculture students from the Neudamm Agriculture College completed a six-week internship and practical work experience at CCF. Both students undertook practical and theoretical training and worked with CCF's cattle, goats and sheep, as well as working on CCF's Bush Project.

Working with Dr. Martin Mbewa from the University of Namibia's Biology Department, CCF hosted 25 students for a week in August as a part of their Arid Land Ecology Programme. CCF staff assisted in teaching game count techniques and vegetation/habitat collection methodologies, which also consisted of conducting a plant identification session. The students were exposed to research aspects such as study design, data collection, and analyses.

Eight students from throughout North America completed the fifth course of Round River Conservation Studies field school at CCF between September and November learning conservation biology, ecology, and the natural history of Namibia under the guidance of CCF Senior Ecologist Dr. Richard Jeo. Round River Conservation Studies is accredited through Utah State University and focuses on predators and monitoring of prey species.

Two students from University of Oregon's Global Graduates programme conducted three-month internships with CCF. A student from the University of Natal in South Africa conducted research at CCF on behaviour analysis of captive cheetahs correlating behaviour to reproductive hormones. During their time at CCF all interns participated in all aspects of CCF activities.

3. Namibian Environmental Educational Network (NEEN)

CCF's Matti Nghikembua is on the NEEN steering committee and attended several meetings during the year. The network is in a planning and preparation process for hosting the 21st International for the Environmental Education Association of Southern Africa (EEASA) conference in 2003. These meetings were mainly aimed at organisational and preparatory aspects of EEASA and reviewing the strategic plan of NEEN for 2003.

E. Eco-Tourism

CCF has been one of the key players in assisting the Otjiwarongo Tourism Association in regional marketing. The organisation is planning its "Meeta Cheetah" campaign and continues to promote and encourage tourists and tour groups to visit the "Cheetah Capital of the World", and overnight in the Otjiwarongo area, the heart of cheetah country.

F. Government Meetings

In May, Laurie Marker and along with CCF Namibia's Board Chairman, Dr. Arthur Bagot-Smith, and delegates from the Cincinnati Zoo, including CCF Board members Carl and Cathryn Hilker, met with the Namibian President, His Excellency Dr. Sam Nujoma, to update him on the cheetahs he donated to the USA. The President was highly complimentary of CCF.

In April, the Namibian Ambassador to the USA, the Honourable Leonard N. Iipumbu and Laurie Marker, had a two-day visit to Cincinnati, Ohio (USA) to see the four Namibian cheetahs that had been donated. A special ceremony honouring the Namibian

Ambassador and Namibian Cheetah Project was held at Cincinnati Zoo, where he met civic and business leaders and was given the key to the city of Cincinnati.

G. International Programmes

The Fund assists in international programme development and adapts model programmes developed in Namibia for use in other countries, distributing CCF materials and information throughout Africa and the rest of the world. CCF's director, 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

CCF Kenya is led by Senior Research Assistant Mary Wykstra. Over the past year, good collaboration has been developed. The Kenyan Wildlife Service (KWS) approved a three study of "Cheetah Conservation and Human Impact in Kenya". Subsequently, Tom Cholmondeley, Chairman of the Nakuru Wildlife Forum (NWF) has provided housing on the Delamere Estates for CCF researchers based in Kenya. A local Kenyan, Cosmos Wambua, holding a BSc in Natural Resource Management has been hired as a Research Assistant. In addition, Meridith Evens, a Masters student from Florida State University spent six months conducting fieldwork along with an undergraduate student who spent three weeks at CCF Kenya. Through a grant from the Bay Foundation and CCF Washington Chapter Chairwoman, Suzanne Garrison-Clise, a 4-wheel drive truck was purchased.

Over the last year, CCF Kenya has been active in networking with Nakuru Wildlife Forum stakeholders and surrounding communities to develop confidence and cooperation. The group has also made initial contact interviews with 30 farmers in the Central Rift Valley to analyse issues, attitudes and management practices. Cheetah sightings, livestock and land management and predator conflict issues were researched in line with game counts to evaluate wildlife habitats.

Cheetah in Kenya appear to be viewed as having minimal threat to livestock compared to lion, leopard, jackal and hyena. Some farmers have difficulty identifying differences between cheetah and leopard. Very little is done, however, to alleviate predator conflict problems in a non-lethal manner.

The CCF Kenya team has initiated an Environmental Education Program for primary schools in the Nakuru region, and developed a plan for secondary schools and special interest groups in cooperation with East African Wildlife Society, World Wildlife Fund, Kenya Wildlife Service and Wildlife Clubs of Kenya. The focus is to educate students on the plight of the cheetah and its role, as well as that of other predators, in the ecosystem.

During the year, a presentation was given to 40 students from the Canadian Field Studies in Africa programme. This is a full time course in biology and conservation management

with Langara University in Vancouver. Presentations were also made to tourists and tour operators from both Park East and Fun Safaris to share the work of CCF Kenya with them. The lecture fees from these groups have assisted with supporting CCF Kenya's efforts. An article was featured in the East African Wildlife Society's SWARA magazine introducing CCF Kenya, and CCF was featured in a newsletter for a PR organisation for artists and filmmakers.

2. Iranian Cheetah Conservation

In January, three Iranians visited Namibia to learn more about CCF's conservation and research programmes. The objective of the visit was to provide training.

Mr. Anoshirvan Najafi, the Deputy Director of the Department of Natural Environment & Biodiversity (DOE), along with Mr. Ali Joorabchian, the National Project Manager for the Conservation of Asiatic Cheetah Project and Mr. Behzad Rahgoshai, the Assistant Project Manager worked side-by-side with CCF staff for a week. These Iranians are responsible for undertaking the cheetah rescue project in Iran where less than 50 cheetahs are now found. This project is supported by a United Nations Development Programme (UNDP) grant entitled "Conservation of the Asiatic Cheetah, Its Natural Habitat and Associated Biota" in the I.R. of Iran. CCF has been asked by the UNDP to participate in an Inception Mission to Iran in 2003, which will guide the conservation planning.

While at CCF, the Iranian team learned cheetah capture techniques, darting, handling, management of wild caught cheetah, sample collection, radio-tracking, data processing, management of captive cheetahs, game and livestock management techniques and environmental education techniques used here in Namibia. In addition, they were able to visit the Etosha National Park, and meet with members of the WWF Life Programme to discuss communal resource management and met with several CCF Board members. They left Namibia with a wealth of information.

3. Botswana Training

In June, CCF hosted three cheetah conservationists from Botswana. The team was made up of the government's problem animal researcher, the project's veterinarian, and the main biologist for the Mokolodi cheetah project, Rebecca Klein. The Mokolodi group is actively developing a cheetah project to assist with the conflict between farmers and cheetahs and will use CCF's protocols modelled after the CCF Namibia programme.

The group worked side-by-side with CCF staff for a week learning capture techniques, darting, handling, management of wild caught cheetah, sample collection, radio-tracking, data processing, management of captive cheetahs, game and livestock management techniques and environmental education techniques. One of CCF's long-term volunteers, Ann Marie Houser, has joined the Mokolodi team.

4. Captive Cheetah Management - International Cheetah Studbook

CCF's Director, Dr. Laurie Marker, is the Keeper of the International Cheetah Studbook. In October the 2000- 2001 International Cheetah Studbook, was finalised and mailed to all captive cheetah facilities with the help of student research assistant, Karin Bierbaum. This is the eleventh edition of this world registry. This edition of the International Cheetah Studbook combines all information available for the period of 1 January 2000 to 31 December 2001, ending with a total captive cheetah population of 1376 (710M.666F) cheetahs in 264 facilities in 52 countries.

In November, one of the 10 cheetahs that were donated from Namibia to the USA in April 2001 gave birth to two cubs at the Cincinnati Zoo. However, one had congenital defects and died and the other cub was pulled for hand raising, since single cubs do not survive due to lack of stimulation resulting in poor milk production. Since then, the dam has been re-bred, along with the other female housed at the Cincinnati Zoo and at least two of the cheetahs housed at White Oak Conservation Centre have bred. The cub is to be sent to Fossil Rim Wildlife Centre in Texas, to be integrated into a litter of cubs that was born two weeks after this cub.

5. Global Cheetah Interest Group

CCF staff worked on editing the document from the 1st Global Cheetah Workshop held in 2001, which came out in May 2002, as well as editing the document from the 2002 Workshop. In July, five members of CCF attended the 2nd Global Cheetah Workshop held in South Africa. Several international attendees to the conference visited CCF either before or after the Workshop.

H. CCF Organisational Activities

1. Development and International Fundraising

1.1 Namibian Trust

CCF's Namibian board has met four times during the past year. In March, the Board spend the weekend at CCF's Centre learning more in-depth about the various programmes. Additionally, under the guidance of Board member Mike Hill, one day was devoted to scoring CCF's programmes and looking critically at CCF's future.

In July, USA board members Bill and Pat Miller, Carl Hilker and Vance Martin, met with CCF Namibia board and discussed the various programmes. During the past year, CCF Namibia has completed the process of becoming a Section 21 Company, not for gain, and has placed all CCF's farms within a Land Trust administered by the Section 21 Company.

1.2 Annual Fund Raising Dinner

In July, CCF's 4th annual fundraising dinner, "A Celebration of Speed and Elegance", took place at the Windhoek Country Club and was attended by more than 350 people. Guest speakers included Dr. Abraham Iyambo, Minister of Fisheries and Marine Resources, representing His Excellency, President Dr. Sam Nujoma, and Dr. Richard Jeo, CCF's Senior Ecologist. Kenya conservationists, Kuki Gallmann, author of "*I Dreamed of Africa*" was the keynote speaker.

Two awards were presented during the dinner, including the 3rd Annual Cheetah Conservationist of the Year Award going to the Rolf Ritter family. The other award, for General Conservation, was presented to Blythe and Rudi Loutit of "Save the Rhino Trust" for their efforts in rhino conservation. In a surprise announcement, Mr. Rolf Ritter, presented Dr. Laurie Marker with a Certificate of Honour on behalf of the Sandveld Conservancy acknowledging her work and dedication to cheetah conservation.

1.3 US Foundation and Fundraising Activities

CCF continues to receive most of its funds from the United States. In April, CCF's Executive Director attended the US CCF Board meeting in Palo Alto, California, which was attended by all but two members of the US Board. A consultant was invited to the Board meeting to assist in bring the Board together into a stronger working team. The two-day meeting presented the Board with some challenges in organisation and future direction.

While in the US, the Cincinnati Zoo and Cathryn and Carl Hilker hosted both the Namibian Ambassador and Laurie Marker for three days of major activities, including meeting with the Editorial Board of the Cincinnati newspaper, meetings with business leaders and a dinner for the major donors and Board members of the Cincinnati Zoo.

Between October and November, CCF's Executive Director, Dr. Laurie Marker, conducted her annual fundraising and lecture tour. During the tour, she visited 3 countries (USA, Canada and Spain), 11 states and 15 cities. Several of CCF's Chapters held very successful events that brought in many new cheetah friends, as well as support for CCF's work. Highlights at these events included the Big Cat Big Party in Portland where Laurie presented retired Director of Wildlife Safari, Frank Hart with a Life Time Achievement Award. The Washington DC group held a very successful evening where Cathryn Hilker brought her cheetah and Anatolian Shepherd, which are a part of the Cincinnati Zoo's Cat Ambassador programme, to meet CCF supporters. Cathryn also brought this pair to New York for the Chase Foundation Annual Dinner where Laurie was honoured for her long-term efforts. At Cincinnati Zoo, the 3rd Angels of Music was held which brought together over 750 people for the fundraising event, along with five Broadway musical stars. In addition to these major fundraising events, Laurie was a guest speaker at the Predator Coalition Alliance's annual meeting in Yellowstone National Park, and was one of several conservationists at the first Wildlife Conservation Network's weekend in the San Francisco Bay area. In addition, Laurie gave a

presentation at the Annual EarthWatch Principal Investigator's Conference in Boston, Massachusetts.

Laurie also attended the US CCF board meeting in Florida. The two-day meeting presented the Board with some challenges in funding, organisation and future direction. Due to financial difficulties, CCF USA will be cutting back on some of its services and there will be major staff changes in 2003, and CCF Namibia will also restrict its programmes as well as trying to increase funding opportunities.

1.4 UK Fundraising

CCF UK held their Annual General Meeting in June 2002. Also in June, the Friends of Conservation (FOC) in London held a fundraising event for CCF. Following this, two meetings were held between FOC and CCF UK, to discuss further funding possibilities. In December, CCF's Executive Director met with members of CCF UK's board and representative FOC where a joint agreement was developed to partner with FOC in fundraising activities in the UK.

1.5 South Africa's Cheetah Outreach

Cheetah Outreach has continued to support the efforts of CCF through their educational outreach programmes and direct financial support. CCF is now assisting Cheetah Outreach by encouraging support for a major renovation project in 2002 at the Spier Wine Estate. Presently, most of the funds have been secured for this project.

I. International Meetings and Conferences

1. Cat Specialist Core Group Meeting

In October, Dr. Laurie Marker attended the Annual Core Meeting of the IUCN Cat Specialist Group, in Spain. This annual meeting had two primary goals: (1) to push the group's common and lasting business, and (2) to meet with the Cat SG members of the region and to review the status and conservation needs of the regional cat populations.

In Spain, the Core Group was asked to attend and assist in facilitating an international meeting for the Iberian Lynx (the most endangered cat species). In addition, the Core Group reviewed the progress of the Cat Specialist Group in 2002, and discussed plans for 2003.

2. Society for Conservation Biology Conference (SCB)

In June, Matti Nkgeumbu, Amy Dickman and Dr. Laurie Marker attended the annual SCB conference in Kent, UK. They presented two papers entitled, Cheetah Removal on Namibian Farmlands, Reasons, Rates and Conservation Implications, & Assessing the Ecological impact of Bush Encroachment on Namibian Farmland, and one of CCF's Round River Conservation Studies collaborators presented a paper on research conducted

at CCF. The conference provided a valuable opportunity to meet and discuss conservation issues with other researchers from around the world.

3. Vortex Workshop

In November, Dr. Laurie Marker and Amy Dickman attended a Vortex Workshop hosted by the Pretoria Zoo and the IUCN Conservation Breeding Strategy Group (CBSG). The three-day workshop gave participants a background in the use of the computer programme, Vortex, to model the long-term viability of small populations. The programme was used to model the sustainability of Namibia's cheetah population using CCF's demographic data.

4. People and Wildlife Conferences: Conflict or Co-Existence

In the latter half of the year, CCF staff attended three conferences on people and wildlife conflict. In October, Dr. Laurie Marker was an invited speaker at a conference in Yellowstone National Park in the USA, on predator coexistence. The title of her talk Namibia: Livestock and the Cheetah.

In December, Dr. Laurie Marker and Amy Dickman attended a wildlife conflict conference in London where they met with various members of the Cat Specialist Group. A few days later, Amy attended a third workshop in Oxford on the same subject and presented a poster by she and Laurie Marker entitled Cheetah Removal on Namibian Farmland, Rates, Reasons and Conservation Implications. Human and wildlife conflict issues are increasingly becoming an important issue in conservation, and CCF is recognised as a leader and model in resolving conflict.

5. Pan African Association of Zoos, Aquariums and Botanical Gardens (PAAZAB)

Mandy Schumann attended the annual PAAZAB conference in May in South Africa and presented a paper on entitled Cheetah Conservation Fund, In-situ and Ex-situ. PAAZAB members are interested in Africa's conservation programmes.

J. Media and Public Relations

CCF has continued to gain publicity in international and Namibian media, through news items and feature articles in the print media, and in television and radio broadcasts.

In January and February two international photographers and journalists spent time at CCF for articles that were published in UK and Germany. In addition, two TV programmes were filmed at CCF, one for a popular French station, and the other, which was an hour special by the Cincinnati Zoo on their support of CCF's work in Namibia.

Three additional TV programmes were filmed at CCF. During September, a popular Norwegian travelogue programme on Norway's TV2 station was filmed along with Nomados, a Berlin based video production team, for a travel themed

TV/Broadband/DVD series, which focuses on the environment and culture and is aimed at families, children and schools. In November, the BBC spent a week at CCF filming a programme called Animal Sanctuary with the popular presenter, John Craven that was broadcast in the UK at peak time Christmas/New Year 2002. A BBC website and an article in a large circulation Sunday newspaper (the Sunday Mail) complemented the work, was published in January 2003.

Several national and regional newspaper and magazine articles were published as a result CCF's Executive Director, Laurie Marker, having been chosen as one of this year's Audi Terra Nova Award Nominees. Laurie was chosen as one of the four nominees for 2002 at a ceremony in March in South Africa with Audi representatives and Dr. Ian Player, Audi's Patron of the Terra Nova awards. Each year candidates are nominated by the public and four finalists selected, who each receive R10,000 from Audi to help with their ongoing work.

By contact with journalists and sending regular news releases, CCF's profile in the Namibian media has been kept high. CCF achieved much coverage for the Annual Fundraising Dinner in July, the Waterberg Conservancy Annual Waterhole Count, and had articles in publications produced specially for the World Summit on Sustainable Development in August. These were distributed at the Summit, thereby reaching an international readership, and within Namibia. CCF also had an article in Conservation 2002 on CCF's bush project, an excellent annual publication, which reaches a worldwide audience by being distributed at main tourist outlets in Namibia.

In addition, several journalists, photographers and film crews have visited CCF gaining material, which will reach international readerships/audiences within the next six months. These include articles to be written for UK, Italian and South African publications and websites.

Approaches have been made to several UK magazine editors in order to publicise CCF within the UK, and gain support for CCF UK. To date, this has resulted in features on CCF in two popular magazines, Global Adventure and Cat World. Cat World has agreed, in addition, to a quarterly contribution from CCF. Approaches such as these will continue over the coming months.

Another focus has been including CCF in Travel Guides to Namibia. CCF will have editorial and advertising space in several guides produced within Namibia and South Africa, as well as international guides.

Adverts were developed for free advertising space granted in Africa Geographic magazine for the three month period, October to December, and complementary space was granted in others: South Africa, and Namibia Tourist and Leisure Destinations Solutions.

Finally, Laurie's fall lecture tour in North America was well covered, by media in the towns and cities she visited.

K. Visitors to CCF

During the past year, CCF had several special groups visit its Centre including several members of CCF's Science Advisory Board; Dr. Linda Munson, Dr. Sanjayan Muttulingam, Dr. Richard Estes, Jack Grisham, and Dr. David Wildt, as well as several members of the Global Cheetah Forum.

A group of executives and Board members of The Nature Conservancy (TNC), the largest NGO in the world, visited in September, accompanied by CCF Scientific Advisory Board member Dr. Sanjayan Muttulingam, who is also the Lead Scientist for TNC. TNC does not yet have a programme in Africa and were shown CCF to see how a successful conservation project can work in Africa.

A group of 26 Synergos Institute Senior Fellows were in Namibia as guests of the Rossing Foundation to attend the Institute's third annual meeting and attend a conference on partnership building, which CCF's executive director was invited to attend. The Synergos Institute is a non-profit organisation based in New York that works with local partners around the world to fight poverty. One of its activities is a Senior Fellows programme to bring together leaders at the pinnacle of their field of organised philanthropy to share their knowledge and experience related to the art and science of grant making for social change.

Following the Conference, the Senior Fellows visited CCF to learn about its community and education programmes on cheetahs, their habitat, and how conservation can help support local communities. CCF's innovative capacity building and training programmes help Namibians join in conservation efforts for economic change.

Raleigh group co-ordinators from around the country visited CCF for a day following their phase with Raleigh International. In addition, tour groups from the Natural History Museum in New York, the Philadelphia Zoo and the Washington DC National Zoo visited CCF.

L. Volunteer Programme

Volunteers are the backbone of CCF's programmes. In 2002, nearly 80 volunteers assisted including 44 Earthwatchers. EarthWatch volunteers have been assisting CCF since 1996 and four volunteers participate on a monthly basis for a two-week period.

In addition, three groups from the British youth development organisation, Raleigh International, each spent three weeks at CCF. The groups, composed of 12 volunteers each, and undertook finalising new cheetah quarantine holding pens begun by Raleigh teams in 2001, and the fencing of another cheetah holding pen.

Many other long-term and short-term volunteers were at CCF during the year. Some are volunteers from our US chapters, whilst others had related experience in animal or veterinary care, as well as business and marketing.

M. CCF Staffing

In September 2002, Johan and Tanya Britz joined CCF and replaced Edgar and Heike Dedig as Farm Manager and Accountant. Previously, Johan was a lecturer at Neudamm Agricultural College in Agriculture and Wildlife Management.

CCF's permanent staff includes:

Dr. Laurie Marker – Executive Director
Dr. Bruce Brewer – General Manager
Dr. Richard Jeo - Senior Ecologist
Siegfriedt Bandu !Aebeb - Community and Youth Relations Officer
Johan Britz - Farm Manager
Tanya Britz - Accountant
Amy Dickman - Senior Research Assistant
Fanuel Ekondo - Research Assistant and Assistant Farms Manager
Matti Nghikembua – Research Assistant & Education Officer
Gephardt Nikanor - Education Assistant
Bonnie Schumann – Senior Research Assistant
Mandy Schumann - Research Assistant
Mary Wykstra -Senior Research Assistant - Kenya
Cosmos Wambua – Ressearch Assistant - Kenya

CCF also supports twenty-one Namibian farm and domestic workers.

IV. PLANNED ACTIVITIES: January - December 2003

During the next 12 months CCF will:

- Continue work with farmers in cheetah related issues and reducing conflict.
- Continue with a 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. In February, all CCF's resident cheetahs will again be endoscoped and annual physicals conducted
- Continue radio-tracking programme, but the radio-tracking programme is being phased out.
- 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.
- Continue work with the Conservation Association of Namibia (CANAM) the Waterberg Conservancy and communal conservancies in wildlife, 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 youth groups.
- Continue to conduct educational assembly programmes in schools throughout Namibia and distribute and evaluate student activity books in collaboration with the Cincinnati Zoo.
- Host another semester of the Field College on Cheetah View in cooperation with Round River Conservation Studies.
- Host a three-week Conservation Biology and Wildlife Management course in cooperation with University of Namibia, the African Conservation Science Centre, and the Smithsonian Institution's National Zoo.
- Work with University of Namibia in developing a certification programme for Conservation Biology courses.
- Continue with student internships in co-operation with Namibia's Polytechnic and 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.
- Assist with the development of CCF UK.
- Participate in the Inception Mission with the Iranian Cheetah Recovery Programme through United Nations Development Programme (UNDP).
- Assist Iran and Kenya with developing cheetah programmes in their countries as well as Botswana, Zimbabwe and South Africa.

- Publish peer reviewed scientific papers on CCF's research.
- Continue to host national and international journalists.
- Develop a strategy for Rhino Conservation on CCF and Waterberg Conservancy properties.
- Travel to the United States and the United Kingdom for fundraising and lectures.