THE FAST TRACK

Newsletter of the Global Cheetah Forum

NEWSLETTER 2
SEPTEMBER 2004

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The Global Cheetah Forum was born out of the 2001 and 2002 Global Cheetah Action Plan workshops at which 66 participants from 14 countries met to unite the work being carried out worldwide to conserve cheetah. The results included the publication of a Global Cheetah Action Plan and the formation of the GCF. The GCF supports and fosters the development of progressive, collaborative conservation partnerships and facilitates effective communication and information flow between cheetah conservationists worldwide.

FROM THE SECRETARIAT:

It has been a busy and productive six months since the last Fast Track in March, this issue of the GCF Newsletter includes progress on the Marwell Zimbabwe Trust Cheetah Project and a report back on the International Cheetah Census Workshop held 1 – 4 June 2004, Ndutu Safari Lodge, Serengeti Tanzania.

Kelly Wilson from the De Wildt Cheetah and Wildlife Trust (South Africa) highlights some of the great things that come from networking at international workshops with particular reference to the Cheetah Census Technique Development Workshop.

And the National Cheetah Conservation Forum of South Africa "brags" with their new logo.

Enjoy this edition of The Fast Track and please feel free to contact any of the contributing organisations or the secretariat for more information on any of these projects.

We wish you all a

Many best wishes

Brenda Daly and Yolan Friedmann
CBSG Southern Africa
Endangered Wildlife Trust

MARWELL ZIMBABWE TRUST CHEETAH PROJECT

Marwell Zimbabwe Trust is a non-profit conservation research organization dedicated to collecting, analyzing and disseminating information about wildlife in Zimbabwe that will assist the relevant government departments to manage these species more effectively within the country.

In early 2001, the Marwell Zimbabwe Trust (MZT) was requested by the Department of National Parks and Wildlife Management (DNPWM) in Zimbabwe to carry out studies of cheetah (Acinonyx jubatus) on land outside of the National Parks estate. As a matter of fact, cheetahs are an endangered species with less than 15,000 cheetahs remaining in the world (Marker 1998; Nowell and Jackson 1996). Furthermore, most of the cheetahs in Zimbabwe are found outside the National Parks. They are perceived to be a 'problem' predator in non-protected areas, and many landowners sought to remove animals from their properties (Marker-Kraus and Kraus 1995).

The main focus of this research was to identify levels of conflict arising from predation of livestock by cheetah and how these were affected by location, land use type and husbandry methods. MZT was also asked to recommend and

implement, where possible, livestock management techniques to reduce this conflict.

The overall objective of the MZT Cheetah Project is to contribute to the conservation and protection of the free-ranging cheetah and its habitat in Zimbabwe. In order to implement an appropriate management plan for the maintenance of a sustainable cheetah population, outside the National Park estates, it is crucial to determine and understand the different components involved in cheetah survival over time.

MZT Cheetah Project was initially successful in assessing the distribution of cheetah on farmlands, as well as identifying areas of conflict and the extent of livestock predation and in providing information on management techniques to reduce conflict. A database has been designed to record instances of cheetah/land owner conflict and the development and distribution of educational material specifically for the Zimbabwean situation has been a successful priority. Indeed, the Cheetah Project has created and distributed the "Spot the Differences posters" for the landowners and the schoolbook named "Living with Cheetahs: Projects for Primary School Children". This is a variation of the book developed by the Cheetah Conservation Fund in Namibia. The book uses facts about cheetah and their behaviour to teach basic school subjects to children (Mathematics, English, Science, Social Studies and Geography). Pupils learn about the cheetah and its specificity while learning concepts required by the Ministry of Education syllabus. Newsletters have been initiated to inform the relevant stakeholders, in order to institute constructive communication. Community work has been carried out to help decrease predation and so far, four students from Zimbabwean universities have been trained. These are students who are attached to the Cheetah Project for a year during their BSc (Honours) degree in Wildlife and Rangeland Management.

However, changes in land use since 2001, with the resettlement program where large-scale commercial farms are converted rapidly to small-scale farms have required the project to adopt a different emphasis to continue to contribute to conservation of cheetah in Zimbabwe. Preliminary results from the project suggest that, as opposed to large commercial farms, problems with cheetah predation of livestock on communal land and in newly resettled areas are not frequent. This appears to be due, at least in part, to lower densities of the cheetah's wild prey base in these areas and this may now pose a greater threat to cheetah conservation in Zimbabwe than conflict with farmers. However, in areas adjacent to wildlife reserves livestock predation by cheetah may still be of concern. More research is needed to determine whether conflict resolution is still an important priority or whether efforts need to be redirected towards maintaining adequate populations of the cheetah's wild prey species outside of protected areas. In both cases more information about the cheetah's behavioural ecology in areas under the currently predominant land management systems is needed.

As a consequence, Marwell Zimbabwe Trust Cheetah Project will continue to use a multidisciplinary approach including research, conservation and education programs to focus on the following priorities before proceeding to the next step. Firstly, we plan to determine whether conflict arising from livestock predation is still, and likely to remain, a threat to cheetah in Zimbabwe and if so which areas and types of land management are worst affected. We will use survey questionnaires mainly, in all the different land-uses types in a representative area.

Secondly, it is necessary to investigate the behavioral ecology of cheetah in non-protected areas in Zimbabwe in order to form future conservation strategies to ensure cheetah survival. For that purpose, we intend to use GPS (Global Positioning System) collars to record baseline data on home ranges, spatial distribution, etc. So far, one male cheetah has been collared in a non-conflict zone, in Malilangwe Wildlife Reserve, in the south-east Lowveld. We hope to be able to get more collars to allow comparisons over space and time. Thirdly, we will conduct educational work with all the relevant stakeholders at the community level in order to improve the welfare of both the people and the wildlife. We will organize workshops and keep on developing didactic support on various topics (Livestock Management Techniques, Importance of wildlife, predators and Biodiversity, use of wildlife resources on a sustainable way…). Additionally, at the school level, for the future generations awareness and involvement, we will continue to distribute educational material. Finally, we will start investigating the health and genetic status of the free-ranging cheetahs in Zimbabwe by opportunistic collection of biological samples (hair, blood, skin, faeces) during immobilization for collaring procedure.

We hope to keep on receiving the support from the international community and to acquire enough funding to achieve our objectives over the next two years, enabling us to build a database in order to establish an appropriate management plan and to secure the future of the cheetahs in Zimbabwe.

If you require more details on the MZT Cheetah Project and/ or if you would like to contribute to the conservation of cheetahs in Zimbabwe, please do not hesitate to contact us.

For more information, please contact Magali Jacquier on dambari@mweb.co.zw

WELCOME TO DR MAGALI JACQUIER

Dr Magali Jacquier recently joined Marwell Zimbabwe Trust (MZT) as the Project Coordinator for the Cheetah Program, replacing Dr Gianetta (Netty) Purchase.

She adds the following to a very dynamic and inspiring cheetah community. A theoretical background and practical experience in a Veterinary Degree (France), she has been involved in several research projects on lions, elephants, pythons and western kobs in Cameroon, she also has her Master of Sciences in Conservation and Management of Biodiversity at the University of Pretoria (South Africa).

NEWS FROM THE DE WILDT CHEETAH AND WILDLIFE TRUST (SOUTH AFRICA)

1. CAMERA TRAPING

At the Cheetah Census Workshop at Ndutu Lodge in the Serengeti, we spent a lot of time with Ullas Karanth and brainstormed camera trapping as a census technique for cheetahs. Data that we obtained from camera traps that were placed in the Thabazimbi District were sorted and Ullas ran the data through CAPTURE. The results were promising, showing that 6-14 cheetahs occur in the study area with a mean of 7 cheetahs.

This equates to a density of approximately 2 - 5.8 cheetahs/100km2. This is higher than we estimated using the questionnaire survey. However, due to the limited number of camera traps used, it is probably too early to make any hard and fast conclusions. The results were all statistically significant and with improved camera placing and more available traps, the data should be even richer after the next sampling period.

The Wild Cheetah Project is now the lucky owner of 18 more Trailmaster™ camera traps. We are very grateful to the Howard Buffet Foundation for sponsoring the cameras for us.

As a result of the Census Workshop, it was decided to do camera trapping throughout the entire cheetah range in South Africa. Six study sites of 1 000 km^2 each have been identified and trapping will take place in each site once every three years with Thabazimbi remaining the core study area and being monitored every year.

We would like to thank Ullas Karanth for all his help and patience with this project so far. We would also like to thank the landowners who are granting access to their properties.

2. RADIO COLLARED CHEETAHS

We have had success collaring three more cheetahs. A single male that was collared joined up with two other males – one of which was collared previously. This coalition of three has been together constantly for 3 months and has been seen from the air hunting an adult male waterbuck, but they were unsuccessful.

The coalition of two males that were collared almost a year ago, have now suddenly split up. They were about 20km apart, and both seen to be hunting successfully. They remained apart for approximately 2 months before reuniting.

Coalition of two males photographed together on Atherstone Nature Reserve

A cheetah was trapped and collared at a scent marking post on a farm where the landowner has been removing cheetahs for the past 4 years. We convinced him to allow us to collar one and it was last found about 50km from the tree in a mountainous area. A camera trap placed at the tree has shown no cheetahs at the tree since his capture a month and a half ago. There have also

been no other cheetahs at the tree since. We would like to thank Mr Brian Gebhardt for allowing us to collar the cheetah and for giving us access to his farm for camera trapping.

3. PROPOSED CROSS BOARDER PROJECT

At the Census Workshop, the area where SA, Botswana and Zimbabwe meet was identified an important area for cheetahs' conservation. The area on the South African side is notorious for landowners being intolerant towards cheetahs. This could have a negative effect on the establishment of the transfrontier park as well as to the flourishing ecotourism activities on the Botswana side where predators are desired for tourism.

A meeting is planned between all role players and a lot of support has been shown from the South African landowners and sponsors have been identified.

For more info, contact Kelly Wilson on wcmp@dewildt.org.za

CHEETAH CONSERVATION BOTSWANA (JWANENG RESEARCH CAMP)

UPDATE ON CHEETAH CONSERVATION BOTSWANA

Overall, so far we have identified 25 individual cheetahs utilizing Jwaneng Game Reserve, where our research camp is based. Most of those identified move through the park as part of their larger territory. The exception was a mother with young cubs, although their home range is now expanding, they were always found within the safety of the park, now they are occasionally found outside. This is a concern as there are many cattle posts in the area. We interviewed some of the cattle posts in the area where she had been frequenting. Luckily, no one was aware of a cheetah in their midst and no one had experienced any losses. This is encouraging and we hope the cubs inherit their mother's good sense!

In early May we captured a coalition of 3 brothers. They were the biggest so far, the largest being 53 kgs. They were all in great condition and after samples were taken and one was fitted with a radio collar, they were released back into the park to be monitored. They spend a lot of time in the North of the Park but are often found outside. Cattle posts in this area have been sighting the brothers and 1 man had lost a goat to 3 male cheetah. We hope with the education program we can encourage people to coexist with them and decrease the current levels of conflict. We have been making visits to cattleposts, villages and commercial farms in the area to discuss current methods of livestock protection and provide information on successful techniques. We have now employed a full time local community officer for this vital role. We are planning a workshop in November to be attended by farmers, predator conservationists and relevant government departments.

Our project veterinarian is here assisted with the workup by 3 local farmers, who had provided the goat for the capture. They were fascinated at the chance of touching a wild cheetah and the work the project is doing to preserve them.

2 brothers were captured on a game farm where they were going to be shot; they were collared and released in the Kalahari wildlife management area.

August was a busy month with the capture of a mother with 5 cubs. All were sampled, tagged and the mother was collared. Unlike the other collared cheetah in the park, this group do not disappear as soon as they are sighted. They are content to

be observed and have even approached the vehicle.
We are continuing with field interviews in the Southern district, in order to get an estimate of cheetah numbers, investigate the cheetahs role in predator/livestock conflicts, assess current methods of predator control and gather community perceptions.

Skins including 3 young cheetah, confiscated by the Department of Wildlife.

For more information please contact Rebecca Klein on cheetah@mokolodi.com

NATIONAL CHEETAH CONSERVATION FORUM (SOUTH AFRICA)

Spot the new logo

The South African National Cheetah Management Programme underwent an extreme make over in July as people were confusing the NCMP with the De Wildt Wild Cheetah Project. It is now called the National Cheetah Conservation Forum of South Africa with Prof Gerhard Verdoorn, Director of Birdlife, appointed as the new chairperson and Johann Kruger of the Limpopo Department of Conservation as the new vice-chairperson. The role of the NCCFSA is to act as a liaison and advisory forum on any cheetah conservation issues in South Africa. One of the functions of the NCCFSA is to execute the compensation-relocation programme as an independent body with the cooperation of the various role players. To date 100 cheetahs have been relocated through the compensation-relocation programme with the De Wildt Cheetah Centre, Jubatus Cheetah Reserve and Hoedspruit Centre for Endangered Species acting as temporary holding facilities.

Another successful release…

The NCCFSA has taken the lead in establishing a data base for all cheetahs in captivity in South Africa. Any captive breeder will be required by the provincial conservation authorities to submit their data as well as DNA samples. This database will act as a tool for scientific genetic management of cheetahs in captivity and curb the illegal trade in wild cheetahs. Rob Hall from Cango Wildlife Ranch has been appointed as coordinator for the project and the Agricultural Research Centre (ARC) are the executing body. The NCCFSA provided R20 000.00 to develop the database. This money was paid from the compensation fund through relocated cheetahs.

For more info, contact Kelly Wilson on wcmp@dewildt.org.za

NEWSLETTER CONTRIBUTIONS

If you would like to contribute to this newsletter, please send your contributions to brendad@ewt.org.za

CHEETAH CENSUS TECHNIQUE DEVELOPMENT WORKSHOP

In June 2004, an international Cheetah Census workshop was held at Ndutu Lodge in the Serengeti, Tanzania.

We all worked really hard.…

And some of us partied even harder?

The workshop was organized by the Endangered Wildlife Trust, CBSG Southern Africa, the Zoological Society of London and the Tanzanian Wildlife Research institute (TAWIRI) and sponsored by the American Zoo Association's (AZA) Conservation Endowment Fund, the Saint Louis Zoo, the AZA's Cheetah Species Survival Plan and additional support was given by the Zoological Society of London, Regional Air Services, Ndutu Safari Lodge, the Ngorogoro Conservation Authority and the Darwin Initiative.

A total of 34 people attended the workshop from 7 countries which included a variety of predator monitoring experts and Cheetah conversations and biologists, to devise a set of standard methodologies that can be used to initiate a global census of Cheetah numbers.

A global Cheetah Census Technique Development workshop was identified as being a critical step towards developing global standards for censusing Cheetah and for determining the best methodologies and most appropriate conditions for applying them.

The objectives of the workshop were to:

- Convene experts in large carnivore census techniques to evaluate the viability of the various census techniques currently available and determine the most appropriate for Cheetah across a wide variety of habitats;
- strengthen the lack of integrated Cheetah monitoring between range states
- determine the best census techniques to use under different environmental circumstances;
- strengthen cooperation between role-players and range states;
- identify the most appropriate census techniques for use in the different range states with guidelines for using these techniques in such a manner as to facilitate data integration and calibration; and
- identify role-players from countries that were not represented at the workshop and therefore identify gaps which need addressing.

An additional outcome for the workshop is the intension to develop a detailed Cheetah census technique manual to ensure standardisation and offer "best practice" guidelines for all Cheetah census methodologies.

This manual will provide for the following:

- Summary of each technique and rules for application in the field;
- Description of the statistical data analyses appropriate for each technique;
- List of additional data that should be collected for each survey area that can be used in predictive GIS mapping. This will enable refinement of existing predictive mapping techniques through the inclusion of additional variables relevant to Cheetah distribution and abundance; and a
- List of priority areas, areas of survey calibration and describe the overall survey framework.

RECENT PUBLICATIONS

ANALYSIS OF THE MITOCHONDRIAL GENOME OF CHEETAHS (ACINONYX JUBATUS) WITH NEURODEGENERATIVE DISEASE

Pamela A. Burger
Ralf Steinborn
Christian Walzer
Thierry Petit
Mathias Mueller
Franz Schwarzenberger

Abstract

The complete mitochondrial genome of *Acinonyx jubatus* was sequenced and mitochondrial DNA (mtDNA) regions were screened for polymorphisms as candidates for the cause of a neurodegenerative demyelinating disease affecting captive cheetahs.

The mtDNA reference sequences were established on the basis of the complete sequences of two diseased and two nondiseased animals as well as partial sequences of 26 further individuals. The *A. jubatus* mitochondrial genome is 17,047-bp long and shows a high sequence similarity (91%) to the domestic cat.

Based on single nucleotide polymorphisms (SNPs) in the control region (CR) and pedigree information, the 18 myelopathic and 12 non-myelopathic cheetahs included in this study were classified into haplotypes I, II and III. In view of the phenotypic comparability of the neurodegenerative disease observed in cheetahs and human mtDNA-associated diseases, specific coding regions including the tRNAs leucine UUR, lysine, serine UCN, and partial complex I and V sequences were screened.

We identified a heteroplasmic and a homoplasmic SNP at codon 507 in the subunit 5 (MTND5) of complex I. The heteroplasmic haplotype I-specific valine to methionine substitution represents a nonconservative amino acid change and was found in 11 myelopathic and eight non-myelopathic cheetahs with levels ranging from 29% to 79%. The homoplasmic conservative amino acid substitution valine to alanine was identified in two myelopathic animals of haplotype II. In addition, a synonymous SNP in the codon 76 of the MTND4L gene was found in the single haplotype III animal. The amino acid exchanges in the MTND5 gene were not associated with the occurrence of neurodegenerative disease in captive cheetahs.

PUBLIC STANDS TO WIN BIG BY HELPING KNP'S CHEETAH AND WILD DOG CENSUS

September 10, 2004

Big prizes are up for grabs for members of the public who help the Kruger National Park (KNP) and the Endangered Wildlife Trust's (EWT) Carnivore Conservation Group with a Cheetah and Wild Dog census, which will start on October 1, 2004 and end on April 30, 2005.

This six month photographic census is different from any previous census of its type in that it involves the public in the counting of two of the threatened carnivore species found in the KNP at the same time – the Vulnerable Cheetah (*Acinonyx jubatus*) and the Endangered Wild Dog (*Lycaon pictus*) – as classified by the IUCN (World Conservation Union).

This is only the second time in the more than 100-year history of the KNP that the Cheetah population has been counted. The first census was conducted in 1991/1992 and 172 individuals were identified.

This is the fifth Wild Dog census and previous results portray a fluctuating population of this endangered species. In 1989, the population stood at 357, in 1995 it stood at 434 and in 2000 it had dropped to 177 individuals. It is believed that these fluctuations are natural and the populations seem to do better during dry periods when prey is possibly easier to catch.

Census operations on any animal species within the boundaries of the KNP are important in order to get an idea of that animal's status within the context of biodiversity management.
Both animals are classified as threatened or vulnerable, by the IUCN, a further reason for the need to further research population patterns of these animals. It is well understood that Wild Dogs – in particular – have distinctive colour patterns and individual animals can be recognized in this way. Thanks to scars, size and other characteristics, it is hoped that Cheetahs can be counted in the same way.

As the southern half of the KNP is visited more extensively, entrants are asked to pay special attention to the northern areas of the Park. The competition also covers the private game reserves bordering the KNP's western boundary, including the Sabi Sands, Manyeleti, Timbavati, Klaserie and Umbabat, where no fences exist between these areas and the KNP.

When guests to the Park see either Cheetah or Wild Dog, they are asked to attempt to get clear photographic or video images of either, and preferably both sides of each animal in that particular pack or group and to record all relevant information of the sighting including the species, date, time, location, group composition (total, adult males, adult females, young) and any other notes and details of the photographs that might be relevant.

Very importantly, the winner will not be judged on the quality of the image but on the amount of assistance that he or she gives to the programme. Prizes include three packages of "two nights for two" at upmarket destinations including Tinga Private Game Lodge, the Lion Sands Private Game Reserve and Jock Safari Lodge, as well as nine Agfa photographic hampers valued at R400 each.

In order to help with the logistics of the research, Land Rover has provided a vehicle for the duration of the project.

Entry forms and brochures will be available at the gates and rest camps in the KNP from October 1, 2004 and digital images or video clips of either animals can be sent to the dedicated email address census@sanparks.org. Photographs, slides and video tapes can be posted to "Wild Dog and Cheetah Project", P.O. Box 10, Skukuza, 1350.

All other rules and regulations pertaining to guests in the KNP apply.

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In Closing . . . . .

Thank-you to all those who support and further the interests of cheetah worldwide. I look forward to receiving your updates for the next edition.

Please keep 'em coming so that we are sure to include you!

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The GCF secretariat is currently held by the Conservation Breeding Specialist Group (CBSG) Southern Africa and the Endangered Wildlife Trust, South Africa. The features in this newsletter represent the various GCF members and their projects and do not necessarily reflect the opinion of the GCF secretariat or the editor of this newsletter.