

AFRICAN WILDLIFE CONFERENCE 2008
Zoo Dvur Králové a.s.
May 6-11, 2008

- Conference Proceedings –

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Cheetah Conservation Strategies in Namibia – a Model for the Future

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Over the past century, the wild cheetah population worldwide has been drastically reduced with a world population estimated at less than 12,000 individuals. The reasons for this decline include habitat loss, reduction of the natural prey base, and persecution due to conflict with humans. Pressures from increasing human populations changed land use across much of the cheetah's range, and 'wilderness' areas are now reduced to small patches of intact habitat surrounded by a matrix of human and livestock-dominated land. In addition, the captive population of cheetahs is not self-sustaining although captive breeding and cooperative management has increased during the past decade.

The best hope for long-term cheetah survival rests in a few countries in sub-Saharan Africa with relatively large cheetah populations (Tanzania, Kenya and Botswana) and Namibia, which supports the largest remaining cheetah population around 3,000 animals. In Namibia, more than 90% of the cheetah population resides outside of protected areas on livestock and wildlife farmlands in the north-central regions of the country, an area of approximately 275,000 km², with an increasing number of cheetah now inhabiting the north west communal farming area.

An abundance of wildlife shares the farmland with Namibia's farmers. While game species such as eland, kudu, gemsbok, springbok and hartebeest are welcomed by most farmers, due to their perceived economic value, predators – large and small - are mostly unwelcome and persecuted, whether or not conflict occurs. Many farmers fail to acknowledge the role predators play in the ecosystem. Africa's predator and prey species evolved together however and without one, the other could not have developed. The hunting of game by predators has resulted in the abundance and diversity that we see today with the predators fulfilling a critical role. Without them, game species would be significantly less healthy, since the weaker animals that are usually selected by predators would instead survive to reproduce. Wildlife is one of Africa's most valuable resources and gives Africa its unique image. Predators are vital to the health of our wildlife and are an integral part of what attracts tourists to Africa.

The Cheetah Conservation Fund (CCF) with its international base in Namibia, Africa, with satellite programmes in Kenya, undertakes scientific research regarding cheetah and their habitat, assists in the management of captive and free-ranging cheetah throughout the world, maintains a major public conservation awareness and education programme for local and international communities and school groups, and conducts community conservation and predator conflict resolution programmes. The cheetah's survival depends on a total integrated approach: an ecological system of farmland management, prey species management and habitat stability using practices such as alternative land management, non-lethal predator control and relocation of problem cheetahs. CCF's focus is to work with livestock farming communities in order to develop ways to reduce conflict. This is achieved by devising conservation plans that secures habitats for the species, while still accommodating farmers' land use needs.

During the past three decades, the Namibian cheetah has been perceived to be in direct conflict with Namibian farming interests. Human-cheetah conflict in Namibia has evolved over many years and has been affected by drought conditions, economic considerations, farming practices and environmental law. None of these are solely responsible for the cheetah's present status on the farmlands, but their combined cumulative effects continue to impact the cheetah population. Close monitoring or protection of livestock has been impractical due to the extensive farming methods necessary, especially with water as a limiting factor due to the arid land, and large areas of land being required to sustain the livestock. Elimination of predators therefore became the accepted practice. Lion, hyena and wild dog were eradicated from the vast majority of the farmlands by 1950.

Although classified as a protected animal in Namibia, a cheetah may be removed (killed) if it poses a threat to life or property. Between 1996 and 2006, at least 2,556 cheetahs were legally removed from the wild Namibian population, primarily through indiscriminate catching in live traps and/or shooting. Although this is a substantial number however, it is a reduction over the decade before. Cheetah removals continue regularly, independent of the verification of livestock loss specifically due to cheetah and not all cheetah removals are reported therefore removals are an underestimate.

Indiscriminate removal of cheetah is not an effective strategy for protecting livestock or managing the cheetah population, and it can be extremely detrimental to both. In fact, it appears to be one of the biggest threats to cheetah survival. During surveys by CCF of Namibian farmers the majority indicated that cheetah were removed as a preventative measure, not in response to actual livestock losses caused by "conflict animals".

With sound livestock and wildlife management, predators can be incorporated into African farming systems and will continue to play the key role for which they have evolved. Communities can also benefit from both components – livestock and predators. With this in mind, CCF conducts courses on integrated livestock and predator management for communal, conservancy shepherds and farmers – as they are the Future Farmer's of Africa. These week-long educational courses are vital to changing the long held beliefs of the Namibian farming community that livestock kills are virtually always made by large carnivores, such as cheetahs. During the courses farmers are taught ways to identify the true causes of livestock loss (in many cases, disease) and manage both livestock and wildlife. And, methods are learned to identify predators and how to live with them through proper boma design and use of herders and breeding seasons, etc.. They also have an opportunity to observe cheetahs up close at CCF's sanctuary, thereby acquiring a new appreciation of this beautiful cat.

Encouraging farmers to utilise more effective livestock management techniques can have significant impacts in terms of reducing losses. In 1994, CCF began a Livestock Guarding Dog Programme to assist farmers. The Kangal Anatolian Shepherd dogs, used in Turkey for 6,000 years to protect livestock, are bred by CCF and donated to farmers throughout Namibia. The dog barks loudly and places itself between the predator and livestock. In most cases the predator will back down immediately, but if necessary the dog will attack in order to protect its livestock "family". The use of dogs in this way ensures that the predator is driven off, rather than being shot, and to date over 270 dogs have been placed on farms, with the participating farmers reporting up to an 80% decrease in livestock losses.

We found that using guarding animals was very successful, as the dogs effectively guarded smallstock herds against both predators and theft, and also alerted herders to stock that had been left in the bush. Livestock guarding dogs were placed primarily with smallstock, while female donkeys with foals, kept amongst cattle, were found to effectively guard the herd of cattle from predators.

Reducing levels of livestock loss in this way lessen the economic pressures on farmers, and reduce the incentives for removing predators from private land.

Predation upon livestock is often aberrant behaviour for carnivores and the majority of cheetahs that were found killing livestock during our study had physical problems that were likely to hamper their hunting efficiency. However, predation upon game is a more difficult issue, as it involves normal hunting behaviour, and conserving large carnivores involves maintaining a suitable prey-base that they can exploit without creating intense conflict. Our studies have identified game farming as one of the biggest problems facing cheetah conservation in southern Africa. To combat this, CCF has worked with the Conservancy Association of Namibia (CANAM) to promote large tracks of land where wildlife is free-ranging. The commercial farmlands in Namibia support good populations of free-ranging, native ungulates, and through the formation of conservancies, where multiple farms are managed co-operatively on a sustainable basis, the entire conservancy can sustain populations of large carnivores, as the resultant depredation does not severely affect individual farmers but is absorbed across the conservancy as a whole.

Conservancies consist of adjacent farms that are joined together in broad units where natural resources are cooperatively managed using ecosystem-sensitive management plans. A constitution outlines conservation and management strategies, including the sustainable utilisation of natural resources in conjunction with agricultural aims. Conservancy constitutions may include utilisation of game for trophy hunting, meat, ecotourism, etc., and provide guidelines to assist farmers in coordinating the management and utilisation of species on the farms. In addition, Namibia's proposed wildlife laws will provide incentives to farmers cooperating in conservancies to encourage large unfenced areas that will promote movement of game species, especially during droughts. Objectives for conservancy development include the connectivity of conservancies throughout the country therefore providing corridors for movement of wildlife (game and cheetahs) to ensure gene flow. Strategies such as these, whereby the sustainable utilisation of natural resources is encouraged, will be critical components of cheetah conservation outside protected areas.

Changing the perception that cheetahs are a significant threat to livestock and game is clearly of vital importance if indiscriminate removal is to be reduced. An indication that the levels of tolerance towards cheetahs can be increased through awareness-building and education has been shown by the increased proportion of tagged and radio-collared cheetahs Namibian farmers allowed to be released during our research. Most of the releases were facilitated through long-term contact and work with farmers and indicate that extension-training programmes have positive effects and that continuing such programmes, and expanding them, is beneficial.

We believe that education in sustainable land use must be encouraged, with the primary goal of showing how the linkage of these practices provide direct and indirect benefits to communities. Programmes that train land managers in the environmental value of appropriate range management, which optimises the economic value of a sustainable, mixed wildlife-livestock system designed to avoid land degradation need to be encouraged throughout the cheetah's range, using Namibian programmes as a model. Such programmes should focus on the benefits of natural resource management, attaching economic and cultural values to these resources, and raising awareness of ecological issues. Successful examples of local conservancies and trans-boundary land management planning are providing a basis for developing large-scale land management plans for the future.

Education regarding predator ecology, behaviour, population status, the role of large carnivores and more efficient game and livestock management techniques are all key components of any programme aimed at resolving conflict with local people. Misconceptions abound in these areas, with uncertainty regarding species identification, ecology, behaviour, how to determine the cause of stock losses, and the level of threat posed by wild carnivores. To address these issues in Namibia, a

comprehensive education programme has been one of the main tenets of CCF's operation since its inception, with the aim of making the research results available and relevant to the local communities. Over the past 15 years, Namibian education staff have worked with over 250 000 students, encouraging an awareness of ecology and conservation issues, and have developed a wide range of educational materials for teachers to use in local schools. Many learners, from primary school children to university students, have also visited the field research centre, where they are taught about all aspects of cheetah biology, ecology and research projects being conducted, both locally and internationally.

Additional courses and training schemes, such as workshops on livestock management, environmental education, and ecology have been implemented with the aim of local capacity-building and empowerment, and internships are provided to assist students in developing marketable skills and completing degrees. Working with local people in a variety of ways, supporting local development, highlighting the potential value of predators on private land and furthering the understanding of ecosystem management is key to changing negative attitudes towards wildlife, and ultimately reducing the level of conflict.

The availability of a wild prey base for the cheetah is critical in the issue of predator conflict in southern Africa. According to many Namibian farmers, maintaining a substantial population of wild game is the most important feature in reducing livestock predation. Therefore mixed farms with both livestock and wildlife should be encouraged. To reduce the levels of conflict between people and cheetahs, there must be some economic advantages to maintaining cheetahs on private land. Potential economic benefits include, trophy hunting, incentives for predator-friendly meat, and ecotourism.

However, large carnivores are often elusive and hard to observe, particularly outside of protected areas, so the chances of tourists actually viewing predators directly may be limited in many places, including Namibia. Despite this, we have found that showing visitors even indirect signs of carnivore presence can be a significant attraction: in Namibia, the occurrence of 'playtrees' (specific trees used by cheetahs for scent-marking) on farms provides an ecotourism opportunity for visitors, as they often show signs of cheetahs, which increases the awareness both of the presence and ecology of this rare species. Encouraging such ecological awareness amongst tourists is an important component of predator conservation, both in Namibia and in other countries such as Kenya, where the tourist pressure on cheetahs and other carnivores is very intense.

Market-place pressures can also have strong impacts in terms of driving conservation and raising public awareness of issues, as was seen with the highly successful marketing of 'dolphin-friendly' tuna, and such initiatives can also be utilised for carnivore conservation. Despite the reduction in cheetah removals by Namibian farmers over the years and an increased tolerance towards them, this trend could easily be reversed if economic conditions worsened in Namibia, as farmers would be less likely to tolerate any losses due to carnivore. To avert this situation, economic incentives could be provided to farmers who practice ecologically sound livestock management, such as avoiding lethal predator control, joining conservancies, limiting stocking rates and restoring habitat. With this aim, CCF is currently collaborating with the Namibian meat production company, MeatCo, to investigate the viability of selling beef at a premium to international consumers from farmers who use 'predator-friendly' techniques, providing direct economic incentives for farmers, and raising international public awareness.

As tourism is increasingly important in southern Africa, another beneficial development is the new certification in South Africa of 'cheetah-friendly' guest farms, which do not remove predators from their land, and this too could provide tangible benefits to conserving carnivores on private land. These initiatives ensure that landowners benefit directly from tolerating predators, circumventing the common problem of conservation revenues failing to reach local people.

As human land-use has the greatest impact on the distribution and abundance of cheetahs, monitoring several parameters, including population fragmentation, health, and habitat loss will be necessary so as to not miss important elements, which may affect species survival. Although maintaining cheetahs in protected areas will provide long-term habitat stability and, as such, are critical areas for the cheetah, conflict resolution between people and cheetahs will be a significant determinant for cheetah in the future on private lands. As such, management of 'problem' animals will continue and necessary strategies must be implemented. Such strategies may include placing individuals in captivity, translocating animals, or re-introduction; each provides opportunities for species conservation but should be conducted under international guidelines. Overall, through collaborative research and multi-disciplined approaches, both within protected areas and on private lands, it should be possible to maintain large intact ecosystems for the cheetah, which is the most critical aspect of future conservation, both for cheetahs and for other large carnivores.

CCF's work in Namibia is beginning to show positive results but much more still needs to be done. Cheetah populations are continuing to decline in most other African countries, and in Iran, the last of the Asian cheetahs with a population less than one hundred. CCF's mission is to be an internationally recognised centre of excellence in research and education on cheetahs and their ecosystems, working with all stakeholders to achieve best practice in the conservation and management of the world's cheetahs." For more information contact us at: www.cheetah.org.