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Abstract: The purpose of the Cheetah Conservation Fund is to secure habitats for the long-term survival of the cheetah and their ecosystems through multi-discipline and integrated programs in research, conservation, and education. The point of the survey has been to learn about livestock and wildlife management practices of the farmers, livestock and wildlife numbers, wildlife distribution, farmers attitudes towards wildlife conservation and the environment, and last but not least the farmers' problems with cheetahs and other predators. Of the farmers interviewed, over 70% said that the main solutions to the long-term survival of the cheetah on their farmlands included conservation, education, and awareness; maintaining large enough populations of wildlife for the cheetahs to prey upon thus reducing conflict with livestock; and to improve livestock management practices. One comment that was repeated by over 95% of the farmers was that no one had ever told them of the world picture of the cheetah and that they played such an important role in this species long-term survival.

THE SUSTAINABLE USE OF THE CHEETAH FOR THE ENHANCEMENT OF THE SPECIES

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The purpose of the Cheetah Conservation Fund is to secure habitats for the long-term survival of cheetah and their ecosystems through multi-discipline and integrated programs in research, conservation, and education.

In April 1991, we moved to Namibia to set up the first international conservation program for the free-ranging cheetah. We chose Namibia as the permanent base of operations for the long-term conservation of free-ranging cheetahs for two primary reasons, first and most importantly, Namibia has the largest remaining population of free-ranging cheetahs in the world (+2,500 animals) and, due to the recognized genetic problems of the species, stabilizing the largest gene pools first is important for the long-term viability of the species. Secondly, Namibia is the first country in the world to include sustainable utilization of wildlife and protection of its environment in its constitution, thus ensuring the availability of a large prey base that can sustain a healthy population of cheetahs.

Today, I have been asked to talk about the sustainable use of the cheetah for the enhancement of the species. First I'd like to define the terms 'USE' and 'SUSTAINABLE USE'. The World Conservation Union (IUCN) defines USE as an activity by which humans derive benefit from a population or ecosystem. USES are either consumptive or non-consumptive, active or passive. 'SUSTAINABLE USE' is the use of a population or ecosystem at a rate within its capacity for renewal and in a manner compatible with conservation of the diversity and long-term viability of the resource and its supporting ecosystem.

SUSTAINABLE USE can only be achieved through sound management practices which are supported by research and active participation by those people who are USING or utilizing the resource. Management is the key to SUSTAINABLY USING a resource. There are three parts of a management program.

1) Management must be holistic. One must look at the resource in the context of the environment and take into consideration the impact on other resources. An example of this, as it relates to the cheetah, is to understand the cheetah's role in the ecosystem. How does the removal or USE of cheetah affect the balance in the ecosystem and how does the removal or USE of the prey species affect the balance in the ecosystem thus affecting the cheetah.

2) Management insures that the USE is sustainable. This second factor in management is looking at time frames. Since the earth is constantly changing, management plans must also be flexible. Within a time frame, the population being utilized must be constantly monitored for genetic and demographic health.

3) Management is to have active participation by the people utilizing the resource. To SUSTAINABLY USE a resource, the resource should be micro-managed. Therefore, here in Namibia the resources need to be managed by the people who own the farms and wildlife and not macro-managed by the government or international organizations. For this to be most successful, social and economic incentives are necessary for people to conserve the target population and its supporting ecosystem. This is why we, the Cheetah Conservation Fund, feel it is so important to work closely with you the people who own the farms that support the cheetah and the prey base.

Management involves research. In order to manage a population, one must have and participate in on-going research.

To SUSTAINABLY UTILIZE a population, it is critical to understand the demography of the target population. This means knowing the size, sex and age structure of the population, as well as recruitment into the population - births, and deaths. Understanding the social structure and over-all health of the population is also important and assists in analyzing the genetic composition of the population to make sure that its long-term viability is not compromised by the USE.

To SUSTAINABLY UTILIZE a population, it is also critical to understand the components of the supporting ecosystem. Is the USE of the supporting ecosystem compromising the long-term viability of the target species? For the cheetah one needs to look at the USE of the prey species, the interactions of livestock management, as well as land use practices.

In order to have a sustainable population to be utilized by the people for economic benefits, extensive and participatory research is important. The research will provide you with the tools to micro-manage your populations.

We feel that the CCF is an integral part of your management team. Our research is multi-disciplinary on the cheetah and its ecosystem. Between 1991 and 1993, we conducted an intensive personal survey to learn every thing we could about the Namibian cheetah and its ecosystem. We have learned from the people who own the lands. Since beginning our survey, we have covered over 2.6 million hectares of farmlands in the north central part of the country, which is the cheetahs primary range.

The point of the survey has been to learn about livestock and wildlife management practices of the farmers, livestock and wildlife numbers, wildlife distribution, farmers attitudes towards wildlife conservation and the environment, and last but not least the farmers' problems with cheetahs and other predators. Since 95% of the countries cheetahs live on the commercial livestock farmlands where 70% of the country's wildlife prey species also lives, we chose the commercial livestock farmers to interview.

We have gone door to door and have also attended numerous farmers association meetings. We not only discuss and learn about the farmland ecosystems and the farmers cheetah problems, we are also able to explain about the world view of the cheetah and how important Namibian farmers are in the survival of this species. We ask for possible solutions as to how they think the cheetah can survive. Our results have been quite eye opening for ourselves and the farm communities.

Of the farmers interviewed, over 70% said that the main solutions to the long-term survival of the cheetah on their farmlands included conservation, education, and awareness; maintaining large enough populations of wildlife for the cheetahs to prey upon thus reducing conflict with livestock; and to improve livestock management practices. One comment that was repeated by over 95% of the farmers was that no one had ever told them of the world picture of the cheetah and that they played such an important role in this species long-term survival.

ECOSYSTEM USE

The human impact on the environment has played a huge role in the decline of the cheetah population, as well as the creation of the "livestock predator problem animal". During the 1980's the war started between the farmers and the cheetahs and the cheetah population was halved during this time. The cheetah is an important example of how looking at the short term needs versus long-term conservation of biodiversity can cause economic conflict between humans and wildlife and force a species closer to extinction.

A significant issue in ascertaining the long-term viability of the cheetahs ecosystem is the climatic cycles and include the droughts which occur every 9 to 12 years. These climatic cycles have played an important role in wildlife management and cheetah problems.

During the drought of the early 1980's, wildlife numbers declined by nearly half over a two year period because of starvation and culling to save pastures for the livestock. The cheetahs food was thus reduced drastically. Another problem at this time was the rabies epidemic in the kudu, one of the main prey for the cheetah. The rabies virus reduced the kudu population by nearly 80%.

The extreme environmental conditions exaggerated by drought prompted many livestock farmers to seek an alternative revenue source and many farmers began raising game. Portions of farms in areas where game was abundant were set aside and high (2.5 meter) game fences were erected. Many farmers have indicated that cheetahs are a big problem in their fenced areas for one or more of the following reasons: 1) erecting fences and introducing non-indigenous game altered the ecology of the land and attracted cheetah to game farms as high numbers of game were concentrated and prevented from migrating; 2) reduction of prey outside of the game fenced areas which encouraged cheetahs to enter game farms; 3) constant removal of cheetahs opened territories allowing more cheetahs access to the area; and 4) farmers invested in the development of game farms for economic gain, thus loss of wildlife to predation equaled loss of income.

In the 1980's the farmers went to war on the cheetah. In the eleven year period, from 1980 to 1991, IUCN reported that 6,829 animals were removed from the Namibian wild cheetah population. Our survey showed that of the 240 farmers interviewed over 2720 animals were removed by them during this same time. This represents 40% of the cheetahs removed during this time frame by only about 15% of the farmers that farm in the cheetah region. It is felt, not only by us but by many of the farmers interviewed, that the numbers of animals removed may have been 50% higher during this time as many people do not report the killing of the predator.

Although the cheetah is classified as a protected animal by the SWA 1975 Nature Conservation Ordinance, the same ordinance further stipulates that one may shoot a cheetah, in order to protect one's own life or property. The problem is that most farmers practice preventative management - eliminating the cheetah indiscriminately by either shooting whenever one is seen or after catching them in live traps. Much of this removal is indiscriminate and preventative and not just the livestock killing 'problem' animals were removed.

This type of indiscriminate removal often increases the problems for the farmers because territories are opened and more cheetahs move into the areas trying to find a territory. Another problem which occurs is that social groups are broken

up that then can create 'problem' animals. This indiscriminate removal, where as many as 800 animals per year were removed (according to IUCN), halved the Namibian cheetah population in this last decade. During the same 11 year period less than 175 cheetahs were trophy hunted, which averages less than 20 animals per year. The economic benefit of cheetah has not been realized. This scenario can happen again unless we are aware of the problems and plan ahead.

WHY DOES THIS MATTER?

Cheetahs are only one of the 33 million species living on the planet. Does it really matter if the cheetah becomes extinct? It is tempting to think that the loss of only one species will not affect us. But we must remember that all things are connected, and explore how cheetahs are critical to the ecosystem. When we lose even one species, our world becomes a poorer place to live.

At the turn of the century it was estimated that there were over 100,000 cheetahs throughout Africa and Asia, found in at least 44 countries. Today the species is extinct in ± 20 countries where it formerly ranged, and we estimate that only between 10,000 to 15,000 animals remain worldwide. These cats are found mostly in small pocketed populations in 24 to 26 countries in Africa and only ± 200 animals in Iran (see map). Viable populations may be found in possibly only one third of the countries where cheetahs still exist. All populations are listed in CITES Appendix I classified as Vulnerable or Endangered by IUCN.

The world's captive population of cheetah is not self-sustaining and is supported through imports of free-ranging cheetah, mainly from Namibia. Of the world's captive population of nearly 1100 animals in 165 zoos in 36 countries in the world, 30% are wild-caught from Namibia. After years of working with the cheetah in captivity, it became apparent that the cheetah will not survive in captivity and that cheetahs need to be conserved in the wild.

The Captive Breeding Specialist Group (CBSG) of the IUCN mandated the captive cheetah management team, of which we are a part, to assess the viability of the species in captivity, due to poor reproduction and high mortality, the captive cheetah population world-wide is not self-sustaining. Therefore, a healthy free-ranging population, which is sustaining, is critical to the survival of the species. A research team was just with us from the United States to look at the reproductive health of the cheetah population and other disease factors that affect the population. Our work is in collaboration with international organizations, all concerned with the long-term survivability of the free-ranging cheetah population.

CCF RESEARCH

The purpose of CCF's research is to provide base-line information so that wise management choices can be made. It is important to understand the over-all health and genetic make-up of the population to understand what underlying limiting factors may affect the long-term survival of a population. To assess this, we collect biological samples, blood and tissues, looking at diseases and the genetic structure of the population.

A major problem in long-term cheetah management and conservation is the species lack of genetic variation, making the species more vulnerable to ecological and environmental change. To monitor the genetic health of the Namibian cheetah population, biological samples are collected for genetic analysis. Relatedness of these animals is being constructed through the use of DNA analysis. Through our

collaborative research, we have found that the southern African cheetah is much more genetically compromised than the East African cheetah; therefore, careful management of the population is necessary to ensure stabilization of the gene pool and to permit sustainable utilization.

To learn more about the movements of the cheetahs through the farmlands and better understand the population demographics, we ask the farmers to allow us to ear-tag and/or attach a radio-collar on the animal, and release the it back into its original territory. In order to really understand the demographics of the cheetah population, as many cheetahs as possible should be ear-tagged and released. This is the only true way of monitoring the population thus allowing for SUSTAINABLE USE.

Most people have little idea of the behavior of the cheetah. This is important as to how farmers inter-relate with the cheetah and how they can create more problems for themselves. Through our radio-tracking research, we can monitor the cats movements through the farmlands to learn more about the home ranges, and areas most frequented by cheetahs on the farms. This then allows the farmers an insight as to why they may or may not have problems with cheetahs and livestock predation.

Cheetah have very large home ranges. Males and females range through areas as large as up to 1,500 km². The same animals travel very large distances, thus giving the farmers the idea that there are more cheetahs than there actually are.

We also work with the farmers by providing tracking forms. We ask the farmers to fill in the forms to better understand the movements of cheetahs through their farms. By becoming aware of the movements of the cats, you can identify, for yourselves, if there are certain regions where cheetahs are more prone to travel and what times of the month or year the cheetahs come onto your farms.

MANAGEMENT IDEAS

Through CCF's research, management recommendations have been identified from various farmers who have found solutions to their cheetah problems. We continue to share these recommendations with other farmers through private and public meetings. SUSTAINABLE USE of a species is dependant on you and your active participation in a management scheme. A management scheme must be long-term and flexible.

HOW CAN YOU HELP?

By in large, hunters are good conservationists and play an important role in conservation since they utilize the resource and can aid in its management. Remember, hunters also like to see other wildlife species while they are in Namibia hunting. Viewing a cheetah in the wild is one of those special sights. The cheetah can also bring tourism benefits. For example, in Kenya, a male lion is estimated to bring in over 2.6 million dollars per year by the tourists.

So, what can you do to help the cheetah? Participate with the on-going efforts of the Cheetah Conservation Fund to:

- 1) define the population, sex and age structure;
- 2) assist in the sampling to learn more about the over-all health of the population;
- 3) learn more about the distribution of the population;

- 4) raise the price for a cheetah trophy, make hunting a cheetah a very special hunt and make the hunters pay for this;
- 5) hunt ethically, keeping in mind the SUSTAINABILITY of the species;
- 7) help stop illegal trade.

CONCLUSION

As a concluding statement to the cheetah hunters, we need your help in nurturing the species you consume. The day of killing cheetahs as vermin is past. Contribute to our awareness and help us to keep the habitat and prey base that is essential to the cheetah. Value it as the ultimate, pristine trophy that it is.

For the cheetah to survive, it must have a habitat, a prey base, and a holistic approach in the farmlands incorporating the land use, livestock, and wildlife. We need to work towards a balance between the economic needs of the people and species survival. The long-term goal of the Cheetah Conservation Fund is to develop a conservancy for cheetahs on these commercial Namibian farmlands in cooperation with the farmers and the local communities. Conservation of this last large stronghold for cheetahs will determine if the species will survive for future generations.

The cheetah deserves a place on this earth. With its special adaptations for high speed such as long limbs, flexible spine, enlarged heart, large nasal passages, small head, and blunt claws that remain out to increase traction, there is no animal to compare. In fact, it is the only species in its genus Acinonyx. The cheetah has been revered by humans for almost 5,000 years, for good reasons. If it were allowed to become extinct it would not only leave a large hole in nature, but, also, in the very psyche of the human mind that so naturally feels and knows the uniqueness of this creature. Namibia, with its varied ecosystems and diversity of life, poses the greatest hope for the cheetah's future.