

# Acknowledgments

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# Introduction

Many people fear predators, especially big cats such as the lion, cheetah, and leopard. We are often taught to fear carnivores without understanding their unique behaviors, special adaptations, and essential roles in the maintenance of healthy ecosystems. Our attitudes and misconceptions about these species have led to their endangerment because many people deal with their fear by eliminating predators.

Endangered species exist in low population numbers and need intensive long-term management in order to survive. Attitudes toward predators must be changed if we hope to save endangered species such as the cheetah. By learning the reasons why species are endangered, students learn how clean and healthy ecosystems are crucial and what will occur if we continue to pollute the environment and destroy habitats.

Through environmental education, we can all work together to change the attitudes and behaviors that have led to the endangerment of predator species and help save them from extinction. Individuals can make a difference!

To appreciate predators, we must first understand their roles in wildlife communities. Because predators must kill other animals in order to survive, many myths about them have evolved over the centuries in many cultures. The plight of cheetahs symbolizes the problems that many predators face throughout the world.

Cheetahs are endangered because of:

1. Loss of habitat and prey to commercial farming and land development;
2. Persecution by farmers as vermin or livestock-killing "problem" animals;
3. Poaching or the illegal taking of animals.

If we are to conserve healthy wildlife populations in the 21st century, we must understand the ways of animals and recognize their importance to our survival. Wild species maintain healthy ecosystems, provide us with food, shelter, and clothing, benefit us economically, and improve the qualities of our lives by their existence.

Humans are predators and carnivores. We compete with wild animals for natural resources. Because of growing human populations and over-consumption of the earth's resources, the world is losing wild places and species as the demand for food, minerals, lumber, and other resources increases. Two hundred years ago there were fewer than one billion people on earth. Today, about six billion people live on the planet, and there may be over eight billion of us by the year 2020.

## EXTINCTION

Extinction is a natural process, and for hundreds of millions of years, plants and animals have become extinct. But, the current rate of extinction is something new. Today the total number of species lost each year may be nearly 40,000 species per year. This rate of extinction is far greater today than at any other time in the last 65 million years.

The four most common causes of extinction created through human involvement are:

1. Destruction of habitat for development and to obtain lumber, minerals, oil, and other products
2. Introduction of exotic species into new habitats
3. Pollution
4. Overuse of animals and plants through collecting, hunting or poaching, use of animal and plant products for religious beliefs

The cheetah's survival depends on people and their ability to manage the wild population and protect its habitat.

When people destroy habitat by constructing buildings or grazing livestock, for example, they prevent nearly all animal populations from surviving there, both in the present as well as in the future. Animals compete poorly with humans for space. Humans change the environment rapidly, and animals cannot always adjust to these changes or adapt quickly enough in response. Large predators, like the cheetah, need large areas in which to roam; they usually are not found close together in great numbers. Loss of habitat and a limited geographical range (a reduced area in which to live) threaten the cheetah's survival. Low survivorship (few cheetahs live long or even become adults) also affects cheetahs and makes them more vulnerable to human competition. High cub mortality, up to 90% in the wild, makes it difficult for the cheetah to recover when its population size decreases. Helping predator species survive in spite of competition from people is one aspect of wildlife conservation.

## **CHEETAH POPULATION DECLINE**

Loss of habitat and prey base, competition with large predators and agricultural interests, and poaching are taking a heavy toll on wild cheetah populations throughout Africa. Today, there are less than 12,500 of these endangered cats remaining in Africa and Asia. The vast majority of cheetahs live in small, isolated groups outside protected game reserves where they are often in conflict with humans and livestock, and most populations continue to decline. The largest wild population of cheetahs is found in Namibia; however, in the 1980's their numbers were reduced by half to less than 2,500. Lack of genetic variation, reproductive abnormalities, high infant mortality, and a greater susceptibility to disease place the species at further risk of extinction. Genetic variation allows species to adapt better to environmental and ecological changes and to fight off disease.

While cheetahs were once found all over Africa, they are now endangered in most of their former ranges. Cheetahs do not pose a threat to human life. People have carried on the campaign against cheetahs because they believe cheetahs wantonly kill livestock as well as other animals, such as small or young antelopes, causing excessive economic loss. In reality, the amount of damage to domestic stock is exaggerated and is usually caused by a limited number of livestock-preying cats, or "problem" animals, and inadequate livestock management practices. Despite these problems, cheetahs have a chance for survival on the vast farmlands of southern Africa.

## **OUR PLANET'S DIVERSITY**

Humans share this Earth with up to 33 million animals, plants, and other life forms. The diversity of life on our planet is amazing. All species - plants, mammals, invertebrates - depend on one another. People depend on many different plants and animals for food and medicines. 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. We must remember however, that all things are connected and explore how important cheetahs are in their ecosystem. When we lose even one species, our world becomes a poorer place to live.

The cheetah has been revered by humans for almost 5,000 years and it deserves a place on this Earth. If it is lost to future generations it would leave a large hole not only in nature, but also in the very psyche of the human mind, which so naturally feels and knows the uniqueness of this creature. Southern Africa, with its varied ecosystems and diversity of life, poses the greatest hope for the cheetah's future.

## **YOU CAN MAKE A DIFFERENCE**

Youth education and understanding are paramount to helping the sleek hunter of Africa win its race for survival. The ultimate success of the Cheetah Conservation Fund's education programme depends on you, the teacher, who will take cheetah conservation to your students. In doing so, you become part of an international effort to save this endangered species, and together we can work to conserve our world's rich biological diversity. By participating in environmental education, you become someone who cares for our land, its wildlife, and the future your students will inherit.

The Cheetah Conservation Fund (CCF) appreciates your initiative in using this packet. We hope it will help you motivate students to think critically about individual and communal efforts to conserve wildlife and to act constructively to improve our world's environment.





## THE CHEETAH CONSERVATION FUND

The Cheetah Conservation Fund (CCF) was founded in 1990 and resides on a farm outside of Otjiwarongo, in North-central Namibia. CCF's mission is to develop and implement long term monitoring, and multidisciplinary research, conservation and education programs to ensure the survival of the free-ranging cheetah and its ecosystems in the remaining ranges in Namibia and other African countries. CCF, a non-profit Namibian Trust, is run by director and co-founder, Dr. Laurie Marker, and a local Board of Directors representing the private, government, education and business communities of Namibia. In addition, CCF's International Research Advisory Board includes internationally recognized specialists in cheetah, predator, livestock and wildlife research.

The Cheetah Conservation Fund's research is divided into four study areas: Cheetah Population Biology, Cheetah Ecology, Cheetah Health and Reproduction and Human Impacts on the Cheetah. The Cheetah Population Biology Programme gathers and analyses data on the demographics and genetics of the Namibian cheetah population. CCF is considered the central database worldwide for information regarding cheetah distribution. The Cheetah Ecology Programme considers the habitat, movements and behavior of the cheetah in the Otjiwarongo farming area (15,000 km<sup>2</sup>/9,300 mi<sup>2</sup>), which surrounds the CCF Research Centre Farms. The soil, vegetation, and wildlife have been extensively studied and cheetah movements have been monitored via radio-tracking since 1993. The Cheetah Health and Reproduction Programme has developed and maintains an extensive physiological database and Genome Resource Bank. This involves taking samples and measurements to better assess the health and genetics of the Namibian cheetah population and collecting sperm for use in *In Vitro* fertilization. The Human Impacts on the Cheetah Programme considers agricultural impact, hunting, and issues related to the cheetah in captivity. The programme assesses farmers' needs and works to develop non-lethal predator control methods, such as the Livestock Guarding Dog Programme. To monitor captive cheetah populations, the director of CCF created and maintains the International Cheetah Studbook and coordinates the Cheetah African Preservation Programme of the Pan African Association of Zoological, Aquaria and Botanical Gardens.

The Cheetah Conservation Fund's Education Programme targets a wide range of audiences worldwide. The focus of the programme is to build awareness among farmers, educators, students and the general public about the role of the cheetah in healthy ecosystems and the need to preserve Africa's rich biodiversity. CCF offers education programme at its Visitor Education Centre and throughout Namibia via the CCF school outreach service. CCF also welcomes Namibian and international interns, conducts training workshops and heightens global awareness of the endangered status of the cheetah.

Much has been accomplished since the establishment of the Cheetah Conservation Fund, and CCF's work continues to grow as new issues necessitate creative problem solving, further scientific research, and increased education and conservation programming.

