

# Cheetah Conservation Fund Internship

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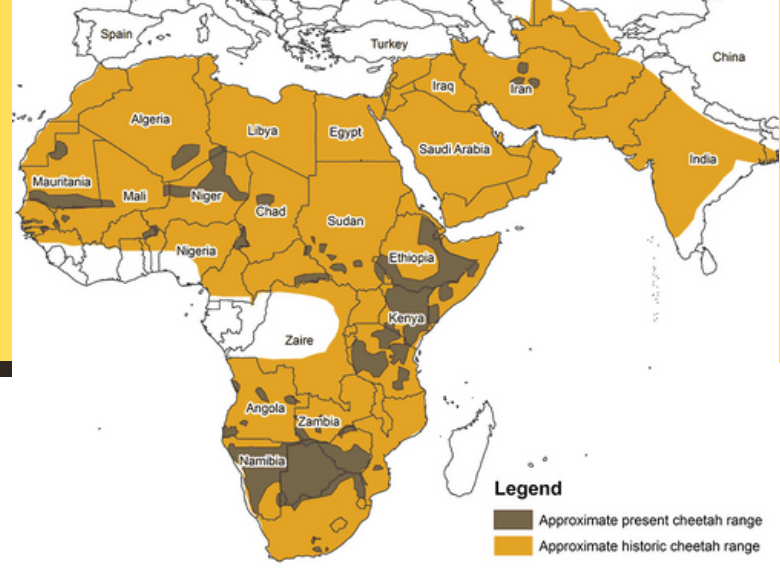


Figure 1: Map of current and historic range of cheetah populations in Africa and Southwest Asia.

<https://wildtech.mongabay.com/2015/10/running-wild-with-laurie-marker/>

I spent 10 weeks in Otjiwarongo, Namibia working as an intern at the Cheetah Conservation Fund (CCF). During that time, I was assigned to the Ecology Department. Other tasks I was a part of included animal care for cheetahs, horses, dogs, and other livestock. This internship was an experience of a lifetime, and I thoroughly enjoyed my time with CCF.

## CHEETAH TEAM

While apart of the cheetah team I was exposed to predator handling experience. As an intern my involvement was limited but I learned how to view predator body language and understand when a situation may be unsafe for a person. I also learned how to prep meals for the cheetahs by removing small bones that could cause harm if swallowed. I took part in feeding the cheetahs. Some of the cheetahs required medication that could be administered through the fence while others required medical care that I helped within the veterinary clinic. During feeding time, I learned how to sort the cheetahs into different pens without entering the pen. These skills will benefit me in my career as a predator conservationist because I will be working with predators one day and I need to know safe practices around them.



Figure 2: Photo of me helping administer care to an injured cheetah under anesthetic (left) and providing medication to a senior ambassador cheetah. (right).



Figure 3: Livestock guardian dog "Spucky" waiting to be let out with the herd for guarding duties.

## DOG TEAM

One of my favorite aspects about CCF is how they are working to mitigate human wildlife conflict. As someone who is passionate about predator conservation, I was very excited to learn about their Livestock Guardian Dog Program. As livestock are killed by other predators such as hyenas, wild dogs, leopards and many other predators, cheetahs get blamed for all the killing due to the fact that cheetahs are seen more often by the farmers. Many of these cheetahs are shot and killed immediately without hesitation. Through community outreach, CCF has tried to educate farmers on the importance of cheetah conservation, but they also supply them with the tools necessary to defend their livestock. CCF has an Anatolian Shepard breeding program onsite that they use to supply farmers with guardian dogs. I had the opportunity to care for these dogs and go on a puppy placement for one of these farms. I learned that the dogs don't have to always fight off the predators, just the presence of the dog is enough to scare away most dangers to the livestock. This is important for my career because I hope to utilize the tactics I learned at CCF to implement similar Guardian dog programs for livestock ranches in the United States.

## ECOLOGY TEAM

My primary position at CCF was in the Ecology department. Here we did field work assessing the diversity and abundance of the wildlife on the private reserve around CCF. I gained experience conducting direct observational counts in a fixed location and along road transects. It was also my job to compile all of the data and I learned how to analyze and create graphs of species richness and abundance. This allowed me to create a simple report based on some of the findings. I also gained some experience creating a map of the study area including all 9 farms. We assessed the reserve through camera traps which we monitored weekly, and all photos were sorted manually looking for high priority animals such as leopards in the area. This work was integral of my learning of how conservation works because it gave my hands on experience collecting data and working with it in real time. My work done here has taught me tactics to use assessing wildlife populations throughout career.



Figure 4: Photo taken of a gannet from one of many camera traps around CCF land (Left) and a photo of me in the field collecting camera trap data

# My personal Project: Species Diversity and Abundance of Wildlife among different farms at CCF

## INTRODUCTION

The Cheetah Conservation Fund is a collection of 9 different farms that surround the main research center. Six of which are livestock farms (Padberg, Cheetah View, Boskop, Otjenga, Janhelpman, and Bynadaar) and three are considered wildlife reserve farms (Bellebenno, Elandsvreugde, Osonanga). Due to the difference in purposes between these two styles of farms my project was to assess the Species Diversity and Abundance of each of these farms. My prediction was that reserve designated farms would yield more richness and diversity than livestock raising farms.



Figure 5: Photos taken during direct observational waterhole counts of Oryx (left) and Kudu (right)



Figure 6: Map of study area I created (Left) and a photo of one of the blinds observers used to count wildlife (right).

## METHODS

CCF's annual direct observational waterhole count was conducted on 19th July 2023 and a total of 16 waterholes were observed over a 12-hour period (6:00 - 18:00). Due to this time period, only diurnal animals were assessed. Two individual observers were positioned in a blind at each waterhole. Participants included volunteers, interns, and staff which recorded all wildlife that made an appearance. They also made note of sex, age class, direction the animal arrived/left, and whether or not they drank from the water. Of the 9 farms, Otjenga and Janhelpman were excluded from the study due to the lack of waterholes.

## RESULTS

Observers counted a total of 1,228 individuals from 16 different species at the direct observational counts. Of these species 13 were mammal species and 3 were large bird species. There was a variety of diversity throughout the farms. Bellebenno had the most species richness with 13 species, followed by Elandsvreugde and Osonanga both with 12 species (Figure 7). Boskop and Bynadaar both had 9 species. Padberg exhibited 6 species and Cheetah View had the least diversity with 4 species (Figure 7). The most individuals were observed at Boskop (294), and the least species were observed at Cheetah View (32) (Figure 8). The most abundant species across the whole survey area was the Common Warthog (260) followed by the Chacma Baboon (194) and Common Duiker (181). The least abundant was the Springbok (3). Each farm exhibited a variety of diversity in species (Figure 8).

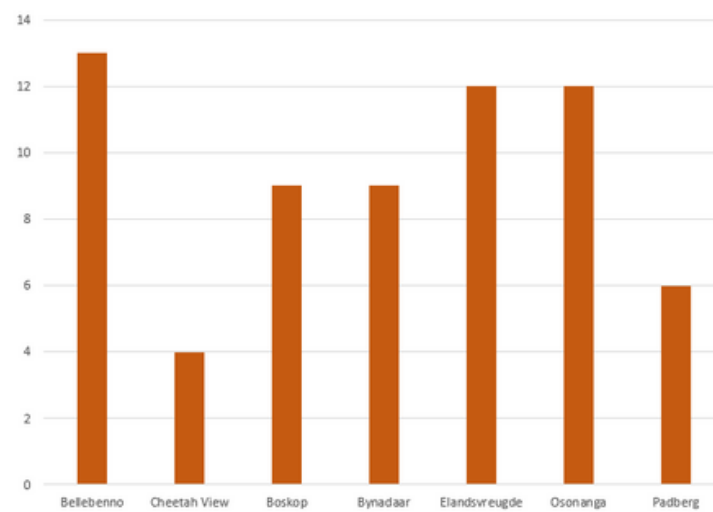


Figure 7: Species richness among the 7 different farms at CCF.

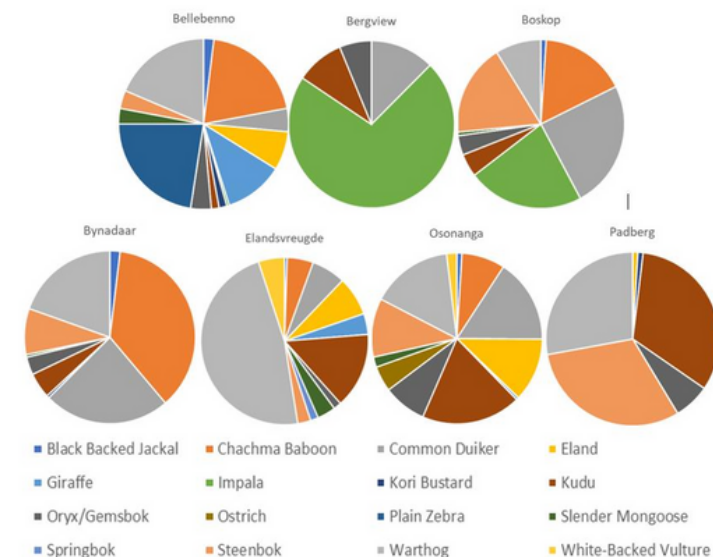


Figure 8: Relative abundance of Wildlife among each of the farms at CCF.

## ACKNOWLEDGMENTS

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## DISCUSSION

The species richness and wildlife abundance around the waterholes in predominantly livestock farms were compared to the waterholes in CCF's Wildlife Reserve Farms. Reserve waterholes (Bellebenno, Elandsvreugde and Osonanga) appear to be more diverse with 12 species. The livestock waterholes (Padberg, Bynadaar, Cheetah View, and Boskop) exhibited only 10 species. Due to overlapping confidence intervals there isn't a significant difference between each type of farm. After running a Shannon diversity index, the reserve waterholes also seem to have a higher evenness than livestock waterholes but due to overlapping confidence intervals it is not a significantly higher difference. Regarding this there was no significant difference between the two different waterhole types.

This study has some limitations and future study could include more sampling. With such a small sampling number, significance was hard to establish. Given more sampling we could conclude more from the data. We could do this by setting up camera traps at more of the waterholes and accumulate more data. This would also eliminate differences in observer bias. This study included many observers with differing levels of observational skills. If all data was collected by camera traps and sorted by the same person, then we could eliminate this bias.

## NEXT STEPS

This experience was a great initial step for me, but the project design was laid out for me to follow. My next steps for my career goals and personal development include designing and conducting my own study that I can build from the ground up. I hope to go to graduate school and develop a study around the effectiveness of guardian dogs against polar bear encroachment in northern human communities due to climate change.



Figure 9: Photo of Dr Laurie Marker, my fellow interns and I caring for an injured Cheetah (Left), a photo of myself helping in the genetics lab for the day with one of the genetics interns (Middle), and a photo of me caring for a sick goat whose mother wasn't producing enough milk (Right).