Cheetah Conservation Fund
and
Namibia's Go Green Fund

Report by:
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Introduction

In 2017, the Cheetah Conservation Fund partnered with the Nedbank, Go Green Initiative and the Namibian Nature Foundation in a three year grant to determine the density and human-carnivore conflict areas for cheetah (*Acinonyx jubatus*) and other key large carnivores across the Greater Waterberg Landscape (GWL) in north central Namibia. The GWL covers approximately 19 200km^2 and comprises of freehold farms (Waterberg Conservancy), the Waterberg Plateau National Park and four communal conservancies (African Wild Dog, Okamatapati, Otjituuo and Ozonahi) (see Figure 1).

The aim of the research was to use remote camera traps and questionnaire surveys to provide baseline data on wildlife presence in the area and determine large carnivore presence and across the GWL. In addition, the project was to establish if the land use type and/or other environmental variables are influencing carnivore densities in the region. The project further aimed to quantify the level and spatial distribution of human-carnivore conflict that takes place across the GWL.

From 2017 through 2019, CCF was able to map conflict zones and target key areas through education providing training in mitigation methods, which in turn reduced the level of human-carnivore conflict in this area. The goal of the grant was to provide baseline information to secure the future of large carnivores across the GWL. In addition, a comprehensive species list was developed which was shared with the relevant government departments, conservation non-governmental organisations, conservancy management and their respective communities, the Large Carnivore Management Association of Namibia, and other relevant organisations. This study provided the first detailed look at the species diversity within the Eastern Communal areas.

Through the support of the Go Green grant, 40 remote camera traps were purchased, and support was provided for staff travel to conduct the extensive surveys through the GWL. Without this support this project could not have been conducted.

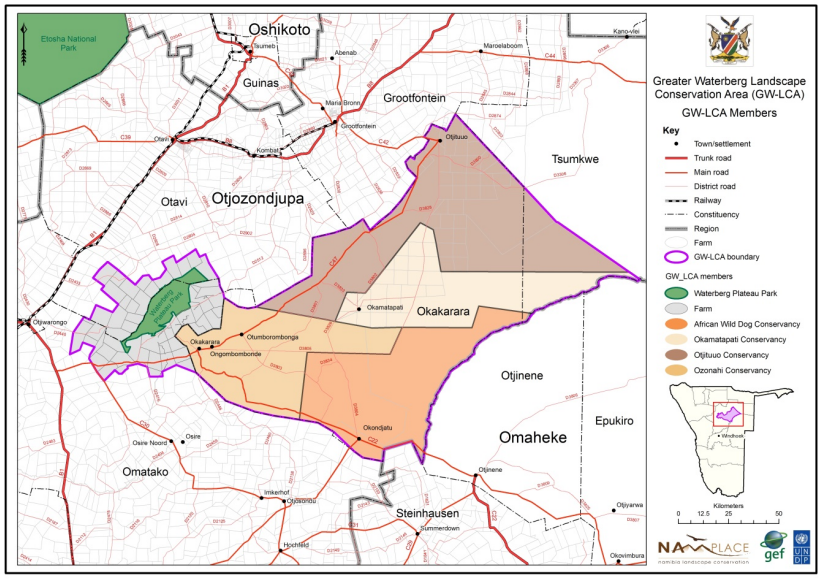


Figure 1. Map of the Greater Waterberg Landscape including freehold farms and the Eastern Communal area.

Results from the Eastern Okakarara Communal Conservancies

In 2018, CCF staff began a remote camera trapping survey using 8 x 8km grid cells in high human-wildlife conflict zones (Fig. 4A&B), within the Eastern Okakarara Conservancies. The aim of this study was to assess biodiversity in the area. This area is highly populated (approximately 23,000 people), but low wildlife numbers, high cattle numbers, overgrazed lands and heavy bush encroachment, limited water supplies, and high levels of human-wildlife conflict (HWC) between people and predators.

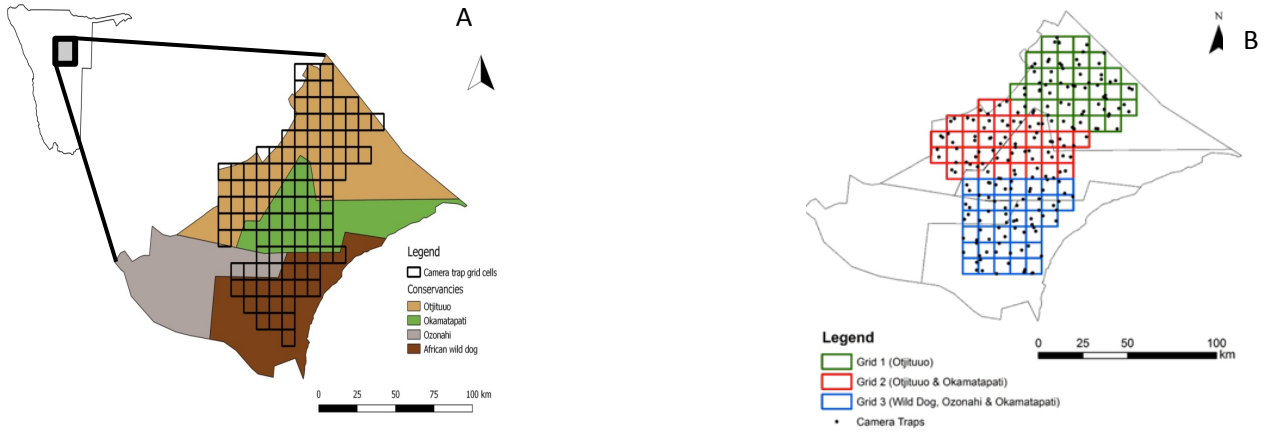


Figure 4. Map of the remote camera trap grid study area in the communal conservancies (A) and the placement of camera traps (B)

In total, CCF deployed camera traps at a total of 210 sites (105 sites in both the wet and dry season; Fig. 4B), targeting high human-wildlife conflict areas within the four communal conservancies. Community members and communal farmers were extremely helpful in deploying camera traps and would frequently check cameras, taking ownership of the cameras while they were deployed on their land (see Photo1).

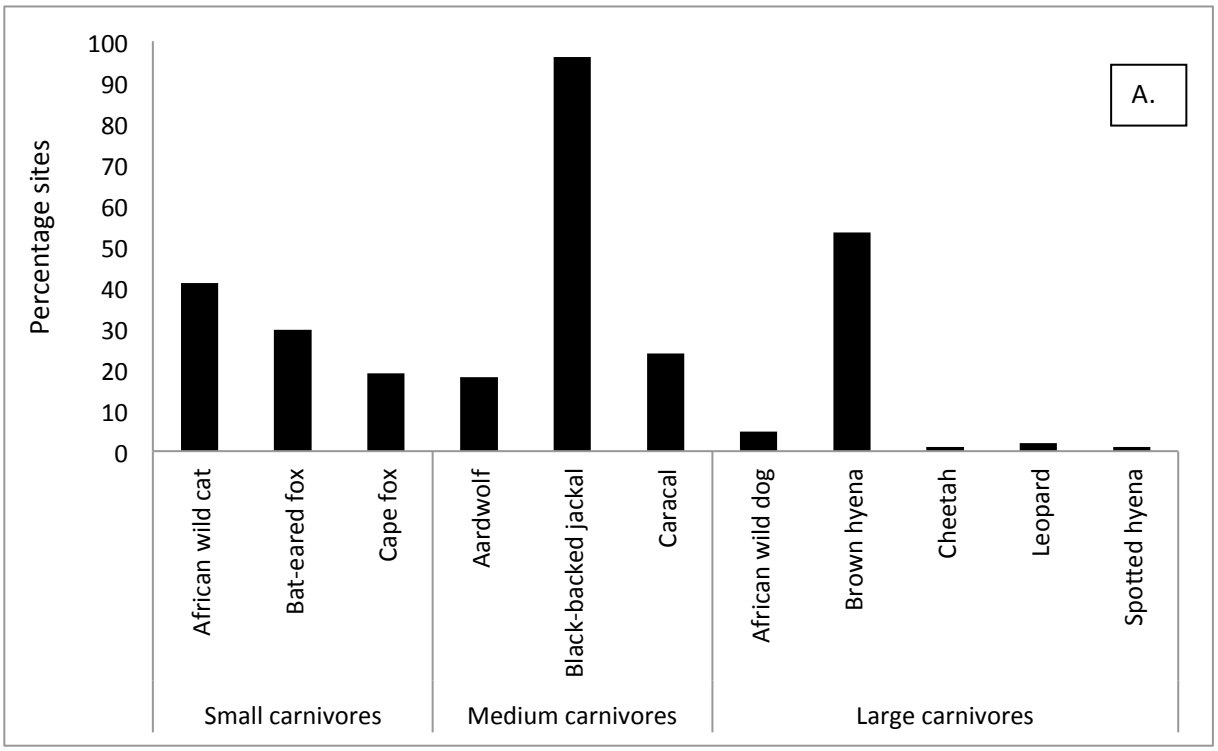
A total of 31 species were captured on camera traps during the study period (Table 2). Of the carnivore species, black-backed jackal were captured most often and at 96% of camera traps sites. Of the other the larger carnivores, brown hyena were captured the second most regularly (53% of sites), while African wild dogs were captured at only 5% of the sites. Other larger carnivores, including the cheetah, leopard and spotted hyena were captured at <2% of camera sites. The smaller carnivore species were captured at between 19 – 41% of the sites (Fig. 5A).

The most common antelope species was common duiker (95% of sites), followed by steenbok (80%,). Kudu were captured at 15% of the sites, while red hartebeest were only captured on one occasion. Scrub hares were captured regularly at 71% of the sites, whereas porcupines were captured at 58% of sites and warthogs were only present at 9% of the sites (Figure 5B).

Photo 1. Communal farmers and community members assisting with

Table 2. List of the 31 species captured of camera traps in the communal area.

Common name	Scientific name
Aardvark	*Orycteropus afer*
Aardwolf	*Proteles cristata*
African wild cat	*Felis silvestris*
African wild dog	*Lycaon pictus*
Baboon	*Papio ursinus*
Banded mongoose	*Mungos mungo*
Bat-eared fox	*Otocyon megalotis*
Black-backed jackal	*Canis mesomelas*
Brown hyena	*Hyaena brunnea*
Cape fox	*Vulpes chama*
Caracal	*Caracal caracal*
Cheetah	*Acinonyx jubatus*
Common duiker	*Sylvicapra grimmia*
Ground squirrel	*Xerus inauris*
Honey badger	*Mellivora capensis*
Kudu	*Tragelaphus strepsiceros*
Leopard	*Panthera pardus*
Pangolin	*Smutsia temminckii*
Porcupine	*Hystrix africaeaustralis*
Red hartebeest	*Alcelaphus buselaphus*
Scrub hare	*Lepus saxatilis*
Slender mongoose	*Galerella sanguinea*
Small (Cape) grey mongoose	*Galerella pulverulenta*
Small-spotted genet	*Genetta genetta*
Spotted hyena	*Crocuta Crocuta*
Springhare	*Pedetes capensis*
Steenbok	*Raphicerus campestris*
Striped polecat	*Ictonyx striatus*
Tree squirrel	*Paraxerus cepapi*
Warthog	*Phacochoerus africanus*
Yellow mongoose	*Cynictis penicillata*



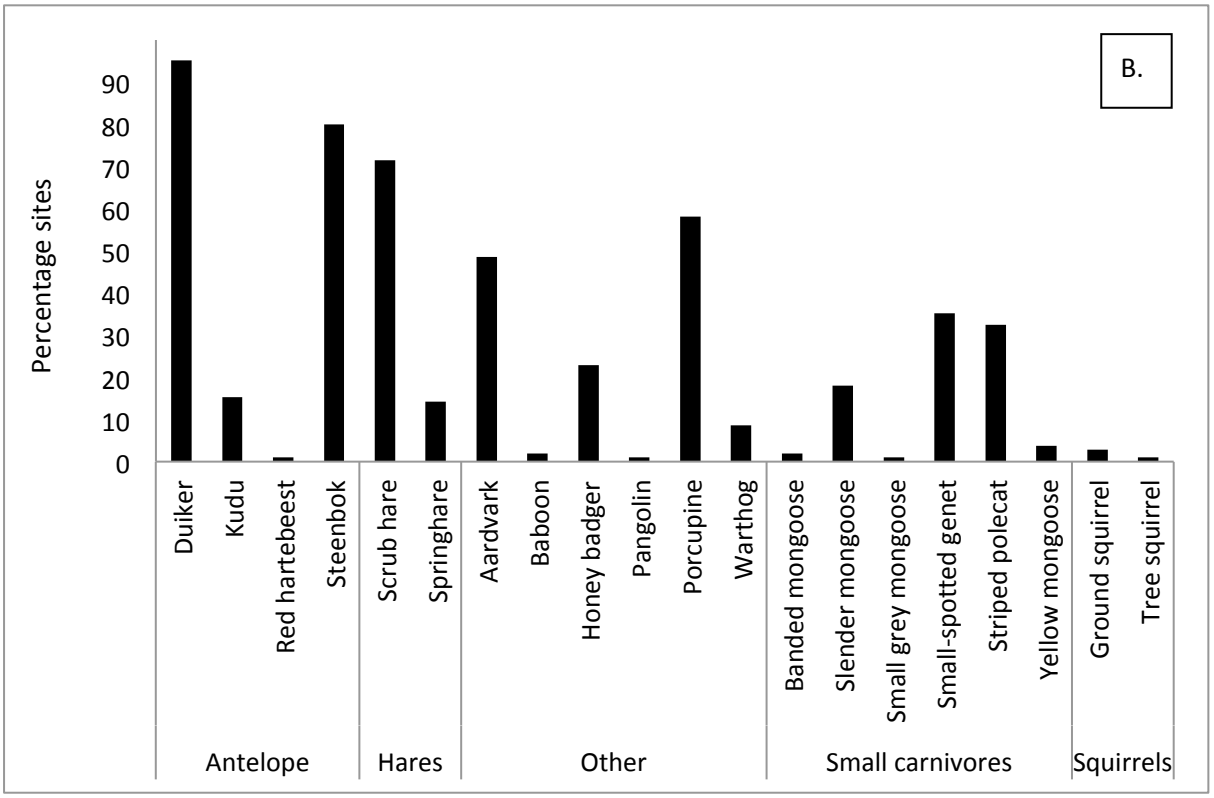


Figure 5A& B. Percentage of predators (A) and prey species (B) captured at camera trap sites in the study area

Main findings from the Camera Trap Study in the Eastern Communal Area

The remote camera trap studies showed that large antelope species are scarce (Fig. 5B) as only kudu were captured on cameras numerous times however red hartebeest were captured once and two oryx were sighted while driving in the study area. Small antelope species (e.g. steenbok and common duiker) (Fig. 5B) but not enough as a prey source for carnivores due to illegal hunting (pers comm.). Small carnivores including the black-backed jackal and caracal are fairly common (Fig. 5A).

Large carnivores (cheetah, leopard and spotted hyena) are scarce however, all that were captured were at sites which bordered freehold farmland (Figure 5A) and brown hyena also occur in the area, but to a lesser extent. While driving in the areas, two CCF staff members observed two wild cheetah cubs (approximately 10 months old) in January 2019, although this sighting was also within 10km from the freehold farmland border. This suggests that these large carnivores will occasionally move into the communal area and will kill natural prey or livestock but are not tolerated in the communal area (pers comm).

Our most interesting finding from the study was the presence of African wild dog (Photo 2) and their denning within the area. Unfortunately, they are highly persecuted due to their tendency to kill livestock primarily due to the scarcity of their natural prey species (Fig. 6).

Photo 2. African wild dog captured on Camera Trap, 01 Feb, 2018

CCF was able to GPS human wildlife conflict hotspots and map them to identify where the highest conflict occurs with African wild dogs (Fig. 6). Further analysis as to the reasons why conflict is so high with AWD is ongoing, however, there is evidence of regular denning in the area, as well as extensive illegal hunting of natural prey by communities and domestic dogs. What is apparent is that the AWDs are not just moving in and out, they are permanently settling in the area. Based on a combination of camera trapping, sightings, spoor, dens and local knowledge, it is estimated that there are still four packs of AWD, however, it is believed that for at least the past two years, no pups have been successfully raised in the communal area, however, there was no records shared of any livestock being attacked or killed during the time CCF was in the area.

Preliminary findings show that the AWD population in the Okakarara Communal Conservancies are not large packs, averaging between 4 – 8 individuals, and it is estimated that the population is 25 – 30 animals total. Due to the small size of the packs, it was reported during the questioning with the communal farmers that AWD do not predate on cattle older than 24 months, although they are capable of injuring them. The main age group of calves predated on by the Okakarara AWD packs are calves between 3 and 18 months old, that are often left out to graze with little protection or livestock management husbandry by farmers.

Overall, 3054 livestock were reported to have died to a number of causes with predators attributed to the main cause of loss, with 77% (n=2014) of the losses in Otjituuo Conservancy were caused by predators, while in Okamatapati and African Wild Dog conservancies it was 86% (n=1941) and 90% (n=198), respectively. Moreover, drought, snakebites and parasites were found to affect respondents primarily from the Otjituuo conservancy.

Jackal were reported to be the carnivore species observed most by respondents, while the cheetah and serval were the least observed carnivore species, while in the African Wild Dog Conservancy the most encountered predator was leopard, African wild cat and African wild dog (Fig. 6).

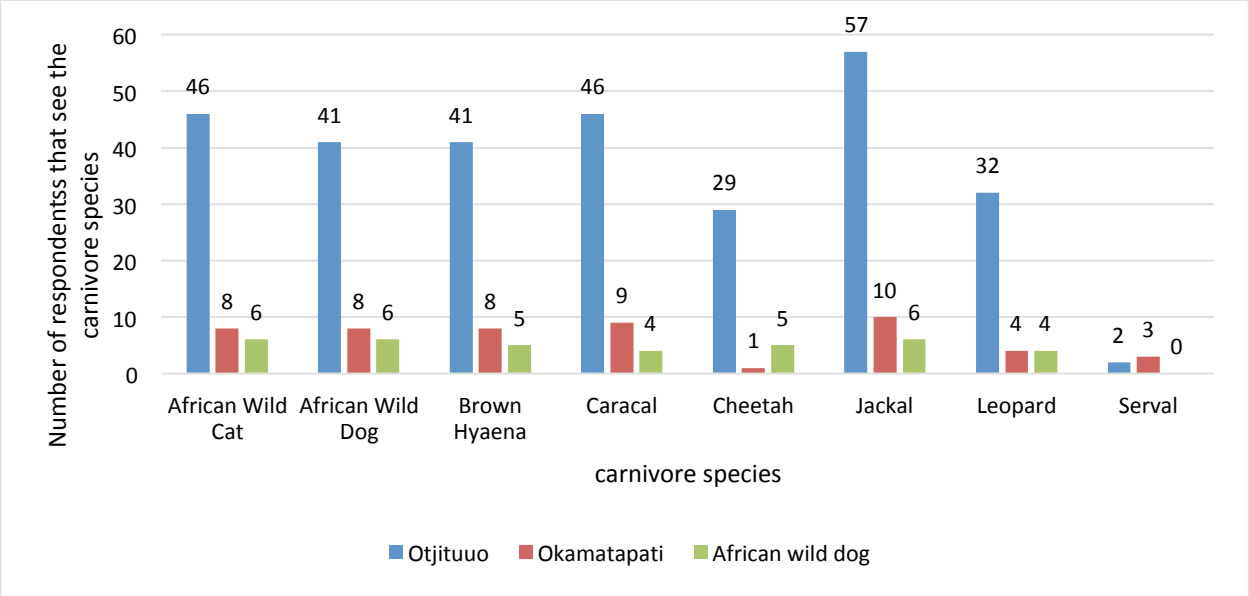


Figure 6. Carnivores reported within 10km of their farms

Farmers were asked about observations of wild prey species around their farms. Duiker and the kudu were the most common wild prey species observed by all respondents near their homesteads, followed by warthog and steenbok.

Through open conversations some interesting issues were discussed and include: The African wild dog conflict was a very hot topic. Community members openly admitted that they do not and will not tolerate them. There was very little buy-in to the conservancy

system, or trust in the committees amongst each other. Farmers reported that MET does not respond to HWC calls and that there is very little known about HACCIS and how it works. Most farmers use Gin Traps and don't report predator mortalities to MET. Livestock theft is a broad issue and reports of neighbouring game farmers chasing wildlife into their farms. There are no water points for wildlife, so wildlife is competing with their livestock (most water points are situated inside kraals).

Incorporating the results from CCF's previous work in the area, CCF has identified an area of high conflict with predators which includes 74 villages and covers approximately 3200 km^2. In 2019, conduced trainings in these villages and implementated workshops, data collection using the National data collection method (Event Book), and joint identification of current HWC hotspots. CCF's goals continue to mitigate livestock farmer-carnivore conflict in the 4 communal conservancies, to reduce the retaliatory or prophylactic killing of cheetahs and African wild dogs.

Conclusion

The cheetah is the most endangered big cat in Africa with less than 7,500 left in the wild, 1,500 of which are in Namibia and less than 100 of which inhabit the Greater Waterberg Landscape (GWL). African wild dogs (AWD) are the most endangered large carnivores in southern Africa, with only 3,000-5,000 individuals left in the wild. Namibia's AWD population is estimated at approximately 250. Our research has identified that there is a small population of approximately 30 AWD in the GWL which is the most persecuted population in Namibia and is on the brink of extinction.

Working directly with farmers in each community, CCF is providing support both to the conservancy as a whole, and to the communities within it. CCF will continue to capture baseline data to gain a better understanding of African wild dog ecology, the threats facing them and identify potential solutions to mitigate conflict with farmers in the Otjozondjupa and Omaheke Regions.

Through the research supported by Go Green, CCF has provide the free-hold and the communal farmers with a better understanding of the wildlife around the Greater Waterberg Landscape. This has been a starting point to begin more extensive efforts to help coordinate an integrated wildlife and livestock strategy to mitigate against human wildlife conflict and reduce the killing of predators in this region of the country.