

PRELIMINARY REPORT

Project Title:

Promoting Cheetah-Human co-existence in the Athi Kapiti Plains through TALK (Training, Awareness, Learning, and Knowledge)

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Promoting Cheetah-Human Co-Existence in the Athi Kapiti Plains through TALK (Training, Awareness, Learning, and Knowledge)

Background and Introduction

Eventhough IUCN list cheetah as Vulnerable species, it is critically endangered in Kenya with a decrease in population of only 23% in their historical resident in which two thirds falls on the unprotected areas and hence the greatest threat to their survival has been human beings (Janzen1983; Laurence & Cochrane 2002), especially in pastoral community areas, which have been a stronghold for cheetahs. Such stronghold is represented by Athi Kapiti plains in the southern part of Nairobi National Park (NNP) and its adjacent livestock areas. The southern part of NNP being not fenced and a migratory corridor of wildlife, enables cheetahs from exiting the park and causing increase conflicts during the past years. Repeated trends of cheetah raiding livestock in the southern buffer zones of NNP has resulted in increased livestock predation and their retaliatory killings. Furthermore villagers see very few or no direct benefits from cheetah presence. On the other hand competitions from bigger cats (lion and hyena) drive cheetah's population into isolation and refuge with high probability of local extinction. (Hanski1994; Wikramanayake et al. 1998), there is now an acute need for successful conflict mitigation to ensure the future existence of cheetahs in and outside NNP.

Aims and Objectives

This project aims at raising awareness concerning the plight of cheetah (*Acinonyx jubatus*) in pastorally dominated areas, highlight local communities grievances besides demonstrating the benefits of protecting Cheetahs in-situ which IUCN list as vulnerable. Conduct workshops that builds the capacity of the locals to adopt national management strategies for conserving cheetahs, obtain information about its occurrence from local communities living around the protected national park, involve the pastoral communities in cheetah conservation by introducing them to measures they can implement to curb cheetah's mortality while protecting their livestock and finally establish institutional frameworks within the 5 villages for cheetah protection.

Project Activities

Evaluate Livestock Depredation and effectiveness of mitigation

With the help of Action for Cheetah Kenya expertise, we were able to determine prey selection through faecal hair analysis that provided insights into the adaptations of the cheetah to human settlement as well as the level of domestic stock consumed by the cheetahs. A scat-detection dog programme was used to collect samples. Another technical service gotten from Northern Trust Foundation. Genetic testing provided information about the frequency that individual cheetahs kill livestock.

Interviews

With the help of Warriors Watch we conducted interviews and field visits to verify evidence and circumstances of livestock depredation. To evaluate the effectiveness of our communication and materials in preventing livestock loss we are revisiting all homesteads receiving advice by our project team, Africa Cheetah of Kenya (ACK), Field officers.



Photo 1: Project staff mounting Camera trap on the fence of Losaiabei ranch

Research (Summary)

- We collected data on cheetah and wildlife movements in the Athi Kapiti field site (500 km²).
- With the help of elders watch, we have since completed 46 predator monitoring patrols recording five cheetahs in the area. Spotted hyena and jackal are still the most predominant predator recorded. The most frequent game sightings included dikdik, reedbuck, Thompson's gazelle, zebra and wildebeest.
- Conflict reports from 2009-2016 were compared showing a decline from 20 to only one cheetah conflict. Total conflicts from 2015 - 2017 declined from 53 to ten. Our focus in 2017 has been conflict mitigation through capacity building, participation in community events and education programmes. Over 70 households were provided with information and assistance on boma improvements.
- Seven predator mortalities and 11 game species were documented due to road accidents in Salama and Athi-Kapiti areas. No cheetahs and fewer hyenas were killed in 2017 than in previous years. Thirty domestic animals (dogs, cats, cattle and goats) were recorded primarily along the Kesajui section of the highway. Highway monitoring and mapping provided information on vegetation, settlement, fencing, water points and intersections to identify correlations in problem areas.
- 9 snares were found and removed by project team and elders staff in July 2017.



Photos 2: Hartebeest and hyena are among wildlife recorded during game count transects. These photos are from the Malili subdivision in Salama and from Machakos Ranching respectively

Conflict Mitigation 1:

Community interviews

To assist in conflict mitigation we conducted thirty random interviews in the community to test perception vs actual predator visitation. We found that people’s perception of the frequency of visitation is correct. Half of livestock killed by predators in the past year were attributed to night time losses. Larger frequencies of daytime losses were related to high numbers killed by wild dogs on four occasions.

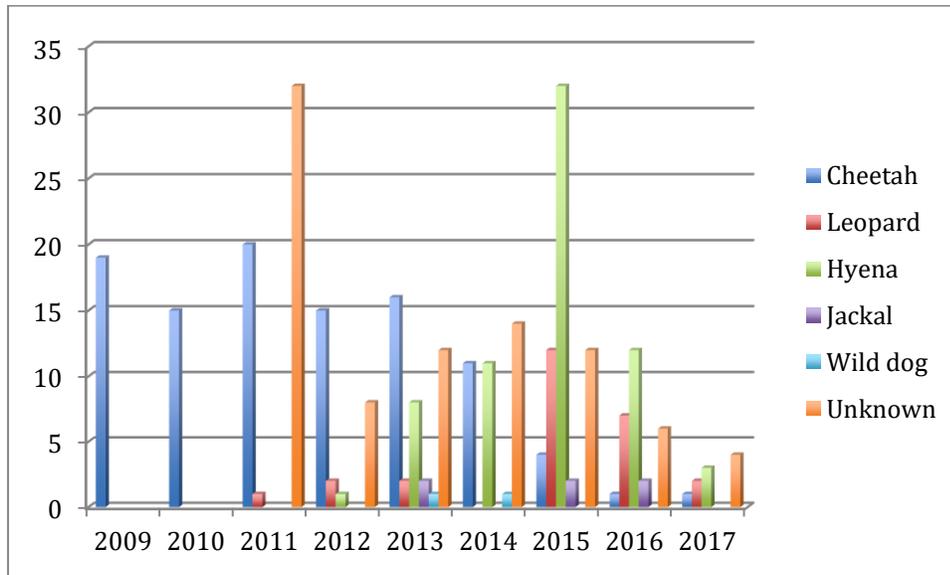


Figure 1 :3D bar graph showing correspondent from locals on years the predators were recorded.

Year	Cheetah	Leopard	Hyena	Jackal	Wild	Unknown	Total
------	---------	---------	-------	--------	------	---------	-------

					dog		
★2009	19						19
★2010	15						15
2011	20	1				32	53
2012	15	2	1			8	26
2013	16	2	8	2	1	12	41
2014	11		11		1	14	37
2015	4	12	32			12	62
2016	1	7	12	2		6	28
2017	1	2	3			4	10

Figure 2: **Predator Conflict Confirmation:** Predators verified to have caused livestock loss since 2009 (Note: only verified cheetah losses were investigated in 2009-2010 -other losses were not recorded ★). Cheetah depredation went from nearly 20 to only one.

Project Activity 2 : Community Outreaches (Summary)

- In Salama Natural Resource Planning using the Conservation Measures Partnership and Miradi software enables the community to identify targets and create management plans that are feasible. ACK staff are trained in conducting the seminars and assisting the community to develop the plan.
- In Samburu Mobinatures works in the Meibae Community Conservancy. We collaborate with rangers and the Northern Rangeland Trust to create strong community conservation ethics.
- We assisted KWS in an informational booth at the Machakos Agricultural Show reaching over 4,000 people with information about predators and improved bomas.
- Mobinatures participated in a tree planting and showed a conservation video at the Ndalani Primary School. We co-hosted 17 students from Kalamazoo Christian High School in an exchange programme where the students learned about field research and where they worked with the Kima Kiu Secondary School on a clean water project.
- Wajir South Member of Parliament is working with MOBINATURES, KWS, County administration and the local community to develop a community conservation area.

Conflict mitigation 2 :

Ranch owner and Pastoralist agreements.

This agreement were organized by elders from the pastoral communities with willing ranch owners.

Agreement entailed allowing pastoralist to graze their livestock on located areas of the ranch. This in itself created harmony between the two parties as there will never be conflict and/or destruction of the ranch, snaring and poisoning of the predators by the herders.

Other measures.

Efforts include herders training, boma reinforcement, deterrent lighting, and livestock health improvements. Thus our networks and friendly organisations will be reached to offer support in terms of training and free handouts of necessary tools.

Each location will be scored on the implementation of changes that prevented future livestock losses.

Photo 3: Pastoralists from the indigenous Samburu community wait to be allowed entry into the Loisaba Wildlife Conservancy, which allows controlled livestock grazing from surrounding manyattas during dry seasons.



Schools Outreach Summary

Our team have made their suggestion and inputs in the ACK's book- ***A predator's role in the Ecosystem*** which is to be rolled out to schools near parks and game reserves in the near future. The book which targets upper primary has been designed to be simple to use and provide all the necessary background information for teachers to be able to help their students to complete each activity. Each activity addresses one goal of conservation and also meets at least one aspect of the Kenyan Primary Syllabus. In order to make the workbook easy to use for teachers, included with each activity is also the page in the student workbook that activity can be found on, as well as the page at the end of the teacher's workbook in which answers to the activity can be found. While students can be provided with their own workbooks, the activity pages in the teachers' workbooks are made so that if wanted, they could be copied and given to each student in selected area schools.

However we came up with schools competitions drawn from the workbook. These activities or exercises to more than twenty schools provided us with M&E tool of engaging the young students to learn and transfer their knowledge to their colleagues in other schools. We conducted these learning sessions on agreed time with the school administration for upper primary 200 pupils (Standard 4 - Standard 8).

A time of thirty minutes was allowed for the exercise, with prizes (writing books and pens) given to winners.

Examples of puzzle and test are here below.

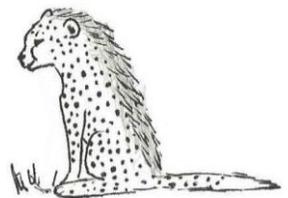
Example 1

Hidden in the puzzle below are prey animals for the cheetah. Help the cheetah find its supper by circle each of the 19 animals in the crossword below.

N	W	H	C	A	N	L	I	V	E	T	S	N	O	S	M	O	H	T
E	E	L	C	N	K	F	G	Q	H	J	K	L	Z	X	C	V	B	W
R	R	P	N	I	J	B	U	A	L	A	P	M	I	F	Q	P	L	M
A	M	F	D	C	R	O	R	R	Z	S	E	A	W	Q	K	U	G	N
H	B	K	Y	G	J	T	U	B	D	R	A	T	S	K	U	D	U	T
L	I	X	D	D	E	W	S	E	E	O	P	Q	W	C	N	L	T	R
D	C	N	E	B	L	T	A	O	S	W	I	O	P	U	S	E	D	E
D	A	E	E	R	A	E	U	D	R	A	T	S	U	B	I	R	O	K
S	H	E	A	J	K	L	Z	G	X	C	V	W	A	N	O	S	G	I
V	S	A	M	N	D	A	H	E	A	B	B	I	T	I	S	D	W	U
T	H	G	N	G	T	N	L	S	E	D	G	M	K	E	Z	X	F	D
M	H	T	D	T	S	D	E	W	S	C	W	A	R	T	H	O	G	G
R	R	N	C	V	E	N	L	W	O	F	A	E	N	S	U	G	O	W
O	A	A	D	Z	M	L	W	O	F	A	E	N	I	U	G	I	A	C
R	P	R	A	N	G	B	O	K	P	E	D	U	C	A	T	I	T	N
Y	O	G	S	E	R	V	E	P	T	H	E	G	E	R	E	N	U	K
X	F	S	H	A	T	G	A	M	E	B	I	R	D	S	E	E	H	C

Words run diagonally, horizontally and vertically:

OSTRICH,
IMPALA,
ORYX,
GRANT,
THOMSONS,
DIKDIK,
ANTELOPE,
ELAND,
HARTEBEEST,
KUDU,
STEINBUCK,
HARE,
WARTHOG,
GAME BIRDS,
GUINEAFOWL,
KORI BUSTARD,
DUIKER,
GOAT,
GERENUK



Example 2

Answer the following questions that deal with all the pages from this chapter:

1. A species that no longer exists is called _____

2. Why is the cheetah considered an *endangered species*?

3. What laws protect endangered species? _____

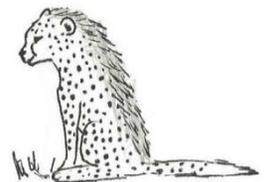
4. List the major reasons why the cheetah (or any species) becomes endangered? A.

B. C. D. E. F.

5. Why do cheetahs need big spaces?

6. How many wild cheetahs remain in the world? _____

7. Do you think the fastest land mammal on earth should be saved from extinction?



Example 3

Fill in the blanks in the following sentences with the correct information from the chapter.

An average cheetah stride is _____ meters long.

Cheetahs hunt during the day, which means they are _____.

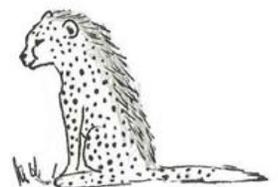
Once a cheetah catches up to its prey while chasing, they _____ their prey to bring the prey to the ground.

Cheetahs _____ kill livestock when it is guarded.

_____ live in female dominated packs and have strong jaws that can crush bones.

_____ are excellent climbers and can pull their prey up into the trees to eat away from competitors.

Cheetahs are _____ which means they eat meat.



Schedule activities

- More awareness and outreaches.
- Final Report

Conclusion

We found that people were more cautious when answering questions relating to park benefits and protected area management procedures or regulations, presumably reflecting the antagonistic relationship between local people and the park authority. The list of potential pitfalls is lengthy, and we by no means claim to have been successful in avoiding all of these.

However, we do believe that the information collected during the course of this survey, schools and community reaches, in addition to our subsequent field work with the same group of stakeholders, will permit us to reach conclusions about the efficacy of different interventions and to identify important cultural issues or belief systems related to the wildlife and nature conservation in Kapiti.