

Project Update: March 2016

Introduction

As mentioned in my proposal, domestic dogs still remain to be a real conservation threat to many wildlife species considering that they act as the main reservoirs for diseases of conservation concern. The settings here in Laikipia are of a big interest since humans, livestock and wildlife coexist together which has attracted various studies in the context of human-wildlife-livestock interface. Dogs remain to be a key and vital part of this since they are closely associated with human beings and are highly valued for the roles they play come protection and herding of livestock owned by humans.

This study, which I started in January 2016, is aimed at giving a meaningful understanding of the roles played by dogs in the community ranches and what conservation threats they might have for our wildlife. This study involves collaring dogs to understand their space use and movement patterns while same time sampling the dogs for both internal and external parasites which is a big step towards understanding their roles in diseases transmission.

So far, the following progress has been made in this project;

i. Field pre-visits/interviews

Immediately after I was awarded this grant, I conducted two quick field visits which were meant to orient myself with the working environment and same time to establish collaborations with the locals and also to conduct surveys to determine which dogs to collar.

I conducted interviews with the dog owners, with help from my field assistants, meant to establish the roles of the dogs meant to be collared. As per our findings, there are two main roles played by the dogs in Laikipia which are basically herding and providing protection in the bomas. Thus, I categorised my dogs into two, that is herding and home dogs.

ii. Signing of Agreements

To establish a working environment with the owners of the dogs, we came up with agreements to be signed by both parties, project and the owner, in presence of the community leaders and the area chiefs. As per the agreement, the owner will allow collaring of his/her dog for a period of ten months and in exchange, the project agreed to conduct rabies vaccinations for all the dogs in the region. Also, as another benefit to the owner, the project will always provide 1 kg of sugar and tea leaves to the owner of each and every collared dog every month. We have been doing this for the past 3 months and everyone is comfortable with this.

iii. Collaring Domestic Dogs

Up to date, a total of 40 domestic dogs have been collared with iGotU data loggers GT-600 model where the loggers are set to record a fix after every 15 minutes for 24 hour a day. From my three months of data collection, the loggers have had a 50% success fix rate which means that each dog can manage a total of 48 fixes per day and a total of approximately 1152 fixes per month. So total fixes obtained within the three months = $(1152 \text{ fixes} * 40 \text{ dogs} * 3 \text{ months}) =$

138, 240 fixes. The collars are retrieved, recharged and replaced once a month which is in line with the battery life of the collars. This is expected to happen for the next 7 months.

iv. Sampling of dogs for parasites

So far, one full sampling has been conducted where I basically collected ticks from the head region for all the dogs and also conducted 15 combings per dog to collect fleas. These samples are now stored at Mpala Research Centre waiting processing. During the full sampling, I also collected blood from all the dogs which I later processed in the lab, separating serum, white blood cells and red blood cells. I have also been conducting mini-sampling sessions every month where I collect blood only from 20 identified dogs and this is meant to conduct a Serosurvey for diseases where I will register myself in one of the blood panels for this survey.

NB: Also, I have employed one permanent research assistant and four temporary community members who have been critically important in the continued progress and success of this project.

Although the above-mentioned has already been achieved, the following is still expected;

- **Continued sampling of the dogs**

It is expected that the sampling for ticks, fleas and blood will continue for at least 7 more months and that all these samples will start to get processed in a short while in the laboratories at Mpala Research Centre. All the same, blood samples are always processed immediately after their collection.

- **Laikipia Rabies Vaccination Campaign**

Many other partners, including Mpala Research Centre, have shown interest in the vaccination campaign and are promising to collaborate in this. It is expected that this outreach will grow big with time and that we will enlarge our coverage by next year. The British Army Training Unit in Kenya (BATUK) has also promised support towards this since everyone recognizes that rabies is a real danger for both people and wildlife.

Recently, we held a meeting between Mpala Research Centre, Domestic Dog project, Small Carnivores Project, the County Government and surrounding ranch owners to discuss on the vaccinations.

Challenges so far

This work has not been without a few challenges.

Recently, I have lost a total of two collars while on the dog and similarly, one of my collared dogs was killed and fed on by a leopard.

Two dog owners have declined replacement of collars on their dogs saying that it is affecting their health. I always replace the collar to another dog in case of such incidences.

Some collared dogs are also very aggressive meaning it has not been successful to sample a few of them for ticks, fleas and blood.

