

Project Update: October 2017

Introduction

As mentioned in my proposal, little is known about the ecology of African small carnivores and many species are threatened by habitat loss and human persecution. The settings here in Mau Forest are of a particular interest since human and wildlife coincide together which has attracted various studies in the context of human-wildlife conflict. Small carnivores here by referred to as mesocarnivores, likely play a vital part since they are closely associated with human beings and are highly valued for the role they play in forest regeneration and/or consumption of poultry or agricultural fruits.

This study, which I started in July 2017 is aimed at giving a meaningful understanding of potential conflicts and/or benefits of mesocarnivores to people living on the edges of Mau Forest. The information will be used to raise awareness and/or positive perception of these understudied and often misunderstood species. This study involves live and camera trapping of mesocarnivores across different habitat types and land use while at the same time sampling the small carnivores for dietary assessment which is the step towards understanding their roles in the forest and the community around the forest.

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

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 sections I will be trapping.

I conducted interviews with the home owners, with the help of my field assistants, meant to establish the peoples' baseline knowledge of mesocarnivores, general attitude towards them, and cultural significance of any species and characteristics of human-mesocarnivore conflict. As per our finding, there are significant conflict between human and small carnivores due to human invasion in the Mau Forest. The community view mesocarnivores in the negative perspective as the culprits that consume their poultry and agricultural fruits, therefore, they hunt and kill them as a consequence.

Live Trapping

Up to date, a total of 10 mesocarnivores representing including *Genetta maculate*, *Ichneumia albicauda* and *Leptailurus serval*, have been trapped and tagged with 12-mm Passive Integrated Transponder (PIT tag) for identification in mark-recapture analysis. From my 3 months of data collection, of these 10 captured mesocarnivores, two have been recaptured. Six mesocarnivores were captured in the pristine habitats, three in the disturbed and one in the agricultural environment. The two recaptured were from the pristine region. Live trapping is expected to happen for the next 6 months.

Camera Trapping

To date, our cameras have been able to capture and record a total of 200 photos of small carnivores representing seven species: *Ichneumia albicauda*, *Galerella sanguinea*, *Genetta maculata*, *Civettictis civetta*, *Leptailurus serval*, *Canis adustus*, and the Near Threatened Jackson's mongoose *Bdeogale jacksoni*. The cameras are set to record any image/object that passes in front of it. The cameras can be able to capture an image as far as 30 m away. From my 3 months of data collection, the cameras have had an 80% success in capturing mesocarnivores. The 16GB-SD Cards are retrieved and replaced once a month. The camera batteries are replaced after every three months which is in line with the battery life of the cameras.

Sampling of Small Carnivores for Diet

So far, four full sampling events have been conducted where I collected faecal samples from captured mesocarnivores. These samples are now stored at -200 degrees C at Maasai Mara University Zoological Laboratory awaiting processing. During the full sampling, I also collected ticks, fleas and blood samples which can be used for further studies in future projects. I have also been conducting mini-sampling sessions every month where I collect SD Cards from deployed cameras for analysis.

Having mentioned the above achievements, the following is still expected:

- Tree Nursery

As part of this endeavour, I plan to work with local communities to establish tree nurseries in areas where I undertake my mesocarnivore project to establish a reforestation programme, especially in areas that have been denuded of forests. The nurseries shall comprise of both indigenous and exotic trees.

- Continued Live and Camera Trapping

It is expected that the trapping of small carnivores will continue for at least 6 more months in various parts of Mau Forest in the pristine, disturbed and agricultural habitats.

- Continued Sampling of Mesocarnivores

It is expected that the sampling for faecal samples will go on for at least 6 more months and that all the samples will start to get processed in a short while in the laboratories at Maasai Mara University. All the same, faecal samples meant for seed germination are processed and planted immediately after collection in the sterilized soil in the laboratory for seed germination rate of known fruits consumed from scat.

Challenges so far

However this work has not been without challenges. Recently, some of my camera traps have been disturbed in the field by people or animals, the screen of one camera was broken. I have also lost 4 Tomahawk live traps in the field.

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



Left: In the Field Showing Maasai Mara University Undergraduate Students Research Techniques and Equipment Used. Right: In the Field Showing Maasai Mara University Undergraduates Students Proper Camera-Traps Techniques.



Left: In the Field Setting Live Traps. Right: In the Field Collecting Trapped Mesocarnivores.