

Project Update June 2024

The ongoing project aims to determine whether there has been recent hybridisation between Kenyan and neighbouring cheetah subspecies by genetically analysing cheetah samples of Kenyan origin. As part of the project, plans are in place to support capacity building of the Kenya Wildlife Services (KWS) and Action for Cheetahs in Kenya (ACK).

So far, Cheetah Conservation Fund Headquarters in Namibia has received 40 out of the 50 DNA samples intended for the project supported by Rufford. The DNA samples were extracted from cheetah scat by the Kenyan Wildlife Services laboratory. I have commenced laboratory analysis at CCF Namibia and to date, I have successfully produced mitochondrial sequences as well as partial microsatellite genotyping data for all 40 samples. I will continue the processing of these samples, while waiting for the remaining 10 samples from Kenya to complete this project.

Our Kenyan collaborators from ACK have secured the remaining samples for the project. The samples include scats obtained from the Eastern and Northern part of the Kenyan cheetah range. Those samples will be particularly valuable for the study as they represent border areas and may be more likely to include animals with different genetic signatures.

Challenges

For reasons out of their control (related to the implementation of the Nagoya protocol and restructuring of KWS), our Kenyan Government collaborators have encountered difficulties in obtaining the necessary permission to send these remaining 10 samples from Kenya to Namibia. We are still hoping to find a solution to this problem but have been looking into contingency plans with our collaborators in Kenya.

In case shipping should not be possible, we recommend that the laboratory analysis of these 10 samples be conducted in Kenya during my scheduled capacity building visit in order to be able to include these valuable samples into our analysis. This would mean that part of the laboratory work will be carried out in Kenya instead of Namibia, leading to an adjustment in the budget allocation and we would seek the proper authorisation from The Rufford Foundation to do this.

Background

Genetics play a crucial role in understanding the genetic diversity, population structure, and connectivity of the rapidly declining cheetah population. With just around 7,500 mature individuals left worldwide, cheetahs are facing the threat of extinction. They are found in small cheetah population patches across Africa which belong to four different subspecies of across Africa. Although there are indications of connectivity between different cheetah subspecies, this has not been officially documented, particularly between *A. j. raineyi* in Kenya and *A. j. soemmeringii* in Ethiopia/Somalia, which share genetic similarities.



The crucial question that needs to be addressed is

- Whether the eastern African cheetah (classified as *A. j. raineyi*, or *jubatus*) interbreeds with the north-eastern African cheetah (*A. j. soemmeringii*).

With financial support from The Rufford Foundation, me and my colleagues from the Cheetah Conservation Fund (CCF) Genetics Laboratory in Namibia are actively collecting genetic data to determine if hybridization occurs between the two subspecies. Over the past 3 months, we have received and analyzed samples of Kenyan origin using mitochondrial and microsatellite markers. The samples were collected by our Kenyan collaborator, Action for Cheetahs in Kenya (ACK) who are actively working on the ground in Kenya.



CCF also continues to work closely with ACK and the Kenya Wildlife Services (KWS) for the DNA extraction of additional samples collected. As part of the project, we are also making plans for me to go to Kenya to support cheetah specific capacity building to KWS and ACK.

Every piece of data collected is vital in our efforts to protect, conserve, and understand these magnificent and endangered creatures.