Project Update: November 2023

Project abstract

Why are the rare species restricted and the abundant species widespread? I test the hypothesis that abundant, widespread species are resource generalists, and that rare, restricted species are resource specialists using a small mammal community in central Kenya. Preliminary results on diet profiles of these small mammals shows preference of *Acacia etbaica* seeds in the diet of rare, restricted species with the abundant, widespread species having catholic diets. Using a resource removal experiment to isolate the most preferred food, I expect abundant, widespread species to switch to other foods and rare, restricted species to decline in abundance and become extirpated following resource removal (i.e., rare species emigrating from the resource removal experimental plots).

From top left downwards to top right downwards: Katherine Garret (a University of Wyoming undergrad scholar) handling a rufous elephant shrew, Nicholas Mati (a Kenyan intern at Mammalogy Section-National Museums of Kenya) handling a rufous elephant shrew, a rufous elephant shrew being tagged, Allan Kipruto (a Kenyan intern at Mammalogy Section-National Museums of Kenya) handling an elephant shrew, and Leo Khasoha demonstrating how to set small mammal Sherman traps to Katherine Garret.

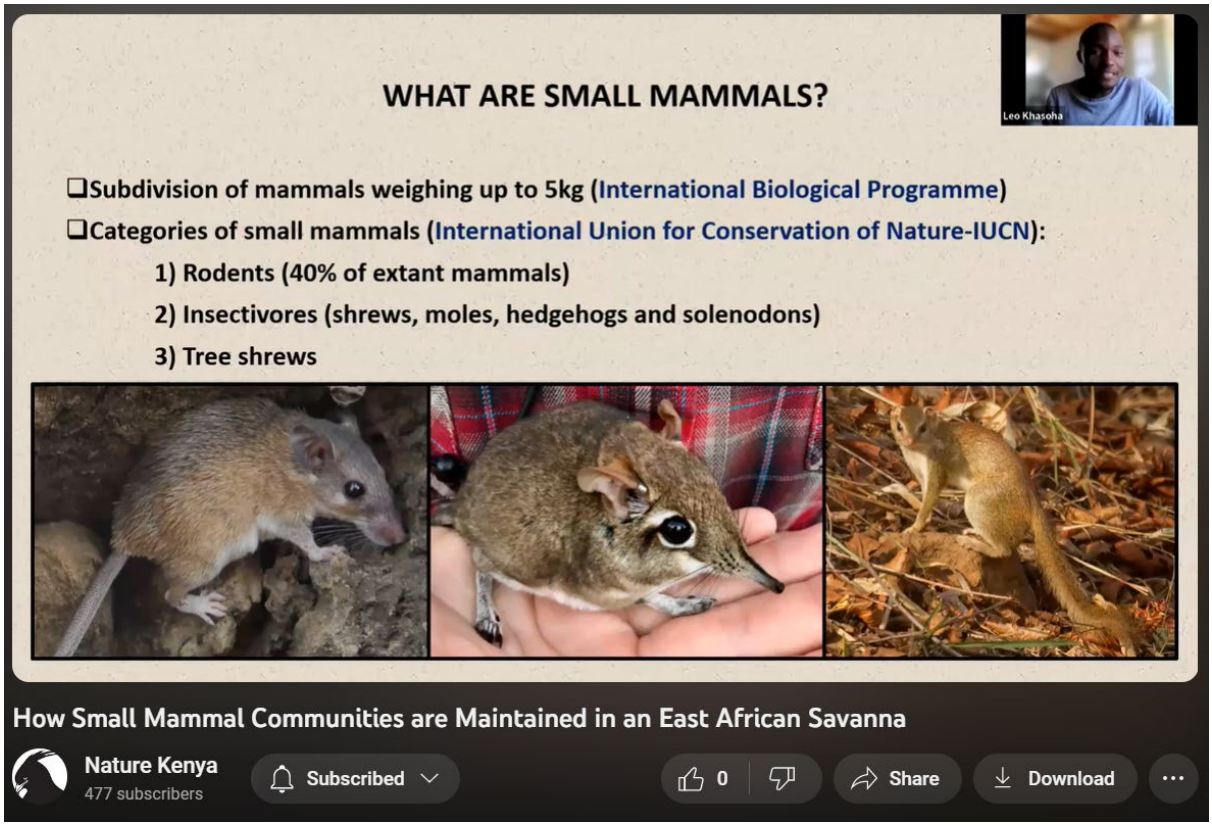
Project progress major highlights

1) **Capacity building of upcoming small mammal biologists:** I continued with an internship programme in collaboration with the Mammalogy Section of National Museums of Kenya. Two interns from the mammalogy section (Nicholas Mati and Allan Kipruto) joined me at Mpala Research Center and they were trained on "field mammalogy techniques" (i.e., setting up of ecological experiments; trapping and sampling of small mammals; identifying, aging, and sexing of small mammals; field collection and lab preparation of samples), and other broad ecological aspects (i.e., data analysis in program R and data presentation). In addition to the mammalogy section Kenyan interns, I took on an undergrad student from University of Wyoming who was sponsored by the University in promotion of global studies.

2) **Project results communication:** So far the preliminary results from this study have been successfully presented in three meetings: 1) an invited wildlife talk to the Nature Kenya membership and public on "How Small Mammals Communities are maintained in an East African Savanna" , 2) a talk at the 13th International Mammalogical Congress in Alaska on life histories and demographics of small mammals of Mpala Conservancy presented by Katherine Garrett (an undergraduate scholar of University of Wyoming), and 3) a talk at the 14th African Small Mammal Symposium in Namibia on life histories and demographics of small mammals of Mpala Conservancy by Leo Khasoha.

Next steps

I am currently analysing data on how generalists and specialists respond to preferred resource removal/ or decline to ascertain.



Leo Khasoha presenting on how small mammals are maintained in an east African savanna in an invited wildlife talk to the membership of Nature Kenya and the public.

Katherine Garrett presenting on life histories and demographics of Mpala Conservancy small mammals at the 13th International Mammalogical Congress in Alaska, July 2023.

An acknowledgement slide from Leo Khasoha's presentation at the 14th African Small Mammal Symposium in Namibia, September 2023.