

Progress Report: [Nairobi national park and dispersal areas] - Rufford Small Grant.

Project Title: [*Vulture abundance, distribution and species diversity along a gradient of anthropogenic effects in Nairobi national park, Kenya*].

Date: [05th November 2023]



Figure 1: Brian Ochieng' (Project's principal investigator) in a field survey at hippo pool (Riparian habitat) in Nairobi National Park.

The study of vulture species diversity, abundance and distribution within Nairobi National Park and its dispersal areas is an ongoing vulture conservation project funded by The Rufford Foundation. The project is dedicated to bringing to light the impact of anthropogenic activities on vulture dependence on the habitats within the target study areas i.e., Nairobi National Park and adjacent Olerai Community Wildlife Conservancy (a wildlife dispersal area). Since the commencement of the project, significant progress has been made in various aspects.

Together with my dedicated team of researchers and volunteers, we have diligently surveyed various habitats within Nairobi National Park and Olerai Conservancy for potential sighting of vulture species that are dependent on these habitats for either breeding, roosting or foraging.

Preliminary findings

Surveys were done from 14th May to 14th September 2023. During the surveys we identified each individual vulture to species level, noted its behaviour and recorded the GPS coordinates of nests. Out of our surveys, we managed to record 37 active nests of white-backed vulture distributed within Nairobi National Park while within Olerai Community Wildlife Conservancy, we recorded 13 active nests for white-backed vultures. We did not record nests for other species of vulture within our survey period. These are our preliminary findings before scientific analysis. Detailed results will be provided after we are done with data analysis. Fever tree (*Vachelia xanthophloea*) along the riparian habitats of both Nairobi National Park and Olerai Community Wildlife Conservancy provided preferred nesting sites for white backed

vultures. Additionally, within the open bushland of Nairobi National Park, splendid thorn (*Vachelia robusta*) were the preferred trees for nesting by white backed vultures. We did not record nests for other species of vulture within our survey period. These are our preliminary findings before scientific analysis. Detailed results will be provided after we are done with data analysis.



Figure 2: Main entrance into the Nairobi National Park, one of the main study sites. Right is John Musina a research scientist at Ornithology Section of the National Museum of Kenya) and Brian Ochieng' (Rufford grantee) officer. Figure 3: Faith Achieng' (field assistant and program coordinator at The Peregrin Fund) and Brian Ochieng' during field survey in Nairobi National Park.



Figure 4: Olerai community wildlife conservancy scouts scanning a vulture nest using a telescope. This was a learning experience for these scouts who became part of my survey team. Figure 5: Brian Ochieng' scanning a vulture nest during our field survey at hippo pools (riparian habitat) in Nairobi national park.

Key findings for this project include the presence of white-backed vulture (*Gyps africanus*) as the common vulture species using Nairobi National Park and Olerai Community Wildlife Conservancy as roosting and breeding sites. Anecdotal reports from community members adjacent to Olerai Community Wildlife Conservancy also indicated rare sighting of Ruppell's vulture (*Gyps ruppelli*) as the other species that is sometimes seen early in the morning roosting within Olerai Community Wildlife Conservancy. We developed a map of both Nairobi National Park and Olerai Community Wildlife Conservancy showing distribution of nests for *Gyps africanus*. These will be shared with the relevant conservation stakeholders to inform decisions in the current land use management and plans for the future.

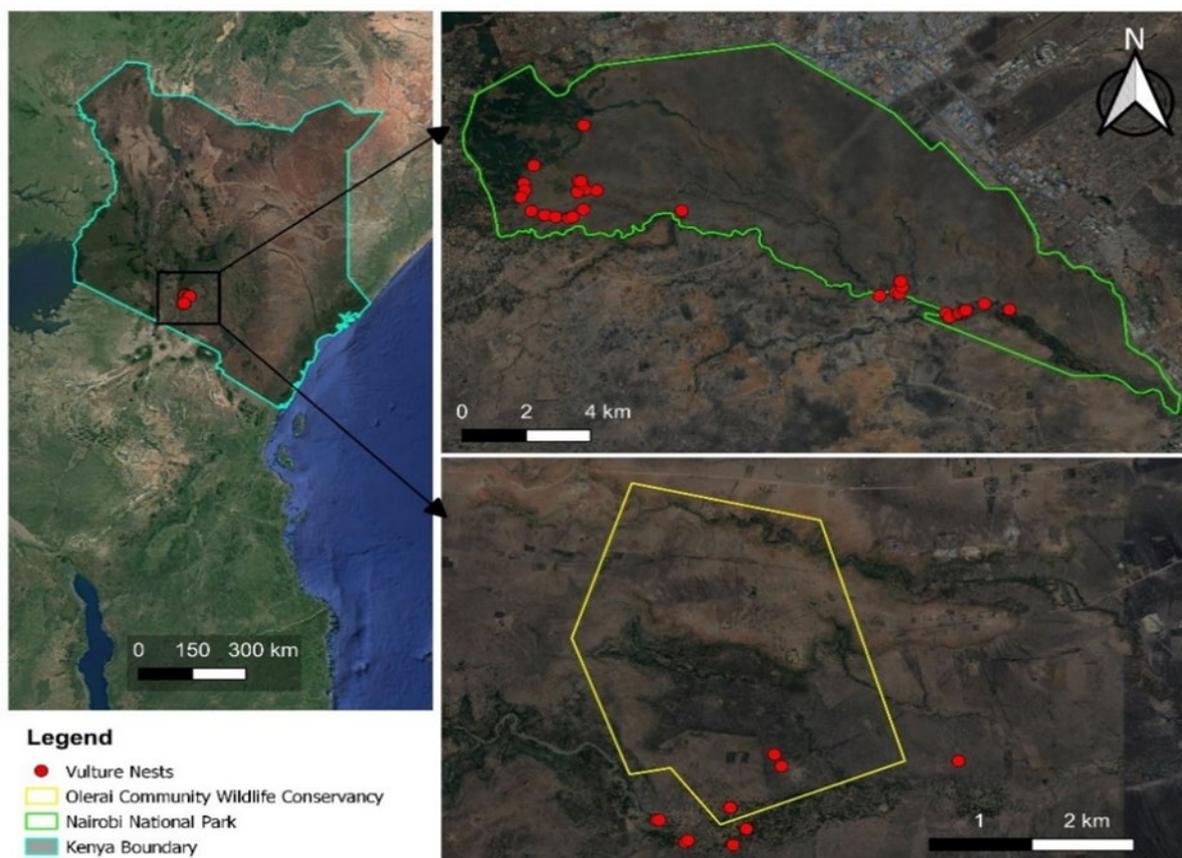


Figure 6: Map showing the distribution of breeding sites for White-backed Vulture (*Gyps africanus*) in Nairobi National Park and Olerai community wildlife conservancy in Kenya, according to survey done between May and September 2023. Cartography done with help of Joshua Sese, Nature Kenya's staff (KBA Officer)



Figure 7: *Gyps africanus* roosting on *Vachelia xanthophloea* at hippo pools in Nairobi national park @Brian Ochieng'. Figure 8: Nest of White-backed Vulture (*Gyps africanus*) in Nairobi National Park's riparian habitat (Brian Ochieng').



Figure 9: From left, a nest of *Gyps africanus* invaded by bees. This was observed in almost all White-backed vultures' nests in Olerai Community Conservancy which could be a possible threat to vulture nestlings. On the right, is herd of cattle utilizing the conservancy for grazing.



Figure 10: At the background of this picture is a Standard gauge railway line that traverse through the grassland habitat of Nairobi national park. Such infrastructural developments indicate the amount of pressure within the park from human activities. Figure 11: A section of riverine habitat in Nairobi national pack with the highest concentration of *Gyps africanus* nests.

Community engagement

Community involvement remains central to this project's success. After completion of field activities and data processing, we have now shifted focus on intensive community engagement through community local leaders to mobilise community members to take part in our planned interviews and awareness creation activities. The topics are structure on the plight of vulture conservation, significance of vultures in the ecosystem with emphasis on human caused threats such as wildlife poisoning on vulture populations in Kenya. These efforts will foster a sense of vulture conservation ownership and stewardship among local communities.

Challenges and Solutions

While progress has been promising, a few challenges have always been encountered. One key challenge is the high rate of inflation experienced in the country that significantly impacted the project's budget. This was however, addressed by the Nature Kenya's support with a field vehicle to facilitate delivery of this project. Therefore, the budget for vehicle hire was used to cushion the inflated price of the essential components of the project such as purchase of fuel for field activities.

Acknowledgment

I am indebted to The Rufford Foundation for having approved this project for small grant funding. Without Rufford's generous funding, none of these accomplishments in this update would have been possible. I extend my gratitude to Nature Kenya, Maasai Mara University and the National Museum of Kenya for the unwavering technical support they always accorded during the field data collection to achieve the objectives of this project. Nairobi National Park and the Olerai Community Wildlife Conservancy for allowing me to conduct this study within their jurisdictions. Not forgetting the National Commission for Science, Technology and Innovation (NACOSTI Licence No: NACOSTI/P/23/24665) and the Wildlife Research and Training Institute (Licence No: WRTI-292-03-23) for granting access and research permits for the implementation of this project.