

Project Update: January 2022

Activities

The survey commenced with a meeting with community leaders and security agencies to inform them about our readiness to begin the project (1st week of September 2020) while we purchased the equipment needed for the study and awaited delivery.

Fortnightly surveys were carried out along transects of pre-existing footpaths in both sites to monitor vulture abundance at Amurum Forest Reserve and NVRI, Vom.

During the fortnightly surveys, two pairs, as well as a group of six individuals and five other isolated individuals, were identified in Vom and one pair at Amurum. One of the pair observed in Vom was found mating next to a nest. This breeding pair was subsequently found at the nest site, and were observed twice a week, as the transects were still observed for surveys for vulture abundance.

Other locations in Jos which were surveyed included the abattoir within the metropolis, where vultures were sighted only once (residents reported several nocturnal sightings), the ECWA farms on the outskirts where there was no sighting of vultures although the farm workers and locals reported seeing vultures regularly and villages (Fobur and Sabon gari) which bordered the metropolis.

These other locations were identified during road transects carried out throughout the metropolis exploring different routes. Other carnivorous birds (mostly pied crow, *Corvus albus* and yellow-billed kite, *Milvus aegyptius*), instead, were observed in large numbers, at these locations. These locations were subsequently visited once a week.

Observational survey: Breeding and roosting sites were identified and observed fortnightly from October 2020 to March 2021. The pre-existing footpath transects were maintained in surveying these locations, with the survey team walking these paths and counting the vultures observed. Both Amurum and Vom were visited twice a week, fortnightly and the abattoir and poultry farm were visited once a week. Road transect surveys were carried out to and from these locations, utilising different routes and plying the routes once per week.

The identified breeding pair was observed twice a week, from the nest-building stage in September 2020 through to the fledging stage in February 2021. This was to ascertain breeding success. During the transect surveys, the following tree species were identified as utilised by vultures for roosting and nesting as well as perching as vantage points for foraging; *Eucalyptus camaldulensis*, *Tectona grandis*, *Gmelina arborea*, *Senna siamea*, *Khaya senegalensis* (mahogany), and *Maranthes corymbosa*.

Nests were observed using pairs of binoculars, telescope and by flying a drone over the nest.



Plate 1: Nest Monitoring Using Drone

Summary of Breeding Observation: A pair of hooded vultures was seen mating on 10th October 2020. This pair was followed and observed keenly, and their nest was seen close to point of mating. Continuous observation showed that a clutch size of one was laid. The incubation period was estimated to about 50 days. By the end of April 2021 to May 2021, it was observed that the pair and the fledgling had departed from the nest. Generally, the whole population of hooded vultures had migrated from the Vom community. They returned from early September.



Social surveys: these surveys which were consented (1 week/month October 2020-June 2021) were carried out with the team asking residents of communities surrounding Vom and Amurum for their perception on vulture existence and knowledge on the ecosystem services they provide. The results obtained from this survey informed the conservation education outreach and are being compiled

towards the final report.

Purchase of seedlings for tree planting (August 2021)

Seedlings of the tree species most utilised by the vultures during the surveys as listed above, were purchased from reputable plant nurseries (APLORI Nursery and Pathfinder Green Initiative) to be planted at conservation education outreach in schools which occur in areas of vulture occurrence or along likely corridors for breeding and roosting.

Design and production of posters, teaching aid (August 2021)

Teaching aids and printed materials including posters, pamphlets and exercise books for conservation outreach were designed and produced.

Conservation education / Community engagement (September / October 2021)

Conservation education were carried out at the National Veterinary Research Institute (NVRI), St Joseph's Secondary School, Vom and Child Love and Protection Advancement Initiative (CLAPAI), a school for orphaned children near Amurum Forest reserve. The lectures centered on teaching school students the importance of conserving biodiversity and the ecological roles of vultures. These events started from International Vulture Awareness Day on 4th September 2021.



Plate 2: Conservation Education and Tree Planting





Plate 3: Pictures of Hooded Vultures Taken During Observational Surveys

At locations where the vultures were observed, the tree species which they use as substrate for perching, roosting and nesting were identified and recorded. Vegetation measurement was also carried out at vulture territories and roosting sites. Vegetation parameters including number of trees, tree height, tree diversity, tree species composition, canopy cover and NDVI were recorded. Anthropogenic

threats were also observed and categorised.

A Facebook group with the name Vulture Report group (VRG) has been created where citizen scientists share their vulture sightings and announcements have been made on WhatsApp groups focused on ecology and conservation with interested participants in Nigeria, Ghana and Liberia joining the group.

Post project Radio presentations: We had some radio live programmes which enabled interaction with the general public on vulture conservation using ecosystem services provided by them as a selling point.

We shall return to the radio station to present the conservation evidence emanating from our project. Here we shall discuss success stories and how we engaged communities to achieve success.



Pending Activities

Some activities have had to be postponed due to logistical and administrative issues with some of the institutions involved. The management of the NVRI requested that we put on hold our activities involving their institute as they wanted to review the project as the clearance, we had received at the beginning of the survey was temporary and subject to a review by their management. A full approval has since been given by the management and we have carried out our avian and social surveys in the area. Due to this delay however, subsequent activities are being carried out later than the proposed dates.

1. Data analysis and Report writing (Ongoing)

Data collected from the field survey is currently being analysed and results presented in graphs, tables and text, to be presented together with the results from the social surveys within the final report to be submitted upon the completion of the project.

2. Conservation education/ Community engagement (proposed for February 2022)

The conservation education programmes, which commenced from International Vulture Awareness Day on 4th September 2021 through October, were not carried

out at all proposed schools as some schools (mostly primary schools) were out of session at the period of the outreach programmes and will be visited as soon as ideal dates have been agreed upon.

3. Report writing and distribution to stakeholders (Ongoing)

We shall dedicate about two weeks to report writing to be sent to The Rufford Foundation.

4. Preparation of manuscripts for journal publications (Ongoing)

We shall begin preparation of manuscripts for publication in reputable peer reviewed journal.

5. Post project radio presentations of conservation evidence (upon completion of project)

We shall return to the radio station to present the conservation evidence emanating from our project. Here we shall discuss success stories and how we engaged communities to achieve success.