Luano vulture survey report

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Chaona Gertrude Phiri
African Bird Club Conservation Award report

Chaona G Phiri, BirdWatch Zambia

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Figure 1; Location of project area (Luano Valley, in red) in Central Zambia. Indicated are also the Chisamba-Mkushi Farm block (including Vulture Safe Zones, in blue) and nearby National Parks (in green; Bangweulu and Luangwa complexes top right, Lower Zambezi below)............................................................................. 3

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Cover Photo: African White-backed Vulture (Gyps africanus) in flight – David Ngwenyama
Project Summary

Luano Valley lies at the very center of Zambia’s core vulture distribution, in between the Bangweulu and Luangwa complexes to the north and east, Lower Zambezi to the south, the Kafue system to the west, and the Vulture Safe Zones of Chisamba-Mkushi to the north and west. The four species of endangered vultures identified for this project area included White-backed Vulture (Gyps africanus), Lappet-faced Vulture (Torgos tracheliotos), Hooded Vulture (Necrosyrtes monachus) and the White-headed Vulture (Trigonoceps occipitalis). Tracking data coupled with reports from land owners within the area suggest that 3 species of vultures frequent this area and may possibly be nesting in the area. Furthermore, the locals have reported that the area has in past years suffered high poisoning incidents at different waterpoints such as rivers and streams. This was in an interest to kill and sell baboons and monkeys as quickly as possible to meet the high demand for game meat. Vultures are suspected to be collateral damage from the water hole poisoning. The objective of this survey was to assess the status of vultures in the area as well as prescribe feasible, site-specific conservation interventions.

Acknowledgement

Sincere gratitude is expressed to the Africa Bird Club for providing the financial support for the surveys, Andre Botha (Endangered Wildlife Trust) for facilitating tracking units and poisoning response training, Department of Wildlife and National Parks for the study permits and armed escorts. The transects would have been impossible to complete without the guidance and participation of the 2 scouts who worked tirelessly with the field survey team. Lastly, the project team also extends thanks to the BirdWatch Zambia executive committee, particularly Frank Willems and Guida Bellcross for the technical oversight and backstopping provided for the project.
Introduction

The current situation with Vultures in Africa requires that special conservation measures are put in place. Besides updating research information on the distribution and status of vultures in Zambia as required within the Multi species Action plan, this expedition will also serve as a feasibility study for the viability of the Vulture Safe Zone initiative pioneered in Africa by BirdWatch Zambia; [https://www.birdlife.org/africa/news/helping-farmers-create-safe-haven-vultures-zambia](https://www.birdlife.org/africa/news/helping-farmers-create-safe-haven-vultures-zambia)

Luano valley is a stunning location bordered by three rivers: the Luangwa, Lukusashi and the Lunsemfwa. This valley is the corridor that links the Luangwa Valley to the Zambezi valley right down to Zimbabwe’s Mana Pools. The Luano area is a hilly woodland wilderness dominated by Mopane and baobab trees and covers well over 10,000km². The Luano forms a large buffer zone between the Lower Zambezi national park to the south, the Luangwa Valley to the northeast, and a very large farming block (which includes many cattle and game farmers) in the central part of the country to the west and north (Chisamba-Mkushi).

Buffer zones such as the Luano are thought to be hot spots for vulture poisoning incidents. The large carnivore and mammal populations known to occur in this area have in the past suffered losses from
human-animal conflict and vultures may have been among the casualties. However, without any ‘trained eyes’ on the group, such data is not captured and no measures put in place to mitigate losses of these already endangered species.

Aims

a) To collect updated information on the current status, distribution and threats to the species of Vultures known to occur within the Luano Valley
b) Conduct education and awareness talks at schools and village centres as well as to other stakeholders in and around the project area
c) Train scouts in vulture identification to improve their capacity to report vulture related poisoning incidents

Methods and Results

a) Status, distribution and threats to the species of Vultures known to occur within the Luano Valley

The survey was conducted between 20 and 30 October 2018 from 8:30 to 15:30. October is the peak of the dry season thus there was no rain on any of the survey days. The survey method used was a combination of line transect and point counts; a preferred method for counting and observing easily disturbed birds that flee from observers. The transect method took care of the fact that vultures are usually in lower densities along roads but are mobile and habitats are fairly even. The point count method on the other hand, was used at water pools or feeding points encountered to get details of habitat associations of the birds. Habitat data was recorded around each census stations which was easily associated with the presence/absence of individual birds.

A total of 237.3km was covered, divided into 11 transects, 17 points and 6 water holes. 31 Vultures were recorded during the survey period; 2 Hooded Vultures and 29 White-backed Vultures. Of the 31 birds, 23 were perched (11 on the ground and 12 in trees) while 8 of the recorded birds were in flight in the forested area. The 11 birds on ground perch were found at water holes while the 12 in the trees were within the forested area along the edge of the forest and the grasslands leading to the hot spring area.
Vulture abundance was then calculated using total transect distance against minimum observer distance to be approximately 0.53/km² of the total survey area, less than one bird per square kilometre.

One of the major threats to vultures within this area as documented from interviews conducted during the survey as well as historic reports is poisoning of carcasses and water holes. The poisoning is driven by an interest to kill and sell baboons and monkeys as quickly as possible to meet the high demand for game meat. This meat is sold to unsuspecting travellers who are assured that it is the meat of a large mammal such as Buffalo or Kudu which are the preferred choices for most Zambians. The last documented poisoning incident in Luano Game Management Area (August 2019) did not only sweep out Vultures and large mammals but also other birds that source their drinking water from the same waterholes. The Chichele and Chipembele Hotspring are among the points where massive poisoning has been conducted, with some cases of people having diarrhoeal diseases. In other instances, poisoning has been as a result of human attempts to deliberately eliminate large predators of livestock.
b) **Education and awareness**

A number of education and awareness activities were conducted in and around the project area;

i. Educational talks were conducted at 2 schools with a total of 86 children and 6 teachers in attendance.

ii. 20 posters and 250 stickers were printed and distributed during the awareness campaigns.

iii. 10 vulture identification guides were printed and given to 5 trained residents within the study area.

iv. 2 meetings were held at village centers and were attended by a total of 102 community members.

c) **Training of Species monitors**

Two training sessions were conducted;

i. Training of species monitors in Vulture identification – 5 residents were trained within the study area; 3 scouts and 2 community members.

ii. 23 wildlife police officers were trained in wildlife poisoning rapid response.

**Project Outcomes**

The overall aim of the project was to establish the current state and threats of endangered Vultures in the Luano valley. Using the data collected, suitable site-specific conservation measures and interventions will be designed. One major consideration is to establish a Vulture Safe Zone in partnership with Makasa safaris – safari operator newly managing the area under a hunting concession.

Furthermore, the results will be communicated to stakeholders on the project such as BirdLife International, Endangered Wildlife Trust, Wildlife and Environmental Conservation Society as well as the Wildlife Crime Prevention Unit to facilitate the implementation of suitable conservation measures.
Expenses

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost (ZMW)</th>
<th>GBP</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Use</td>
<td>18252.15</td>
<td>1303.725</td>
<td>Vehicle for travel and movements to the study area</td>
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<tr>
<td>Fuel</td>
<td>7278.11</td>
<td>519.865</td>
<td>Diesel for the vehicle</td>
</tr>
<tr>
<td>Food &amp; Accomodation</td>
<td>7449.09</td>
<td>532.0779</td>
<td>Food and accomodation for the survey team</td>
</tr>
<tr>
<td>Stationary</td>
<td>100</td>
<td>7.142857</td>
<td>Books and pens used during training sessions</td>
</tr>
<tr>
<td>Training of species monitors</td>
<td>1150</td>
<td>82.14286</td>
<td>Venue use and meals for training participants</td>
</tr>
<tr>
<td>Education &amp; Awareness</td>
<td>886.02</td>
<td>63.28714</td>
<td>Printing of posters and stickers for awareness raising</td>
</tr>
<tr>
<td>Rechargeable GPS batteries</td>
<td>399.99</td>
<td>28.57071</td>
<td>Used for mapping transects and points</td>
</tr>
<tr>
<td>Phone and Internet</td>
<td>1980</td>
<td>141.4286</td>
<td>Use of phone and internet at the BWZ office</td>
</tr>
<tr>
<td>Incidentals</td>
<td>1098</td>
<td>78.42857</td>
<td>Other materials used such as tyre mending, regasing of gas stove , etc</td>
</tr>
</tbody>
</table>

Total                                                                  | 2756.669   |

Project Photo gallery

1. African White-backed Vulture perched on a Mopane tree along a transect
2. Mopane woodland dominated transect, along which some Impala were encountered
3. Chichele hotspring – one of the most reliable water holes and also one of the recently poisoned water holes

4. Chacma Baboon with young – the major target of water hole poisoning