

Report on Kwando (Botswana) Vulture poisoning investigation 16 November 2013

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Introduction

A report dated 21 August 2013 precedes this report. The 21 August report describes an aerial investigation conducted on 19 August of a poisoned elephant carcass with nearby dead vultures in the Kwando Concession (NG14). Coordinates of the poisoning were originally communicated by Kwando Safaris to Pete Hancock (formerly with Birdlife Botswana). Photographs taken on 19 August from the air showed evidence of what appeared to be dozens of dead vultures around some skeletal remains of an elephant (Figure 1).

The 21 August report of this cursory aerial investigation written by JB and JWMc, was submitted to Pete Hancock, Birdlife Botswana, and distributed to other interested stakeholders. Due to the photographic

evidence of large numbers of dead vultures the report emphasized the importance of further investigation on the ground. Ground investigation options were discussed with the concession holders, but to date, prior to mid-November, an investigation of the remote site had not been organized and no ground investigation had been conducted.

On 16 November, Dr McNutt organized to charter a helicopter from Maun directly to the site to investigate and attempt to quantify the number and species of dead birds before seasonal weather, vegetation, and age precluded any useful quantification. In attendance were Dr JW ‘Tico’ McNutt, Dr James Bradley, Pete Hancock, and Dale Jardine (pilot, Helicopter Horizons).



Figure 1 Photograph (by Stuart Arnold) taken 19 August from a Cessna shows the burned spot (lower centre) and the remaining elephant carcass , and the leadwood tree (centre) under which most of the vultures appear to have died.

Methods

The helicopter landed approximately 350m from the site and the carcasses

were easily within walking distance. Upon arrival at the poison site, two methods to estimate the number and species of dead birds were used:

1. An estimate was made by counting carcasses of birds based primarily on remains of wings (robust flight feathers) and other remains. This was made difficult owing to the age of the carcasses (at least 6 months old, perhaps older) and to the fact that in the areas of highest concentration of dead birds the carcasses were layered on top of each other where they had died.

2. A precise minimum number of dead birds was derived by collecting and counting major skeletal structures. These included skull, sternum (breast keel), and synsacrum (the fused pelvic and posterior back bone typical of birds). These were then separated into type (each of which represents a single dead bird, as opposed to other robust skeletal structures that were also prevalent such as wing or leg bones). Due to the age and condition of the carcasses, the decomposition and time constraints at the site, we are certain we did not manage to collect skeletal pieces to represent every dead bird.

Results

Three elephant carcasses were located approximately 300m apart near location S18.2000 E23.2000 (Map Datum WGS84).

1. Elephant Carcass 1: 286 dead vultures were estimated by counting, 228 individual pelvic structures were collected, and skulls used to identify species included four Lappet-faced and two Hooded vultures (the remainder were presumed to be White-backed).

2. Carcass 2: 38 dead vultures were estimated by counting, 34 individual pelvic structures were collected, all were White-backed.

3. Elephant Carcass 3: Two (2) White-backed Vultures were found.

No tusks were present at any of these three remains. Two of the three skulls showed evidence that tusks were chopped out probably by axe (see photo below). All three carcasses showed evidence of having been burned. All three were < 150m from a nearby vehicle track.



Figure 2: Carcass 1 skull, showing chopped maxilla and charring due to fire, also evidenced by the ash (carbon) in the surrounding sand.

Samples of a pink splattered substance found on the feathers of dead vultures lying beneath the largest tree 20m from the elephant carcass was collected for possible analysis and identification.



Figure 3 Collected skeletal structures at Carcass 1; Synsacrum (fused pelvic back bone (top)), sternum (breast keel bone (middle)), skulls (bottom). Synsacrum (top) proved to be the most easily found as most birds appeared to have died breast down, resulting in heads and breast bones being buried in debris, while the back pelvic bone was more exposed to weather making it easier to find. Minimum count of number of dead vultures was derived from the number of synsacrum bones counted.

Summary

At the main poison site (Elephant Carcass 1) we estimated 286 dead vultures by counting carcass remains. From among those remains 228 individual pelvic structures were collected. Skulls were used to identify species and included four Lappet-faced and two Hooded vultures (the remainder were presumed to be White-backed). At Elephant Carcass 2, 38 dead vultures were estimated by counting, and 34 individual pelvic bones were collected. All were White-backed Vultures. Carcass 3, located 300m from Carcass 1, was within 15m of the nearby road (track) and only two white-back vulture remains were found. Although no tusks were present, we saw no evidence of chopping of the maxilla on this elephant skull.

It is possible that all three carcasses were poisoned, but the majority of the dead birds were found at Carcass 1 and 2. Both carcasses were further from the road (>100m) than Carcass 3. The date of the poisoning is unknown, and we have no knowledge of who burned the carcasses, nor whether any vulture carcasses were also burned at the same time. It is noteworthy that no dead vultures

were found within 2-3m of the burned elephant remains (see photo) at carcasses 1 and 2. Given the distribution of dead birds elsewhere in the vicinity, we consider it likely that an unknown and unrecoverable number of vulture carcasses were burned when the elephants were burned.

Therefore, our estimate is 326 dead vultures (collectively from all 3 elephant carcasses) represented by the remains of vulture carcasses still present on 16 November at least 6 months after they died is likely to be conservative. The absolute minimum number of 264 dead vultures is based on collected and counted individual synsacrum bones.

Acknowledgements

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Dale Jardine for his assistance in counting and collecting remains.

Editor's note: *A number of additional photographs have been removed from this report for the purposes of publication in Vulture News. Interested readers can request a PDF that contains all the images.*
