

Project Update: October 2016

In October 2016, I attended the Pan-African Ornithological Congress in Dakar where I presented a scientific poster on the breeding biology of hooded vultures in South Africa. After the conference, I joined Dr Keith Bildstein and other researchers from across Europe and the USA who were doing road surveys throughout Senegal. When these surveys are repeated, they help us to assess population changes. We covered over 700 km, and saw large numbers of hooded vultures, as well as Ruppell's, lappet-faced, and white-backed vultures. Despite the large numbers we saw in Senegal, vultures are declining all over Africa, and so the purpose of the Pan-African Vulture Summit (also held in Dakar this month) was to produce a multi-species action plan for the conservation of 15 Old World vulture species. It will span 124 countries, and is being compiled by Andre Botha, who is also a collaborator on the K2C Hooded Vulture Project.

My collaborators and I presented at the Pan-African Ornithological Congress in Dakar this month. I also attach a picture I took of a free-roaming (i.e. not tame) hooded vulture perched on the entrance gate of the hotel where the conference was taking place. It was so interesting to see how different the West African vultures behave, compared to our Southern African birds.

Breeding biology of Hooded Vultures *Necrosyrtes monachus* in South Africa

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Introduction

In the midst of the current African Vulture Crisis (Ogaba et al. 2015), we need to avoid the environmental and economic costs associated with the dramatic decline of African vulture populations during the Asian Vulture Crisis of the late 1990s (Markandya et al. 2008).

Across its range (Fig. 1), the critically endangered Hooded Vulture faces threats such as the illegal trade in body parts for traditional medicine, the bushmeat trade, and intentional/unintentional poisoning.

Of the 11 species of African Vultures that are obligate scavengers, relatively little is known about Hooded Vultures.



Fig. 1. Hooded Vulture distribution, where red = extant distribution, and green = current range.

Objectives

To investigate breeding success in the critically endangered Hooded Vulture *Necrosyrtes monachus*, in the Kruger-to-Canyons Biosphere Reserve, South Africa (Fig. 2). Also, to determine which other species (nest usurpers and potential nest predators) visit Hooded Vulture nests.

We hypothesised that breeding parameters for Hooded Vultures in South Africa would be similar to those reported for conspecifics in other southern African countries.

Methods

11 cameras with infra-red flash were installed at Hooded Vulture nests throughout the 2.6 million Kruger-to-Canyons Biosphere Reserve in 2015 and 2016 (Fig. 2).



Fig. 2. Study area in South Africa. From Coetzer et al. 2013.

Nest cameras (Fig. 3) were left in place year-round. Cameras took 1 picture every 5 min., continuously, during the breeding season. During the non-breeding season, or after a failed breeding attempt, cameras were set to be motion-activated, with a 3 min. delay between pictures.



Fig. 3. Camera at Hooded Vulture nest.

Results

61 Hooded Vulture nests were located in 2015-2016, all in tall trees with densely foliated canopies, close to flowing rivers. All active nests were lined to varying extents with green nesting material (most often *Diospyros mesaiiformis* leaves, Fig. 4).



Fig. 4. Adult Hooded Vulture bringing green nesting material to nest.

Eggs were laid from 13 July to 1 Sept (n = 31). Of 23 nests that were closely monitored in 2015, 24 (96%) were active (freshly lined, or with egg/chick). Of these 24 nests, the outcome for 23 nests was known: 3 nests (23%) fledged chicks and 10 nests (77%) failed. 40% of nests active in 2015 were reused in 2016.

Nest failure was attributed to abandonment (20%), egg predation (30%), chick predation (20%), and unknown causes (30%). Chicks of all ages showed predator avoidance behaviour by 'silencing itself' (Fig. 5d). Confirmed egg predators included a Baboon (n = 1), while predators of chicks included a subadult Martial Eagle (n = 1, Fig. 5e).



Fig. 5. Camera at Hooded Vulture nest.



Fig. 5e-d. Nest predators and potential nest usurpers at Hooded Vulture nests. Martial Eagle predated 5-day old Hooded Vulture nestling (A), Hooded Vulture nestling 'silencing itself' (B), Egyptian Goose (C) and Verreaux's Eagle-owl (D).

Conclusions

Hooded Vultures in the Kruger-to-Canyons Biosphere Reserve have low breeding success, and their eggs and chicks may fall victims to various primate and avian predators.

We encourage urgent action to address the anthropogenic causes for vulture population decline (Ogaba et al. 2015), however our results show that these birds also suffer from nest predation which may be reducing breeding success.

Furthermore, the presence of potential nest usurpers, including Egyptian Geese (Fig. 5c), at Hooded Vulture nests, is of concern, particularly since numbers of Egyptian Geese are increasing steadily in the study area.



Fig. 6. Adult Hooded Vulture and 5 day old nestling.

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Acknowledgements



Literature Cited

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