An apparent increase in Hooded Vulture *Necrosyrtes monachus* numbers in Kampala, Uganda

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Summary

Previous surveys of scavengers in urban Kampala indicated an increase in the numbers of Hooded Vultures and a decline in the occurrence of other vulture species. This survey provides supporting evidence for this apparent trend with a total of 420–450 Hooded Vultures estimated as resident in urban Kampala and only one other species (Egyptian Vulture) recorded.

Introduction

Vultures are widespread in East Africa (Mackworth-Praed & Grant 1962), and occur in appropriate habitat all over Uganda (Pomeroy 1975). Within urban centres they are generalist scavengers utilizing all kinds of waste associated with humans including human excrement, carcasses, offal, bones, and fresh meat associated with slaughter-houses (Brown *et al.* 1982). Scavenging birds play an important role in consuming organic matter within urban centres that would otherwise rot and cause problems of disease for humans (Chemonges 1991). In Kampala, the capital of Uganda, Chemonges (1991) estimated that 0.02% of the entire waste production of the city was consumed by only two species of bird, Hooded Vultures *Necrosyrtes monachus* and Marabou Storks *Leptoptilos crumeniferus*.

In addition to the resident Hooded Vulture, Carswell (1986) reported four species of vultures frequenting Kampala although of these only the Palm-nut Vulture *Gypohierax angolensis* was also considered resident (Carswell 1986). A later survey recorded only one other species around Kampala (Chemonges 1991), suggesting a decline in vulture numbers and diversity in the vicinity of urban Kampala.

Numbers of Hooded Vultures in Kampala have in fact been surveyed and censused on a intermittent basis since the 1970s when Pomeroy (1975) censused the principal scavenging birds of the city (Marabou Stork, Black Kite *Milvus migrans*, Hooded Vulture and Pied Crow *Corvus albus*. At this stage the total Hooded Vulture population was estimated as being 210. A more recent survey of urban Kampala estimated the population in 2001 as 375 (Amuno 2001). This upward trend in numbers in the city is supported by more intensive and regular surveys at Kampala Meat Packers. Also known as the City Abattoir, this site is located along Old Port Bell Road with several slaughterhouses enclosed within walls. It is the country's biggest slaughtering point were several hundreds of cattle and other small ruminants, mainly goats, are slaughtered every morning. The slaughterhouse also consists of dumping areas at the rear of the enclosures where waste, such as hooves, is dumped. Diseased parts, skin scrapings, a

few horns and more hooves are also dumped at other nearby localities. Both areas provide abundant food for Hooded Vultures and the site is known to be the largest roost site of the species in Kampala (see: Pomeroy 1975, Chemonges 1991, Amuno 2001). Numbers of Hooded Vultures roosting here have increased from an estimated 124 in the early-1970s (Pomeroy 1975), to 175 in 1990 (Chemonges 1991), to 237 in 2001 (Amuno 2001).

The increase in numbers of Hooded Vultures, combined with an apparent loss of vulture species diversity apparent in the sources mentioned above, prompted a renewed analysis of vulture species occurrence in urban Kampala. Some aspects that are expected to have had an effect on vulture numbers in Kampala are improved hygiene and waste disposal over the past twenty years (Amuno 2001) and deliberate poisoning campaigns that have specifically targeted Marabou Storks (L. Kawule, pers. comm.).

Methods

Hooded Vultures associate strongly with other scavengers at feeding sites, but have also been observed to roost with Marabou Storks and in isolated cases with White Pelicans (J.B. Amuno, pers. comm.). Like Marabou Storks, Hooded Vultures frequently occur in very close proximity to man, especially at feeding sites with neither of the parties seemingly affected directly by the presence of the other. Being predominantly urban (in contrast with populations further south in Africa – Mundy *et al.* 1992) and very conspicuous, these species can be monitored relatively easily via direct counts once important feeding and roost sites have been located.

Roosting sites were identified by observing the direction of flight of vultures over Kampala between 17h30 and dusk, observed from Namirembe hill on the southern side of the city centre. Birds feeding at abattoirs were also watched in the early evening as they left the feeding sites and began moving towards the roosts. The birds were followed either by binoculars (8 x 30) or by eye where the birds were sufficiently close, as was frequently the case.

After locating a roost site, a strategic point providing a clear view of all birds arriving at the site was identified and the birds were then counted as they entered the roost. Observations would always commence before the first bird arrived at the roost site, usually at around 17h30, and continue until 19h00, by which time no further birds were entering the roost. In the case of major roosts used by many birds, two observers worked together to count the birds as they entered the site. A total of 18 roost counts were conducted between 5 November and 12 December 2004.

Results

Hooded Vultures were found roosting at six sites within urban Kampala: Kampala Meat Packers,. Celtel House, Kalerwe Abattoir, Nalukolongo Piggery, Katwe and Makerere refuse tips. Vultures at Makerere roosted in pairs in trees utilised as major roost sites by Marabou Storks. Kampala Meat Packers and Celtel House were censused four times during the study period, Kalerwe Abattoir

and Nalukolongo Piggery Unit three times, whilst Katwe and Makerere refuse tips were counted twice. Results from observations of flight lines in the evening suggest that a high proportion of all of the vultures using central Kampala were counted during this study.

Egyptian Vultures *Neophron percnopterus* were observed at Nalukolongo Piggery Unit on two of the three censuses conducted during late-November and early-December. This indicates the continuing presence of this species in Kampala, although other vulture species found by Carswell (1986) were not recorded during this study.

Only feeding sites close to abattoirs supported significant numbers of Hooded Vultures during the day. The other birds were presumably scattered in very small numbers across the city. Some feeding sites with small numbers of birds (e.g. Mulago refuse tip) did not support roosts, suggesting that birds move from such feeding sites to communal roosts in the evenings.

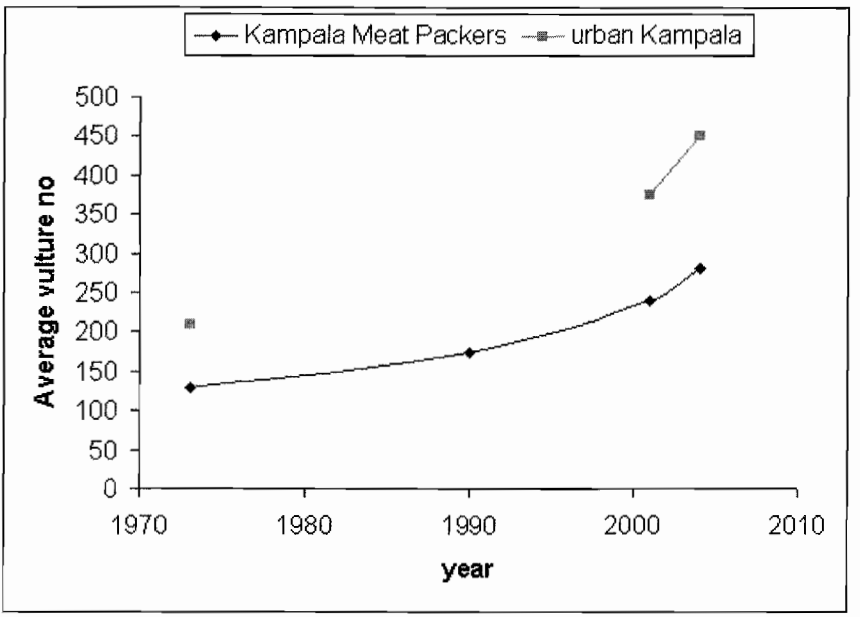

Figure 1. Numbers of Hooded Vultures at Kampala Meat Packers in 1973, 1990, 2001 and 2004. Vulture numbers have clearly increased at this site in the past 30 years. Numbers for urban Kampala in 1973, 2000 and 2004 are also reflected, again indicating a similar increase.

Discussion

As the 1973, 1991, 2001 surveys and this study examined different sites no claim is made as to the absolute comparability of the findings. To a certain extent the differences in the sites surveyed by the

respective authors may well indicate changes in foraging and roosting patterns over time. Nonetheless, despite the possibility of inconsistency between the findings, the upward trend in numbers of Hooded Vultures and the downward trends in other species are reasonably clear.

That this is a reasonable conclusion is supported by the fact that the main site (Kampala Meat Packers and Celtel House area) was surveyed in all three of the previous studies, thus making it possible to directly compare the numbers over time to identify long term changes in vulture numbers. This upward trend is apparent in Figure 1.

The data suggest an increase in the numbers of Hooded Vultures using Kampala Meat Packers, the major site in Kampala, over the past 30 years. This is likely to reflect an overall increase in the population of Hooded Vultures in Kampala, although again it is difficult to be conclusive in this regard. Kampala has grown significantly since the 1970s, and therefore we would expect an increase in waste production and associated feeding opportunities for scavengers.

Hooded Vultures still dominate the vulture population, and only a few Egyptian Vultures are present. That Chemonges (1991) only recorded one species of vulture in the city (which one?) suggests that the others are generally rare, although Palm-nut Vultures were previously regarded as resident (Carswell 1986). It appears that while Hooded Vulture numbers are increasing sharply, numbers of other species are declining, and species diversity therefore appears to be decreasing.

This study shows the total number of Hooded Vultures using four major roosting sites in Kampala in 2004 was around 450, with the prime roost at Celtel House occasionally holding up to 280 birds. However the numbers of birds roosting behind the abattoir and those at Celtel House appear to fluctuate. This could be investigated in more detail by conducting simultaneous counts at both sites to ascertain the actual number of the birds at these two sites.

Although Hooded Vultures are often considered gregarious (especially in West Africa, but not necessarily in southern Africa (Mundy *et al.* 1992), some birds in Kampala roosted in isolated pairs. In Kibuye and Katwe, pairs of vultures were observed feeding on the refuse tips and roosting on nearby electricity pylons.

Unlike Black Kites and Pied Crows, Hooded Vultures appear not to move long distances between feeding and roosting sites, with many birds frequently roosting within 100 m of their feeding sites. Currently, little is known of the timing and location of breeding in Hooded Vultures around Kampala. It would be interesting to relate breeding biology to the availability of suitable feeding and roosting sites.

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References

Amuno, J.B. 2001. The ecology and behaviour of vulture populations in Kampala. Unpublished BSc dissertation. Makerere University, Kampala.

Brown, L., Urban, E.K. & Newman, K. 1982. Birds of Africa. Vol. 1. Princeton University Press, U.S.A.

Carswell, M. 1986. Birds of the Kampala area. Scopus, Special Supplement Number 2, East Africa Natural History Society, Nairobi, Kenya.

Chemonges, J.K. 1991. The role of scavenging birds in clearing up the refuse disposed of in Kampala. M.Sc. thesis, Makerere University Kampala, Uganda.

Mackworth-Praed, C.W. & Grant, C.H.B. 1962. Birds of the Southern Third of Africa. Vol.1. Longmans, Green and Co Ltd, London, U.K.

Mundy, P., Butchart, D., Ledger, J. & Piper, S. 1992. The Vultures of Africa. Acorn Books & Russel Friedman Books & Vulture Study Group, Johannesburg

Pomeroy, D.E. 1975. Birds as scavengers of refuse in Uganda. Ibis 117: 69

Stevenson, T. & Fanshawe, J. 2001. Field guide to the birds of East Africa: Kenya, Tanzania, Uganda, Rwanda, Burundi. Poyser, Calton, UK.

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