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An extreme weather event in Sierra Leone precipitates a mass slaughter of Hooded Vultures *Necrosyrtes monachus* for human consumption

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Abstract

We report how an extreme weather event in Freetown, Sierra Leone, on 24 May 2023, destroyed an iconic Cotton Tree or Kapok *Ceiba pentandra* and resulted in the mass slaughter of c. 100 Hooded Vultures *Necrosyrtes monachus*. Rain soaked, grounded birds were caught by hand, slaughtered and prepared for human consumption. One bird was rescued and subsequently released. The Cotton Tree formed the focal point around which Freetown was founded in 1792, and this contributes to the underlying issues of mythology and symbolism associated with the event. We suggest that awareness campaigns are required to communicate the valuable clean-up services provided by Hooded Vultures in urban environments in Sierra Leone and across West Africa.

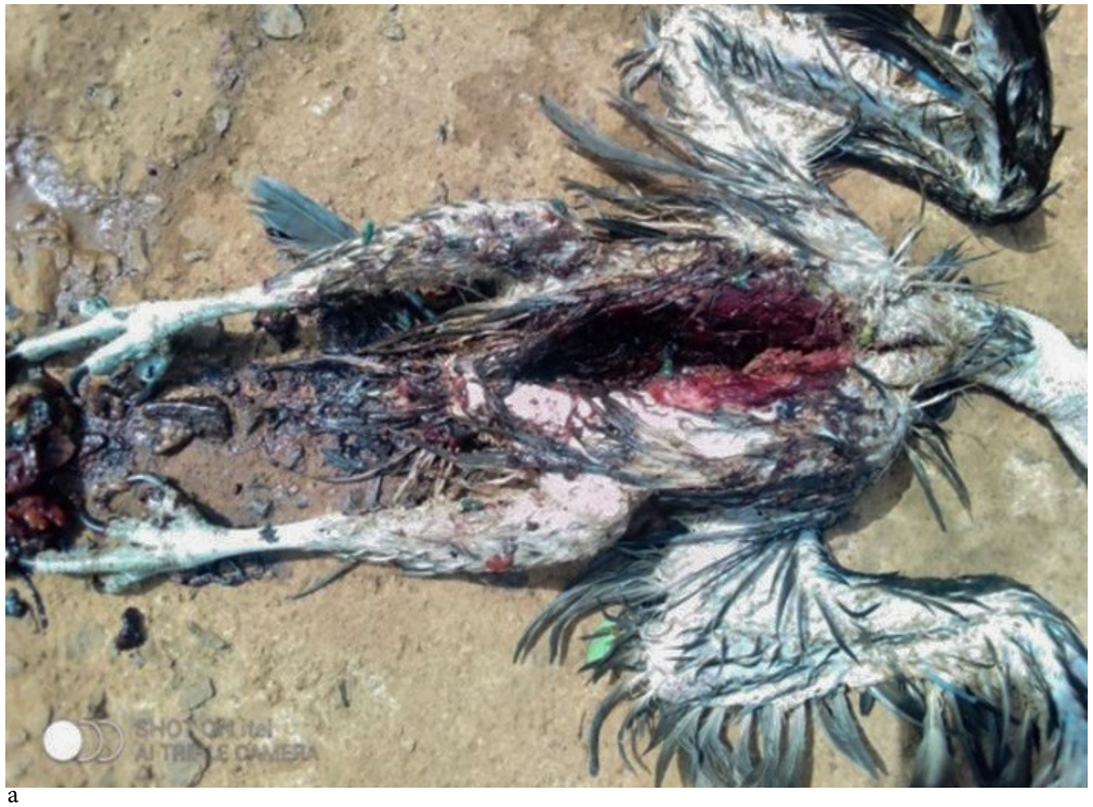
Keywords: Sierra Leone, Hooded Vulture, *Necrosyrtes monachus*, massacre, human consumption, extreme weather, human-wildlife conflict

Introduction

The Hooded Vulture *Necrosyrtes monachus* is one of four Critically Endangered African vulture species. It is a non-specialised, versatile scavenger that exploits a wide range of foraging opportunities (Barlow 2012, BirdLife International 2023). Reasons for its rapid decline in many parts of its range include direct persecution for vulture parts used in witchcraft, traditional medicine and smoked meat for human consumption, collisions with power lines, indiscriminate poisoning, general habitat loss and reduced food availability (Barlow 2012, Henriques et al. 2020, BirdLife International 2023). Scraps gleaned by Hooded Vultures at open slaughter sites and abattoirs (e.g. horns, blood, viscera and other remains) are increasingly processed for fertiliser and modern abattoirs are now enclosed buildings. Hooded Vultures are strongly commensal with humans in West Africa (Barlow 1997, Henriques et al. 2018, Barlow et al. 2021). Here we describe what appears to be a unique vulture-human conflict event. There is insufficient information to establish a population trend for Hooded Vultures in Sierra Leone and we notify on a benchmark data collection effort to rectify this.

Observations

On 24 May 2023, a towering 70 m Kapok *Ceiba pentandra* known to Sierra Leoneans as The Cotton Tree lost all of its branches during cyclone-like wind and torrential rains, leaving only the base of its colossal trunk intact. Standing in the Central Business District of the capital, Freetown, the tree was about 400 years old and was a prestigious national symbol associated with the return of the first re-settled Africans from western slavery in 1792 and the resilient town they founded (Appendix 1). The violent storm struck at around 21:00, and resulted in roosting Hooded Vultures known in local vernacular as Yiba (Mende) or Yuba (Krio) rendered sodden by the torrential rain. Some Freetownians (mainly young men) caught the grounded vultures by hand. They were killed, plucked and sold to street 'chop-shops' where they were fried in oil for human consumption (Figure 1). A translation from Krio, the de facto national language of Sierra Leone, of a video taken at the time illuminates symbolism and mythology: '*Buy the vultures, we have many vultures for sale tonight, this is a very big funeral for vultures many are dead tonight. The tree and the fall of it symbolises the end of witchcraft and shelter for high ranking personalities who exploit the country and hide their witchcraft there; now the cotton tree and the*



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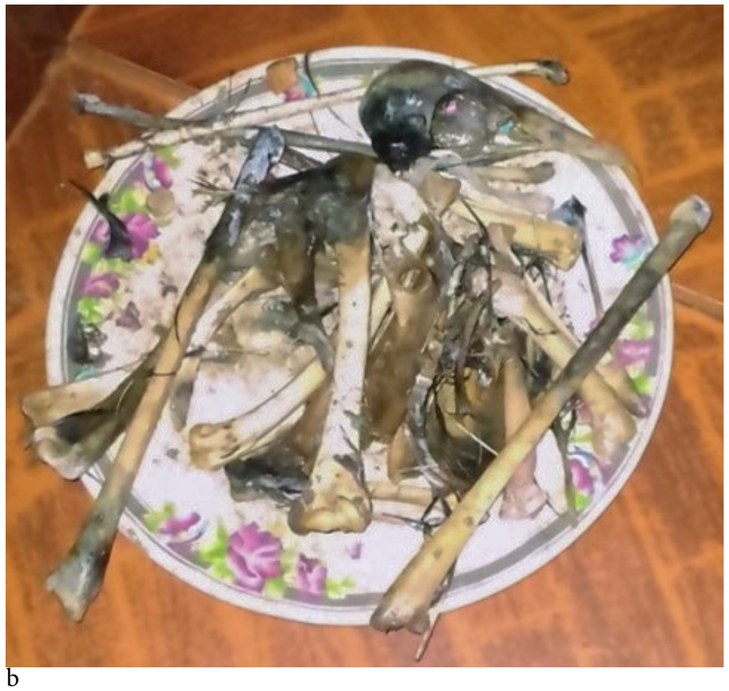

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Figure 1a. A coarsely plucked Hooded Vulture *Necrosyretes monachus* eviscerated and ready for cooking, and b) the skeletal remains of a fried Hooded Vulture at a 'chop-shop' in Freetown, Sierra Leone, after the severe storm on 24 May 2023 (© Musa Kimbo).

vultures are dead so are the big men. Sierra Leone is now coming to develop and progress after the fall of the cotton tree and associated witchcraft. Eat the vultures. Witch!'

The number of vultures killed is thought to be c. 100 (MK, pers. obs.). One bird was rescued and was later released into the Fourah Bay College Botanical Garden, Freetown (MB Sesay, pers. comm.). There are currently no population estimates for Hooded Vultures in Sierra Leone (BirdLife International 2023). MK commenced mid-morning counts of Hooded Vultures at the sprawling King Tom dump in November 2021 which is one of Freetown's several waste disposal sites (together with abattoirs) currently used by feeding vultures. All Hooded Vultures seen foraging on the ground, perched on nearby buildings and communication towers or flying over the area are recorded. Yellow-billed Kites *Milvus aegyptius*, Pied Crows *Corvus albus* and Cattle Egrets *Bubulcus ibis* are also counted. The numbers of vultures vary considerably (0–79 birds) in relation to weather conditions and whether rubbish is burned, but there was no marked change between counts before (28.2 ± 18.2 individuals, n = 33 counts) and after the collapse of the roost tree (32.3 ± 31.7, n = 12), suggesting that the vulture population in the area is substantial. Our data set is currently restricted to only one Hooded Vulture scavenging site in and around Freetown. There are plans to coordinate a systematised monitoring programme to encompass all regularly used scavenging locations in and around the city.

Discussion

This report appears to be the first case of an extreme weather event associated with global climate change which has directly resulted in the mass mortality of African vultures. Twenty years ago, Rondeau (2004) stated in an editorial in *Vulture News* 'it is urgent that the scientific community concern itself also with West African vultures and support the countries of the sub-region in developing the capability to protect them before it is too late'. Despite this call, vultures have been increasingly persecuted and harvested in West Africa over the last two decades. Dramatic declines of Hooded Vultures have been reported in Senegal (Mullie et al. 2017), Nigeria (Nosazeogie et al. 2018) and across the region (Thiollay 2006). Given recent declines in various parts of its range, the global Hooded Vulture population is suspected to number a maximum of 197 000 individuals (Birdlife International 2023). However, the species is still locally common in some areas; road side surveys in the coastal Western Region of The Gambia suggest a population of 7 000–10 500 Hooded Vultures (4% of the estimated global population) in an area of only 600 km^2 (Jallow et al. 2016).

Deliberate poisoning of Hooded Vultures has been conveyed for traditional magico-medicinal and witchcraft use where the local market prices of vulture parts are mentioned (Henriques et al. 2020, Kihumba 2020, Williams et al. 2021, Awoyemi et al. 2022). To the best of our knowledge, the current report appears to be the first instance of an opportunistic mass killing of Hooded Vultures for human consumption. The price of a cooked vulture in Freetown on 24 May 2023 was the Sierra Leone equivalent of US$0.80 (80 cents), less than half the price of a fried chicken. The current value in the European zoo and falconry market for captive-bred Hooded Vultures is in the region of $9 000 per pair (B Macdonald, pers. comm.). The value of their ecosystem services is much greater; for example, the economic value of the sanitation services provided by Turkey Vultures *Cathartes aura* has been estimated at US$700 million per annum (Grilli et al. 2019). Although the contribution of vultures to the economics of human health and veterinary care has not yet been quantified in Africa, efforts to conserve vultures should not be deterred (Van den Heever et al. 2021). However, the video clip suggests that the killings in May 2023 also appear to contain an important element of superstition and mythology. George Tregson Roberts (in litt.) reports that 'The darker recesses of the Cotton Tree supported other life forms, not only thousands of fruit-bats, but also beasts existing more in fearful imaginations than in reality. According to prevailing beliefs, these malevolent, ghostly 'undead' join the hosts of other elements that, at dusk, make the night scary'.

We suggest that public awareness campaigns are urgently required in schools and in the Sierra Leonean media (and elsewhere in West Africa) to communicate the important ecological and human health services that commensal Hooded Vultures provide in urban environments. Our field work to establish a population trend for Hooded Vultures in Sierra Leone is self-funded. Additional support is needed to facilitate surveys at other regular feeding sites and to enable investigations into mythological attitudes towards cotton trees and vultures in other parts of Sierra Leone.

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Appendix 1 - A brief history of the Freetown Cotton Tree

George Tregson Roberts

Little is documented about the iconic Freetown Cotton Tree until 1792, when a cohort of formerly enslaved African-Americans from the British Colony of Nova Scotia arrived at the spot around which Freetown was to be built. However, it is likely that foreign sailors, using the bays around the Sierra Leone Peninsula decades earlier, were aware of the tree's dominating presence. According to John Lang (1915, p. 231), the tree was the subject of an account that read, "The Cape of Sierra Leona is known by a single Tree much larger than the rest and (the) high Land on the back of it". Nearly 100 years after Lang's source recorded his observations, a cohort of 1 100 former slaves, the 'Black Loyalists' or 'Nova Scotians', who had fought on the side of the British in the American War of Independence, arrived at the Sierra Leone Peninsula in March 1792. At that time, the tree must have been at least one hundred years old. It was natural that after a perilous three-month trans-Atlantic voyage, the Cotton Tree was the place for the voyagers to gather to give thanks for their safe passage and the tree became the focal point around which the city of Freetown developed.

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