

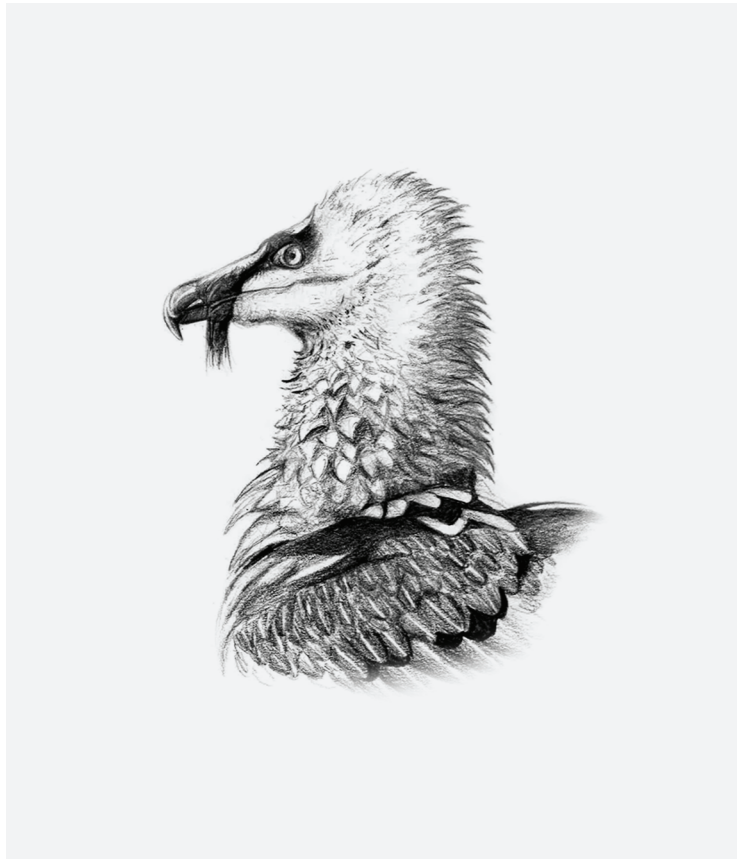
## V U L T U R E S

*Words: Elsa Bussière Illustrations: Annouck Bussière*

In Zimbabwe, a lifeless elephant lies on the dry soil of the scorched savannah, its tusks gone. The rangers have no doubt: poachers have struck again. The blood has already coagulated and the wounds have swiftly retracted. The murderers are long gone, and the ivory most likely already sold somewhere in Asia as a miraculous powder on traditional medicine markets. Tomorrow, the media will waste no time in relaying the news to the world... but will they mention the 219 vultures that perished after ingesting poison from the carcass?

In the nineties, scientists sounded the alarm to let the world know that vulture colonies were collapsing in India. These scavenging birds were accidentally poisoned by the thousands while feeding on livestock carcasses that were treated with Diclofenac, a nonsteroidal anti-inflammatory drug used by veterinarians. In Europe, vultures withstood a dreadful decline throughout the twentieth century prior to an encouraging recovery, especially in France and Spain, by means of gargantuan conservation efforts and species reintroductions into the wild. Today, Africa endures the aggressions of a criminal industry that has been reaching an unimaginable magnitude. Hundreds of rhinoceros and thousands of elephants are slaughtered every year for their horns and tusks. Their poisoned carcasses result in the death of thousands of vultures. In 2015, the IUCN (International Union for Conservation of Nature) reassessed the conservation status of these raptors and the picture is bleak with worsening threat status for six of the 11 African species. Three are now classified as “endangered”, while four others are considered to be “critically endangered”. No other bird group in the whole world is experiencing such a forceful and desperate decline in numbers.





**Bearded Vulture**

{Gypaetus barbatus}

-30% Vulnerable

**Population:** Decline -30% over three generations (53 years)

**Height:** 115 cm

**Weight:** 9.0-7.0 kg

**Wingspan:** 270 cm

**Clutch:** 1 or 2 eggs

**Nesting:** Cliff, solitary



**White Headed Vulture**

{Trygoniceps occipitalis}

**Critically endangered**

**Population:** Decline -90% over three generations (45 years)

**Height:** 78-84 cm

**Weight:** 3.5-5.5 kg

**Wingspan:** 230 cm

**Clutch:** 1 egg

**Nesting:** Arboreal, solitary

**A carrion feast**

The blaze of the African sun sears the vast savannah. Sultry, dusty air invades the atmosphere, sweltering all surroundings. Heavy heat forces time to a standstill. The horizon turns blurry while ground mammals remain patiently calm, motionless, in the shade of mopane and acacia trees. Suddenly, a rising, swirling column emerges in the sterling blue sky: vultures on a quest. These feathered giants soar and glide with ascending thermals, reaching vertiginous heights, where they observe and spy on each and every detail of the terrestrial world. Hardly flapping their wings, they save costly and vital energy while travelling gigantic distances. Thanks to their extraordinary visual acuity, vultures can detect abandoned carcasses kilometres away. The smallest of them all – the hooded vultures – commonly land first and dare to hold out lions and leopards around the victim. Eyes and mucous membranes provide an adequately supple and tender morsel for their small fine bill and thinly muscled neck. Their combative spirit will keep crows, kites and eagles away, but they take second place when larger vultures join the festivities.

If they are still hungry, the hooded vultures can add a few termites and other nibbles found in the faeces of large animals to their menu. The newcomers land ponderously on the ground; they are white-backed vultures, easily identifiable by their long and downy feathered necks, which enable them to attain quality pieces at the heart of the carcass. Plentiful, audacious and assertive, these white-backed vultures climb onto the carrion, which disappears under dozens, if not hundreds, of starving raptors. In some of the steep and craggy regions of South Africa, Cape vultures – who look similar to white-backed vultures – leave canyons and cliffs to partake in the feast. White-headed and lappet-faced vultures, noticeably larger, observe the action from a distance, without getting too involved. The former favour smaller carcasses, which they can steal from eagles or other raptors. The latter, displaying an impressive stature, possess a bill with such power that neither skin nor tendon can resist it. In front of an intact carcass, the vultures wait patiently and peacefully for the arrival of the lappet-faced vulture, who, with a simple beak twist, ignites the action, providing access to the precious insides. White-headed vultures are also known for their hunting instinct – they occasionally catch reptiles, fish, birds and small mammals. They nonetheless remain avid guzzlers of carrion.

Vultures' feasts are a fascinating show for all naturalists. Soon after, trotting hyenas and black-backed jackals approach to claim their share of the trophy. Mongooses and marabou storks gobble up the soft pieces of flesh abandoned here and there in a flash. Death attracts such a profusion of life! Here, animal interactions deliver one of the greatest shows nature has to offer – and there is no better way to understand species interconnection within an ecosystem. Each and every one is part of a complex and delicate balance. Vultures also have a vital role to play: they are responsible for the natural process of dealing with non-edible organic substances. Their remarkable digestive system enables them to devour rotten carcasses with toxins and bacteria that would defeat even the most resilient animals. Vultures' appetites also reduce the spread of diseases, which is why in India, following the vultures' collapse in the nineties, feral dogs proliferated by feeding on deserted carcasses and, with their bites, propagated rabies throughout the country. It is crucial for ecosystems, as much as for humans, to guarantee the vultures' survival in Africa and throughout the world.

**Poison**

Among numerous other threats, poison is undoubtedly the greatest danger to the immediate survival of African vultures. This dreadful weapon holds disastrous consequences for vultures and has far-reaching repercussions within the whole animal food chain. The unfortunate creatures ingesting poison turn into deadly traps themselves, exposing all scavenging animals throughout the ecosystem to the same slow and agonising death. By digesting most of the carrion of large mammals, African vultures pay the highest cost.

Throughout Africa, livestock husbandry typically is the main, if not the only, source of income for local communities, whose number one enemy remains wild predators preying on livestock. In retaliation, many farmers disseminate poisoned baits and trigger a domino effect among scavengers. Although illegal, these practices are not the result of a recent phenomenon, and they cannot explain the drastic increase in numbers of poisoned vultures in southern Africa since 2012. Indeed, over 12 years, between 2000 and 2012, 700 poisoned vultures were recorded, whereas more than 1 000 were counted in 2013 alone (17 times more), and even more since 2014.

The many poisoning occurrences recorded in previous years are generally associated with elephant carcasses, poached for their tusks. The illegal ivory trade is one of the world's most lucrative criminal industries, and dismantling its network and foundation is a serious and daunting challenge. Until recently, little interest was paid to the collateral damages of this mass slaughter. Nearly 20 000 elephants are poached every year across the continent. Poachers strike fast, but ivory can be a heavy and bulky trophy to carry, and no living organism can die in the savannah without vultures knowing about it. Elephant poaching has become such a plague that authorities and anti-poaching patrols now regard vulture gatherings as alerts to locate carcasses of large animals and systematically inspect their remains in order to identify the circumstances surrounding the death. With such conspicuous birds on their tail, poachers unscrupulously poison carcasses and thus neutralize all scavengers. They hope to escape furtively without leaving any compromising clues, while their unlucky victims let out their last agonizing breaths. They will never get to explore the blue immensity above them again. Within just a few hours the pristine savannah, previously teeming with life, turns into a cemetery.

Deliberate use of poison is a frightful threat to vultures and, regrettably, it is hardly the only one. Another object holds great danger, although not for the reason we'd think. The common bullet is not normally associated with poison, but in this case, it is. It is customary for vultures to feed on animals that were shot, and to ingest lead particles, and sometimes even the bullet itself. Regular exposure to lead prompts chronic poisoning, and beyond a certain threshold, one can observe the destructive effects on the host's nervous and reproductive systems, routinely leading to death. Contaminated vultures tend to lose balance, a sign followed by panting, gasping for breath and being subject to severe shivering, which hampers their flying abilities. A rapid and steady weight loss is always observed before their final disappearance. Unaware of the risks, some farmers purposely provide vultures with animal carcasses formerly killed with lead bullets, not realising their honourable actions contribute to the collapse of the flying scavengers.



***Lappet Faced Vulture***

{*Torgos tracheliotos*}

**Endangered**

**Population:** Decline -80% over three generations

**Height:** 78-115 cm **Weight:** 5.4-9.4 kg **Wingspan:** 280 cm **Clutch:** 1 or 2 eggs **Nesting:** Arboreal, solitary



***Egyptian Vulture***

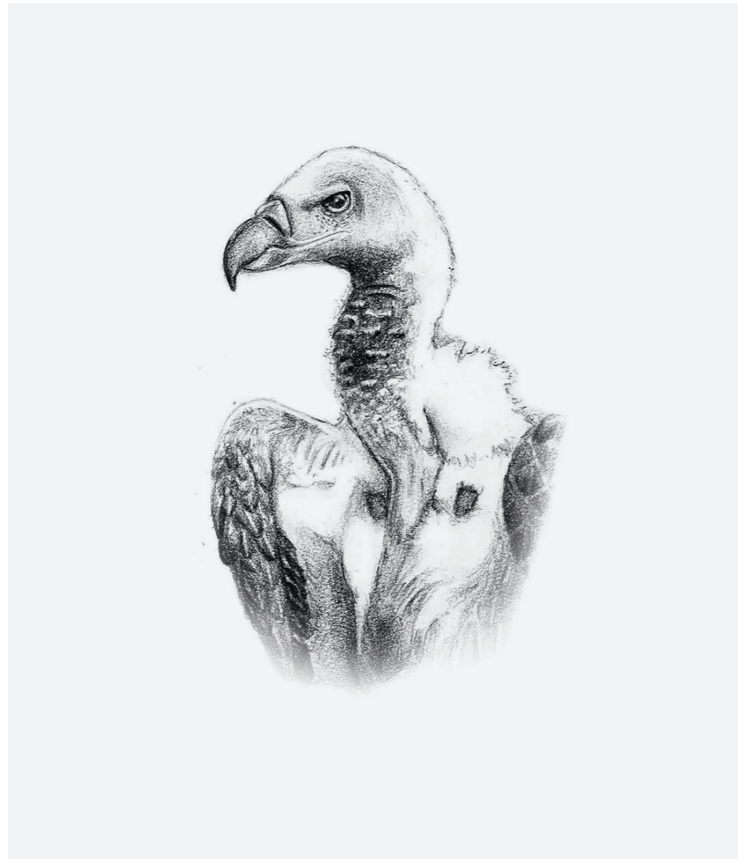
{*Neophron percnopterus*}

**Endangered**

**Population:** Decline -90% in India throughout the past decade; -50% in Europe over three generations; not quantified in Africa

**Height:** 58-71 cm **Weight:** 1.6-2.2 kg **Wingspan:** 160 cm **Clutch:** 2 eggs **Nesting:** Cliff, solitary





**White Backed Vulture**

{Gyps africanus}

**Critically endangered**

**Population:** Decline -90% over three generations (55 years)

**Height:** 95cm

**Weight:** 4.2-7.2 kg

**Wingspan:** 220 cm

**Clutch:** 1 egg

**Nesting:** Arboreal, in colonies



**Hooded Vulture**

{Necrosyrtes monachus}

**Critically endangered**

**Population:** Decline -83% over three generations (53 years)

**Height:** 65-75 cm

**Weight:** 1.5-2.5 kg

**Wingspan:** 170 cm

**Clutch:** 1 egg

**Nesting:** Arboreal, solitary

**Traditional medicine**

Vultures are perceived by many as vermin, fellows from the afterlife, riddled with disease, accompanying morticians and connoisseurs of black humour. On the other hand, there are communities that worship these creatures. This fascination, sadly, is not to their benefit, as they became precious and highly sought-after talismans. Natural selection gifted these birds with astonishing faculties, which are continually misunderstood and believed to be the result of supernatural powers: sharp eyesight implies divine clairvoyance, a scavenging diet suggests magical resilience to illness and a celestial flight demonstrates an intimate relationship with God.

All vultures, without any discrimination, are used in African traditional medicine. All body parts are used but never ingested, which explains why animists never refuse poisoned vultures, and indirectly support its use. In Zimbabwe, feathers are conventionally mixed into herb cocktails prior to being smoked to transmit the gift of prediction and clairvoyance, as well as to treat hiccups and flu. Heads and hearts are used in animist rituals during which patients find ways to contact ancestors in the hereafter. Vulture brains are also considered to improve foresight, often focused on gambling. Finally, bones are crafted and moulded to create ornaments and jewels. These rituals are deeply rooted in human traditions, although all vultures are protected in Zimbabwe. It is strictly forbidden to kill, capture or retain any of them. Nonetheless, all African muti markets have stalls where vulture parts stand out among the “charms” and “talismans” sold for magic and traditional healing.

**Urban infrastructure**

The illegal vulture trade and use in traditional medicine is an anecdotic threat when compared to that caused by urban infrastructures. Roads and railways – especially those following the outlines of protected areas – are covered in animal carrion, attracting vultures and exposing them to the dangers of traffic. Even more worrying, vultures perch and build nests on power lines, where they constantly get electrocuted. Wind farms raise concerns too, especially as these trendy renewable energy setups proliferate in Africa.

**VulPro**

In 2007, Kerri Wolter – a young and passionate South African woman – decided to act by founding VulPro, a South African NGO dedicated to protecting vultures, especially those endemic to southern Africa: Cape vultures. It took very little time for Kerri to set up a multidisciplinary programme, establishing concrete and tangible field actions for vulture conservation, as well as leading scientific and educational projects.

**Rehabilitation and Breeding.**

The VulPro headquarters are located near Johannesburg, where Kerri and her team have built a care and rehabilitation centre for wounded, poisoned or distressed vultures. In these giant aviaries, some birds will only pass through, whereas others will remain indefinitely, playing an important role as species ambassadors, shedding light onto the decline

vulture populations are facing. In 2015, VulPro travelled 38 000km to rescue 75 vultures across South Africa. Twenty-one of them recovered completely and were able to return to the wild. The remainder joined Kerri’s breeding program once they were medically stabilised. Captive breeding is a challenging task. Nevertheless, in 2016, 15 pairs of Cape vultures gave VulPro the opportunity to raise 13 chicks that found their way back to the wilderness and into the blue sky.

**Awareness.**

Vultures are unpopular and often despised animals, but VulPro explores all possible routes to change preconceived ideas. In 2014, nearly 4 000 people took part in VulPro discovery workshops and, among them, 150 employees of Eskom were made aware of the threats posed by high-voltage power lines.

**Science.**

Every year, VulPro monitors four large colonies of Cape vultures with the goal of identifying breeding pairs as well as young fledglings (juveniles ready to fly). Some adults are currently being monitored using numbered wing tags that enable Kerri to calculate the survival rate of juvenile and adult vultures, as well as the rate of the overall population decline. A tight collaboration with South African and Zimbabwean universities, established several years ago, enable VulPro to analyse the colossal amounts of data collected on a daily basis by the NGO. This is how research studies on lead poisoning have been conducted. Finally, VulPro succeeded in setting up more than 90 GPS tracking devices on several species of vultures in order to better understand their movements; where are they going and why? Vultures’ home ranges are immensely vast, and no protected area in Africa offer them an unassailable refuge, not even the largest national parks. Vultures can travel hundreds of kilometres throughout the continent in a matter of hours. Consequently, no southern African vulture is completely safe from poisoning.

Zimbabwe is a country sorely lacking in its ability to engage in vulture conservation. Because vultures cross borders, efforts must be maintained on all fronts. VulPro initiated a collaboration with Zimbabwean authorities such as the Victoria Falls Wildlife Trust, BirdLife Zimbabwe and NUST University in Bulawayo, in 2015 to develop a national monitoring and conservation plan for vultures in their country.

These charismatic and scavenging birds often inspire fear, mistrust and disgust. Nonetheless, they clean the environment of thousands of carcasses, and curtail the propagation of disease such as rabies, anthrax and botulism. One does not have to love vultures to understand the essential role they play in the ecosystem – they are powerful recycling agents of organic matter. In Zimbabwe, ornithologists, rangers and scientists collaborate to establish a national monitoring program for vulture conservation. Hopefully, this rallying of energy will spread to the rest of southern Africa, as danger is everywhere and vultures are great wanderers!