

Nature's undertakers: the African White-backed Vultures of the Kimberley area

Our vultures

Nine vulture species occur in South Africa (see Table). Of these only three species occur in the Northern Cape (White-backed, Lappet-faced and Cape). Several other species are very occasional vagrants to the Province, but there may be a small breeding population of White-headed Vultures in the Kgalagadi Transfrontier Park. Kimberley is one of few African cities with a large vulture population virtually on its doorstep. It is possible on most days to see White-backed Vultures soaring in the skies around Kimberley and in fact they are frequently observed flying over the city itself! Despite their occurrence around the diamond city, surprisingly few people are aware of their presence.

Common name	Scientific name	Red Data Book status	Status in South Africa
Egyptian Vulture	<i>Neophron percnopterus</i>	Extinct as a breeding species	Vagrant
Bearded Vulture	<i>Gypaetus barbatus</i>	Endangered	Localised
Cape Vulture	<i>Gyps coprotheres</i>	Vulnerable	Relatively widespread
African White-backed Vulture	<i>Gyps africanus</i>	Vulnerable	Relatively widespread
White-headed Vulture	<i>Trigonoceps occipitalis</i>	Vulnerable	Localised
Lappet-faced Vulture	<i>Torgos tracheliotos</i>	Vulnerable	Localised
Hooded Vulture	<i>Necrosyrtes monchus</i>	Vulnerable	Localised
Palm-nut Vulture	<i>Gypobierax angolensis</i>	Not listed	Very localised
Rüppell's Griffon	<i>Gyps rueppellii</i>	Not listed	Vagrant

Kimberley's White-backed Vulture population fulfils an important function – as nature's undertakers, these birds dispose of dead and rotting carcasses. They do not show preferences for any animals, consuming everything from rotting donkeys and goats to gemsbok and springbok. These vultures could become an important tourist attraction and, together with Kamfers Dam's flamingos and other birds which are unique to the arid Northern Cape, draw bird-watchers to Kimberley, providing much-needed income to the city.

African White-backed Vulture facts

- The name arises from the adult vulture's conspicuous white back (seen when the bird's wings are outstretched or when it flies).
- Adult weight - 4-7 kg; height - 85 cm; wingspan – 220 cm;
- Probably the most widespread and common vulture in Africa, found through much of sub-Saharan Africa, perhaps numbering 270 000 individuals.
- Although they eat carrion, vultures are very hygienic birds and they often gather at waterholes to bathe, preen and drink.
- In recent years, its cousin, the Indian White-backed Vulture *Gyps bengalensis* has almost disappeared from its range in southern Asia.

How many vultures live in the Kimberley area?

Within a 50 km radius of Kimberley there are at least 300 pairs of breeding White-backed Vultures, perhaps 800-1000 individuals. The large Lappet-faced Vulture is very scarce, and there are probably only 1-2 breeding pairs in the Kimberley area. At times possibly a dozen or more young cliff-nesting Cape Vultures also frequent the Kimberley area. It has been suggested that Kimberley is a so-called “nursery area”, where young Cape Vultures can be free from competition from their parents and other adult Cape Vultures in the core breeding/foraging areas.

Aerial survey

During July and August 2002, researchers from the Department of Tourism, Environment & Conservation, De Beers Consolidated Mines Limited and the University of Reading (UK) conducted a microlight survey of the breeding population of White-backed Vultures in the Kimberley area. Preliminary ground surveys identified the approximate vicinity of the breeding colonies and these were then surveyed from the air. The microlight aircraft were piloted by members of the Kimberley Microlight Club. The survey was sponsored by the Vulture Study Group and Engen Petroleum Ltd. During this survey it was determined that the Kimberley vulture population numbers at least 250 breeding pairs and possibly many more. The whereabouts of two new colonies was also determined.

Their habits

The White-backed Vulture builds its stick nest on the top of large trees, using camel thorn *Acacia erioloba* and umbrella thorn *A. tortilis* trees in the Kimberley area. The acacia's thorny, impenetrable canopy also provides some protection from predators, such as baboons. The nests are approximately one square metre in size and constructed from sticks, with the inner cup being lined with grass. During the months of April to June a single white egg is laid. The egg is incubated by both parents for about 56 days, hatching in mid-winter. The chick is fed regurgitated meat, brought to the nest by both parents. During October and November the young vultures leave the nest; however they still remain dependent on their parents for about six months after fledging. They then roam

the countryside for several years, finding a mate and breeding only at about five years of age. White-backed Vultures may live for more than 20 years.

First record of vultures breeding on electricity pylons

In 1985 John Ledger and Jonathan Hobbs found five White-backed Vulture nests on 132 kV electricity pylons just east of Kimberley, the first nesting record on a man-made structure by this species. They suspected that human disturbance had driven these birds from their typical nesting sites to these large, eminently suitable “steel trees”. Since then, additional vultures have been seen nesting on 88 kV powerlines near Vryburg and on 220 kV powerlines on De Beers’ Dronfield Farm just outside Kimberley. This behaviour is not confined to southern Africa and during the mid-1990s Simon Thomsett observed a few White-backed Vultures nesting on pylons in the Tsavo National Park in Kenya. The habit of nesting on powerlines seems to be unique to the two white-backed vulture species. The Indian White-backed Vulture, which has been seen nesting on pylons in the Thar Desert in India, is the only other vulture to have capitalised on this man-made convenience. The advantages of nesting on the pylons of large powerlines include having a rock-steady support, a 360° view of the surroundings, and of course being a safe haven from all terrestrial predators. A negative factor could be the much-debated effect of electromagnetic fields on the breeding success of the birds. Vultures also occasionally fly into the thin earth-wires of these powerlines, a problem which may be exacerbated when the light is poor and when strong winds are blowing.

The role of vultures in the Kimberley environment

Vultures have many uses to people:

- They consume the carcasses of dead animals, thus combating the spread of harmful diseases such as anthrax and botulism.
- Some farmers use the behaviour of vultures to locate dead livestock on their properties. The vultures therefore alert the farmer about potential problems on the property.
- The presence of vultures (and other raptors) on a property indicates that the environment is healthy.
- Vultures have ecotourism value, especially as bird-watching is one of the fastest growing past-times in South Africa. Ecotourists are more likely to visit a game farm or stay in a guest-house if they will have the opportunity of seeing the Northern Cape’s unique and interesting raptors.
- Vultures are part of God’s wonderful creation and it is our duty to protect these magnificent birds, so that they can be observed and appreciated by our children and by our children’s children.

Threats

There are several threats to vultures:

- **Poisons**. Vultures are sometimes inadvertently poisoned during problem-animal control operations, with the intended target animals usually being the black-backed jackal or feral dog.
- **Drowning in farm reservoirs**. In the arid regions, where water is in short supply, vultures occasionally drown in circular farm reservoirs.
- **Electrocution**. Although the current Eskom powerline structures are “vulture-friendly”, earlier designs have resulted in the death of many White-backed and Lappet-faced Vultures. These birds are electrocuted when they touch two live wires (conductors) or a live wire and an earthed part of the pylon.
- **Reduction in food availability**. The large herds of game on which vultures traditionally depended have been replaced in many areas by domestic stock. Improved livestock husbandry practices result in few mortalities and the carcasses are often buried or burnt, thus being unavailable to foraging vultures.
- **Direct persecution**. Through a misunderstanding of their habits and sometimes for so-called “sport”, vultures are occasionally shot or poisoned.
- **Disturbance**. Well-meaning people may disturb breeding birds by venturing too close to their nests. This can lead to the parent birds deserting their eggs or nestlings.

Two mass poisoning events

Two poisoning incidents in the Vryburg area during February 1994 and February 1995 claimed the lives of 135 White-backed Vultures. Strychnine and an organophosphate poison were used, with the intended target animal in both instances being the black-backed jackal. The local White-backed Vulture population would take many years to recover from the impact of these mortalities and it is conceivable that such poisoning incidents could even lead to the extinction of local vulture colonies.

Mass drownings: why do they occur?

There are records of several hundreds of vultures drowning in farm reservoirs. The reason for the drownings is not entirely clear, especially when a large number of birds drown together (such as when thirty-six vultures drowned in a reservoir near Vanzylsrus during 1996). These mass drownings may be linked to poisoning or the social behaviour of the vultures. Simple modifications to the reservoir can prevent further mortalities.

How can you help conserve Kimberley’s vultures?

Kimberley’s entire White-backed Vulture population breed outside the sanctuary of nature reserves and other state protected areas. The conservation of these birds is therefore the responsibility of the private landowner (especially the farmer) on whose land these birds breed, forage and live. Many farmers and corporates, such as De Beers, lead the way by practising ecologically-sensible farming techniques. There are several ways in which the Kimberley farmer can contribute towards the conservation of the area’s vultures:

- Leave carcasses in the veldt or place them at a central locality (so-called “vulture restaurant”). This will save the farmer time and money! Remember that any animal that has been euthanased by barbiturates is lethal to vultures. The ingestion of a lead bullet could also cause lead-poisoning.
- Do NOT use poisons (only use selective problem-animal control techniques)!
- Use pyrethroid cattle dips (the organophosphate dips, in particular, could be harmful to vultures).
- Modify farm reservoirs to prevent drownings (attach a branch, log or pole to one side of the reservoir).
- Construct a vulture-friendly bathing and drinking place.
- Report hazardous powerlines and vulture electrocutions to Eskom.
- Do not disturb vultures at their nests (limit human presence around the nests during the breeding season; from April to October).
- Prevent bush encroachment as this dense vegetation hampers a vulture’s ability to successfully locate dead animals (as well as its ability to land and take off).
- Do not remove camelthorn and other acacia trees, which are the nesting sites of vultures and many other birds.
- Educate the people of the Northern Cape about these wonderful birds and the important ecological role they fulfil.
- Contact your local nature conservation office should you locate dead, sick or injured vultures. If possible they will be rehabilitated and released back into the wild.

“Vulture restaurants”

Several vulture restaurants have been established in the Kimberley area. Here livestock and game carcasses are made available to vultures at a central locality. These restaurants guarantee the birds of a source of poison-free food.

Research

The vultures of De Beers’ Dronfield farm, located just north of Kimberley, have been very well studied. This research has included a brief study by Keith Forrester during the 1960s, research by well-known ornithologist, Dr Peter Mundy, during the mid-1970s, a post-graduate study by Campbell Murn (University of Reading, UK) during 2001, and a long-term demographic study by Mark Anderson, Angus Anthony and co-workers since 1993. Although the initial research was largely a study of this vulture’s breeding biology, the later studies have particularly been aimed at understanding the movements and mortality factors of these birds.

Since 1993 more than 400 vultures have been ringed (with metal and colour rings) and information has been obtained about their movements (through the recovery of dead birds or observations of ringed birds) and mortality factors (farmers readily report the location of a dead vulture if it is ringed).

Kimberley vulture travels to and dies in northern Namibia

During June 2001 two Lappet-faced and 15 White-backed Vultures were unintentionally poisoned (after feeding on a carcass which had been baited to kill lions) on the farm Stillerus on the southern boundary of Etosha National Park in northern Namibia. Three of the White-backed Vultures had been ringed – two in Etosha and one on Benfontein Farm, near Kimberley. The Benfontein-ringed bird (G21892) had flown at least 1 426 km during the eight months since being ringed by Alma van Staden, a new long-distance travel record for this vulture species. This record shows that, as vultures do not recognise international boundaries, conservation should be a collaborative effort, involving different countries, in order to conserve this species.

Text by Mark D. Anderson