

Observations of White-backed Vultures eating plant material in Namibia

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Vultures are primarily scavengers, feeding on a large variety of carrion, from elephants to snakes and even fish, flamingo eggs and termites. Only Palm-nut Vultures *Gypohierax angolensis* feed on vegetable matter (Mundy *et al.* 1992). However, there is one record of White-backed Vultures *Gyps africanus* feeding on plants (Anderson 1997).

In Namibia, HS saw White-backed Vultures on the family farm, Smalhoek, about 130 km southeast of Windhoek, in the Dordabis area, feeding on plant material. The incident occurred in late 2005 or early 2006 when about 25 of these vultures were on the ground eating the leaves of a “*slangkop*” (snakes-head) species. The vultures then disgorged what on closer inspection appeared to be a mass of hair. There was no carcass in the immediate vicinity. HS identified the plant as

Pseudogaltonia clavata (= *Lindneria clavata*), of the family Liliaceae.

The whole plant, including the bulb, is toxic, but the leaves are less so than the flowers (Mannheimer *et al.* 2007; Steyn 1949). This poisonous plant causes diarrhoea, dehydration, hindquarter lameness, bloat and heart attack in livestock (Mannheimer *et al.* 2007; Vaarmeijer 1981). Sheep, under laboratory conditions and high intakes of the plant, show signs of heavy breathing, increased, but weak pulse, blue colouring of mucous membranes and heart attack. Low intakes over long periods show signs of bloody urine, constipation or diarrhoea, light jaundice, increased breathing tempo and pulse (Steyn 1949). Game and livestock feed on the leaves without negative effects (Walter & Volk 1954, Wiss 1975). On the farm Smalhoek, cattle eat

small quantities of the green leaves and eagerly feed on dried leaves after the first winter frost without obvious negative effects (H. Stehn, pers. obs.).

On being informed of the incident, NT was intrigued, as he had never heard of vultures eating plant material and as White-backed Vultures eat primarily soft body parts and do not eat hides, the presence of hair in the disgorged material was something of a mystery. Further reading unearthed references to White-backed Vultures accidentally ingesting small amounts of hair in the course of feeding frenzies and according to Mundy *et al.* (1992), this hair is occasionally regurgitated in the form of pellets. It also seems possible that the birds could have ingested hair while feeding on the carcass of a pregnant animal and eaten the soft hide of the foetus.

On enquiry, PB indicated that he had heard of similar incidents of White-backed Vultures eating “*slangkop*”. After the rain some years ago, it grew in a pan on a farm east of Keetmanshoop. In this case, the plant concerned was not positively identified at the time, but by elimination, PB deduced that in all probability it was *Lindneria clavata*, now *P. clavata*.

In *Vulture News 36*, Anderson (1997) published a report that dealt with vultures eating a poisonous plant, *Boophane disticha* (*gifbol*), in the Northern Cape. Anderson (1997) went on to discuss Sir Andrew Smith’s writings on vultures eating plant material in the Drakensberg area of South Africa. It is not clear whether Smith actually witnessed this behaviour himself or heard about it from indigenous people in the area. Which vulture species was involved? Cape Griffons *Gyps coprotheres*, Egyptian *Neophron percnopterus* and Bearded *Gypaetus barbatus* Vultures would all have occurred in the area at that time. Anderson (1997) speculated that the most likely candidate would have been the Egyptian Vulture, given its rather unsavoury diet, known to include refuse and human excrement. However, with two Namibian reports of White-backed Vultures exhibiting this behaviour, it is possibly more likely the Cape Griffon, which has a diet similar to that of the White-backed Vulture.

Anderson (1997), sceptical of the reports of vultures eating plant material, wondered whether these were just old wives’ tales or legends, and suggested that the matter required further investigation and research.

Then in February 2011, HS and his family came upon a site on their farm where White-backed Vultures had eaten leaves of *P. clavata* and vomited up what appeared to be mostly hair and *P. clavata* fibre. This time HS was prepared and picked up a sample of the regurgitated material and took photographs of the plants, some of which had large portions of the leaves eaten. The chewed plants and hair were all within about 10 m of the partly eaten carcass of a young ox. HS advised that although *P. clavata* is common on Smalhoek Farm, it does not grow everywhere on the farm. This suggests that in the first incident described above, where there was no carcass nearby, the vultures flew to the area where “slangkop” grew, specifically to feed on it.

Inspection of a dry sample of the regurgitated material revealed that it consisted of both compressed material in the form of a “pellet” (68 x 27 x 17mm) and looser material. A magnifying glass revealed both animal hair and plant fibre. A small, burnt sample and the resultant, distinct smell of burning hair, confirmed the contents. The pellet contained partially digested, fibrous leaf material, probably from *P. clavata*. This particular piece of material

was approximately 82mm long. There was a small amount of other plant material and red sand, probably picked up when HS collected the sample.

HS made enquiries amongst other farmers in the Dordabis area and many were familiar with this phenomenon, indicating that White-backed Vultures in that district quite regularly ate this plant.

In March 2012 there was another incident. On 26/03/2012 the carcass of a bull was found on Farm Smalhoek (probably struck by lightning on 21/03/2012) and one vulture was observed in the vicinity. HS advised that it is common knowledge amongst farmers that scavengers, including vultures, will rarely feed on the carcass of an animal that has been killed by lightning. On 29/03/2012 HS saw between thirty and forty White-backed Vultures on a dune close to this carcass. These birds duly left on their own accord without being disturbed and HS then inspected the site and found the carcass to be virtually untouched but that on the sparsely vegetated dune about 50 m away there were a number of fairly large *P. clavata* plants. At the spot where the vultures had been all had been chewed upon, some down to about 50 mm above the ground. No sign

of regurgitated material (plant material or animal hair) was found at all. These birds had presumably been attracted by the carcass but when they found it to be a lightning kill they had left it alone and fed on the *P clavata* instead.

The four relatively recent observations of this behaviour in Namibia, suggest vultures occasionally, deliberately eat plant material, other than the contents of the rumen they presumably ingest when feeding on entrails. In all the recorded incidents, the material has been from a plant considered poisonous to humans and livestock. One can only speculate as to why they do this but the obvious inference must be that the plant material has some medicinal value or easily induces vomiting to rid the birds of indigestible material.

The two sites in Namibia where vultures fed on the poisonous plants are nearly 500 km apart. From personal observations by HS and those of other farmers in the Dordabis area, it would appear the vultures in the district are ingesting plant material on a relatively regular basis. Domestic cats and dogs regularly eat plant material and sometimes this induces vomiting, but the reasons for this are poorly understood.

Dr Peter Mundy (pers. comm.), suggests that swallowing grass/plants is to provide the vultures' stomachs with indigestible fibre to aid digestion, giving the muscular contractions of the stomachs something to work against. Lappet-faced *Torgos tracheliotos* and White-headed *Trigonoceps occipitalis* Vultures "never" eat grass, but their stomachs are full of hair from their diet and this serves the same function as grass.

Several questions arise as a result of the observations here:

If the ingestion of plant material by vultures happens on a regular basis, why is it so seldom observed?

Are the Dordabis vultures in some way unique?

Have they discovered the medicinal value of certain plants, while other vultures have not?

Have these birds perhaps started to eat hides as well as soft body parts thus requiring them to rid themselves of indigestible material?

Close observation of these birds may reveal more in this regard.

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