

Avian scavengers, but not conspecifics, feeding on the carcasses of storm-killed Turkey Vultures on the Falkland Islands

Keith L. Bildstein^{1*}, Micky Reeves², Melissa M. Bobowski¹
and Anna R. Autilio³

¹Acopian Center for Conservation Learning, Hawk Mountain Sanctuary, 410 Summer Valley Road, Orwigsburg, PA 17961, USA.

²Falklands Conservation, Jubilee Villas, Stanley, Falkland Islands.

³Department of Biology, Boise State University, Boise, ID 83725, USA.

*Corresponding author: Bildstein@hawkmtn.org

Introduction

Cannibalism, which the *Shorter Oxford English Dictionary* defines as “an animal that eats members of its own species” (Trumball & Stevenson 2002), is quite common among birds of prey. However, it is thought to be rare among both Old and New world vultures (Mundy *et al.* 1992, Clinton-Eitniear & McGehee 1994). Examples of cannibalism from Spain include an ambulatory nestling Griffon Vulture (*Gyps fulvus*) feeding upon an adult (presumably its dead parent) at a nest (Fernandez &

Fernandez-Arroyo (2001); two young Griffon Vultures feeding on the carcass of a conspecific in an area where poisoning had occurred (Camiña *et al.* 2002); and several Griffon Vultures pecking at, and subsequently killing and eating, a conspecific that was trapped under a rock while feeding on a sheep carcass (Martinez de Lecea 2011). In Africa, Mundy *et al.* (1992) report *Gyps* vultures feeding on an African White-backed Vulture (*G. africanus*) that had been “caught by the wing in an elephant’s carcass and had died, or was killed, at the spot and eaten there by other vultures.” They also mention

a report of Cape Vultures (*G. coprotheres*) feeding on a conspecific without additional detail. And a parent Bearded Vulture (*Gypaetus barbatus*), a species known to exhibit siblicide, was observed feeding the remains of a younger chick to its sibling at a nest in northeastern Spain (Margalida 2004).

Examples of cannibalism among New World vultures include several events involving captive King Vultures (*Sarcoramphus papa*) in zoos, and a possible instance involving free-ranging Lesser Yellow-headed Vultures (*Cathartes burrovianus*) at a road-kill in Tabasco, Mexico (Clinton-Eitniear & McGehee 1994). Importantly, Snyder and Snyder (2000) report that placing Turkey Vulture *Cathartes aura* carcasses at a vulture feeding station in Florida, USA, appeared to “strongly inhibit use of these sites” by other vultures. And in coastal Veracruz, Mexico, where a flight of approximately three million Turkey Vultures passes each autumn and a somewhat smaller flight passes each spring, Turkey Vultures that die in the region are not eaten by other Turkey Vultures (Lowery & Dalquest 1951).

Here we report on the feeding behaviour, and lack thereof, of three

species of avian scavengers on two apparently storm-killed Turkey Vultures on Saunders Island, in the Falkland Islands, in July-August (austral winter) 2014.

Observations

Observations were made between 30 July and 7 August 2014, on Saunders Island, a 12,500ha island off the north coast of West Falkland in the south Atlantic, approximately 400 km from the South American mainland. The island, which is treeless Patagonia Steppe and has a permanent human population of five, functions as a sheep farm and tourist destination for nature photographers. Four species of penguins and other seabirds breed by the thousands on Saunders, and since 2010 we have been studying the scavenging behaviour of raptors, including Turkey Vultures, feeding at and around a large colony of Gentoo Penguins (*Pygoscelis papua*) at “The Neck,” in the northwestern part of the island. Our study site, at approximately 51° south, experiences a cool seasonal oceanic climate with largely westerly winds that can be quite strong. Temperatures on the Falklands generally range from maximum highs of 25° C in austral

summer to minimum lows of -11°C in winter, with monthly temperatures averaging 9°C in austral summer and 2°C in austral winter. Snow falls, usually in small amounts, on about 55 days of the year, with most snow melting within 48 hours (Strange 1983).

An unusual snowfall of more than 10 cm fell on 24 and 25 July several days in advance of our visit and it, together with low temperatures that reached -10°C during the nights of 26-27 July delayed our first visit to "The Neck," which is 16 km over rough terrain from our base camp on the island, by four days. An initial visit on 31 July by one of us (KB) found the carcasses of two Turkey Vultures, one of which was headless, at the site. The bodies, which were about 20 m apart on a 2km-long sandy beach, were mixed in amongst a heavy drift line of kelp and other seaweed, and most likely the birds had died during the recent snow storm at a roost site in a small grove of Monterey cypress (*Cupressus macrocarpa*) 150 m from where the carcasses were found.

Over the course of an hour of population-survey work at mid-day on the 31st, KB recorded 27 mainly

juvenile Striated Caracaras (*Phalcoboenus australis*), all of which were standing on the ground. Five adult Turkey Vultures, one of which was standing and four of which were flying, also were observed. None of the standing birds were within 100 m of the two carcasses, but two of the flying Turkey Vultures were spotted passing directly overhead, flying at less than 20 m above the dead birds. KB next visited the study site in early afternoon on 1 August and recorded 22 mainly juvenile Striated Caracaras along with two adult Southern Crested Caracaras (*Caracara plancus*), all of which were standing, as well as four adult Turkey Vultures, all of which were flying low over the site during the course of a one-hour survey. Three of the juvenile caracaras were feeding on one of the Turkey Vulture carcasses, which was headless and lying on its back, and whose body cavity had been broken into (Figure 1). Two of the flying Turkey Vultures passed within 20 m of the carcasses but did not deviate from their flight while passing over the bodies and thereafter continued flying out of sight.



Figure 1: The first opened Turkey Vulture carcass on 1 August 2014.

Three of us (MR, MB, & AA) visited the study site on 2-5 August and saw a single Striated Caracara feeding on the first opened carcass on the morning of 3 August. We also saw two juvenile Striated Caracaras and an adult Turkey Vulture feeding on an Imperial Shag (*Leucocarbo atriceps*) we had discovered that day less than 50 m from the closest Turkey Vulture carcass. We also noted that both Turkey Vulture carcasses had been opened and fed upon by 4 August.

KB again surveyed the site at mid-day on 5 August and recorded 27 mainly juvenile Striated Caracaras during a survey of scavengers at the site, all of which were standing, together with one adult male dark-morph Red-backed Hawk (*Buteo polyosoma*) that was feeding on the first carcass that had been broken into (Figure 2). When first encountered the hawk was being harassed by three juvenile Striated Caracaras, one of which briefly hovered less than 0.5 m above the hawk before striking it on

the head with clenched talons and then re-landing 2 m away. After fewer than 2 min of direct observations from a distance of approximately 5 m, the hawk flew off with a gorged crop with two Striated

Caracaras in pursuit. After the hawk departed several Striated Caracaras approached the carcass and began feeding upon it. No Turkey Vultures were seen at the site during the 50-min survey.



Figure 2: The first opened carcass being fed upon by a Red-backed Hawk on 5 August 2014. Note the three Striated Caracaras looking on.

A final brief visit at mid-day on 7 August, shortly before we departed the island, found more than 20 Striated Caracaras standing at the site

and four in-flight Turkey Vultures, none of which was within 100 m of either carcass.

Discussion

Taken as a whole, our observations indicate little if any reluctance on the part of Striated Caracaras (an obligate and opportunistically predatory scavenging bird of prey) and at least one adult Red-backed Hawk (a largely facultative scavenger species that is far less common at the site) to feed on one of the two available Turkey Vulture carcasses. On the other hand, at least several Turkey Vultures most likely detected the two carcasses, both unopened and opened, but none was seen feeding upon them, even though at least one adult Turkey Vulture fed upon an Imperial Shag carcass <50 m from the vulture carcasses. Although we were in the area for fewer than six hours on eight days during the course of a 9-day period, the apparent lack of interest on the part of Turkey Vultures to feed on the two vulture carcasses, despite the fact that one of the carcasses had been opened and fed upon by two other species of scavenging birds of prey birds, bolsters previous observations of the Turkey Vultures'

(see references above) reluctance to cannibalize members of their own species. That this occurred in the middle of winter on the Falkland Islands when food availability for scavenging birds of prey appears to be limited and when at least one of the species involved, the Striated Caracara, is known to be food stressed at this time (cf. Rexer-Huber & Bildstein 2013), further supports the notion of a reluctance to cannibalize on the part of Turkey Vultures. The reason for this remains enigmatic.

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References

- Clinton-Eitnienar, J. & McGehee, S. M. 1994. Cannibalism by cathartid vultures. *Vulture News* 31: 16-19.
- Camiña, A., Palomo, R., & Torres, J. C. 2002. Observation of cannibalism in Eurasian Griffons *Gyps fulvus* in Spain. *Vulture News* 47: 25-26.
- Lowery, G. H., & Dalquist, W. W. 1951. Birds from the state of Veracruz, Mexico. *Univ. Kansas, Pub. Mus. Nat Hist.* vol. 3.
- Margalida, A., Bertran, J., Boudet, J. & Heredia, R. 2004. Hatching asynchrony, sibling aggression and cannibalism in the Bearded Vulture *Gypaetus barbatus*. *Ibis* 146: 386-393.
- Martinez De Lecea, F., Hernando, A., Illana, A., & Echegaray, J. 2011. Cannibalism in Eurasian Griffon Vultures *Gyps fulvus*. *Ardea* 99: 240-242.
- Mundy, P., Butchart, D., Ledger, J., & Piper, S. 1992. *The vultures of Africa*. Academic Press, London, England.
- Rexer-Huber, K. & Bildstein, K. L. 2013. Winter diet of striated caracara *Phalcoboenus australis* (Aves, Polyborinae) at a farm settlement on the Falkland Islands. *Polar Biology* 36: 437-443.
- Snyder N., & Snyder, H. 2000. *The California Condor: a saga of natural history and conservation*. Academic Press, San Diego, California, USA.
- Strange, I. J. 1983. *The Falkland islands*, 3rd Edition. David & Charles, London, England.
- Trumble, W. R., & Stevenson, A. (Eds). 2002. *Shorter Oxford English Dictionary, Fifth Edition*. Oxford University Press, Oxford, England.
