

Evidence for White-headed Vulture Preyed Upon by African Rock Python



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Since 2016, we have been satellite tracking White-backed Vultures (*Gyps africanus*) and White-headed Vultures (*Trigonoceps occipitalis*) in Gorongosa National Park, Mozambique in an effort to better understand how these Critically Endangered species use the park and surrounding landscape (BirdLife International 2017). We have tagged 12 White-headed Vultures to date – an unprecedented number of individuals of this poorly understood and uncommon species (Murn et al. 2016, Alarcón and Lambertucci 2018). We have to thank Western EcoSystems Technology, Inc. (WEST) for their generous contribution of 17 Microwave Telemetry Argos/GPS PTT-100 units, without which this study would not have been possible.

On June 6, 2017, we tagged an adult female White-headed Vulture with MTI PTT-100 unit number 105042. Within hours of release, “WH42” returned to its nest and began transmitting from within its breeding territory. WH42 maintained a small home range throughout the duration of its breeding season before branching out in January 2018. WH42 began foraging over a larger home range covering a substantial portion of the park after this date.

On April 13, 2018, WH42 stopped transmitting at -19.04967, 34.24167, a location that had been visited twice before on the 7th and 12th of April. We contacted law enforcement to investigate; they found a baboon carcass in the vicinity, but no sign of the bird. At this point we assumed that the PTT had either failed or was shed and dropped out of signal. We amended the tag deployment in Movebank to no longer include the unit in automatic updates. Any subsequent locations logged by the unit were classified as “undeployed locations” by the Movebank system.

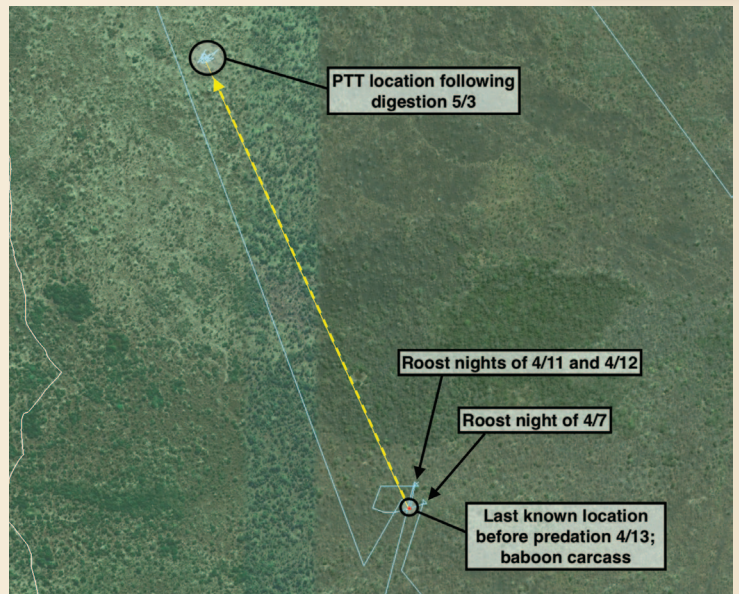


Photo by Teague Scott

White-headed Vulture “WH42” prior to release.

We downloaded all data from the Argos server in mid-June and found WH42’s PTT was still live. Upon inspection, we discovered it had started transmitting again on May 3, 2018, from -19.033, 34.2335. This was almost two km from the April 13th location. Even more surprising was the fact that the unit had been consistently logging data at irregular intervals from within a radius of approximately 75 meters of this location. The irregularity of data, apparent error associated with the location, and low battery readings suggested that the tag was in poor condition, or in a position limiting solar panel exposure, or both.

We searched at the unit’s last recorded location on July 20th. We found it within minutes of switching on the receiver, well camouflaged beneath a tall clump of grass. The unit was barely recognizable and contained in a pile of feces. Upon closer inspection we found not only the PTT, but also wing tags and a steel leg band. The bird’s flight feather shafts were also clumped together in one long mass as if they had all passed through a



Movement tracks prior to predation and following digestion. WH42 spent a number of days in the area before being predated. The snake covered 2 km before excreting the remains of the bird, PTT, and tags.

digestive tract in parallel. Just off to the side of this impressive pile of feces was an apparent answer to the question “what ate the bird?” – a pile of shed snake skin. After consulting with fellow biologists in the park, it seemed the African Rock Python (*Python sebae natalensis*) was the most likely culprit.

Another look at the movement data and the story fell into place. On April 13th, WH42 stopped in the vicinity of the baboon carcass for a third time in a few days. The bird was consumed during this stop, and so began its three-week, two km long journey within the python’s digestive tract. While it was unfortunate to lose one of these Critically Endangered birds, it was amazing to find that White-headed Vultures can fall prey to a predator such as the African Rock Python.

There are published accounts of predation events at vulture nests, but relatively few at carcasses (Mundy et al. 1992, Thompson et al. 2017). While the African Rock Python is unlikely to be a frequent predator of African vultures, this incident highlights the fact that vultures can be susceptible to predation when visiting carcasses. A species such as the White-headed Vulture could be at greater risk of predation due to its solitary feeding behavior, and therefore decreased vigilance.

This event is a testament to the strength and durability of these Microwave Telemetry, Inc. PTTs. A python’s digestive tract is a hostile environment. Gastric pH varies throughout the duration of the digestive process and has been found to drop as low as 1 in the Burmese python (Secor, 2003). Perhaps we’ve unveiled a secret in MTT’s quality control process – the digestion test.

Microwave Telemetry, Inc. PTT, visual ID wing tags, and SAFRING steel leg band removed from the pile of feces.



Photo by Teague Scott