

ARTICLES

Notes on the Rüppell's Vulture *Gyps rueppelli* colony at Hell's Gate NP, Kenya**Alvaro Camiña**

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The Rüppell's Vulture *Gyps rueppelli* (RV hereafter) has been recently uplisted from Endangered to Critically Endangered in the IUCN Red List (Birdlife International 2017). It is one of the least widespread *Gyps* vultures in Africa, occurring in savannahs and arid East Africa and with a smaller distribution in Western African/Sahara (del Hoyo *et al.* 2014, Mundy *et al.* 1992). As happens with other similar species such as the Eurasian griffon (EGV) *Gyps fulvus* and the Cape vulture (CV) *Gyps coprotheres* (Houston 1989, Mundy *et al.* 1992) the breeding season, defined from copulation to fledging time, extends around six months or even longer. Because of such year-long occupation periods of the breeding colonies, the best method to estimate population numbers in both Europe and Southern Africa are censuses that also allow estimates of breeding and fledgling success (Del Moral & Marti 2018 and references therein to timely national censuses since 1979, same in Wolter *et al.* 2011). Here we present some data regarding the RV breeding colony in Hell's Gate National Park, Kenya (0° 52' 37'' S 36° 19' 40''E) after two visits in 3rd-5th September 2016 and 25th-28th February 2017. We used binoculars and scope 20-60X to scan the main walls where the bulk of the breeding pairs are, except Njorowa Gorge (Bennun and Virani 2001). During each visit we looked for laying birds that could be incubating, or sitting on chicks or fledglings. We aged the birds based on plumage and body features. During the visit in September 2016 we saw only four fledglings compared to 46 adults. They were fully-

grown and feathered, and left the cliff for short flights then returned to beg food from their parents. Over the following week, we also visited the Kwenia colony in southern Kenya (Virani *et al.* 2012). Adult numbers there were 196 and we only saw seven fledglings. Over the same period, we witnessed three livestock carcasses in the field accounting for twenty-three, forty-one and fifty-two RVs among other vulture species. A small proportion (7%) was recently-fledged juveniles. On the second visit to Hell's Gate in 2017, we observed up to 16 adults lying on the cliff, the typical behavior of incubating birds, plus another 30 adults flying or perched but no chicks, juveniles or immatures.

Altogether, these behaviours and numbers, in addition to our experience with the EGV, make us conclude that at least for 2016-2017 breeding seasons, the RV has been breeding from around Jan-Feb (laying eggs) to Aug-Sep (fledgling time), similar to the dates suggested by Houston (1989). In our opinion, this is not far from what was seen in Kwenia by Virani *et al.* (2012), if we group all the nests seen per month regardless of the year. These authors found 76% of the nests being occupied between January and July (369 out of 486).

Vultures have long and synchronized breeding seasons (Houston 1989). The same author found that RV in Tanzania was able to shift breeding by some months, depending on changes in food availability (Houston 1990). A no restriction in the breeding period is what Virani *et al.* (2012) have suggested in Kenya. Vultures forage and feed in

groups, so a change in solitary or small groups of pairs would not have much biological advantage, so the entire colony is likely to change altogether. Another question to consider is if a large bird like RV would be capable of breeding twice in a year, given the high food requirements of doing so (Houston 1974) and the possible threat of food availability (Botha *et al.* 2017). Within a *Gyps* vulture colony, there are late breeding attempts or replacement clutches that extend the breeding season well out of the common and widely accepted dates; this has to be also considered (Fernández y Fernández-Arroyo 2020 and references therein as far as 1990). However, such a delay would not explain the high proportion of nests detected in Kwenia in Sep-Oct. On the other hand, Martínez *et al.* (1997) found that a minimum of four visits per colony over the breeding season was required to get a better estimate of pairs detected. Accurate censusing of a cliff-nesting colonial vulture whilst breeding is easier compared to semi-colonial, solitary or even tree-nesting species. Standardized colony counts are essential for proper population estimation - an easier task for a colony such as Hell's Gate, which has good access, communications, and visibility compared to Kwenia - and are also a way to confirm changes in the breeding season (Benson

and McClure 2019). However, we have only found references to total bird counts and not breeding data (Harper 1991, Mundy *et al.* 1992, Bennun and Virani 2001, John 2015). Both the estimation of population size and reproductive parameters of vulture populations are the main but still unsuccessful objectives for two decades now in East Africa (Bennun and Virani 2001, Anderson 2007, Botha *et al.* 2012) and also the recently adopted Vulture Multi-Species Action Plan of the CMS (Botha *et al.* 2017), which highlights poisoning as the major threat for African vultures.

Related to this, we also obtained evidence by chance of the existing threats. In September we found a wire snare used by poachers just beneath the colony in the core area of the National Park (Figure 1). Also, during the second visit, we saw and photographed a dead adult bird on the main nesting cliff (Figure 2). This bird was not there in September 2016. We wonder how frequent these incidents could be during the entire year under continuous monitoring. The Park is only 68.25 sq. km; quite small size compared to the home range of a vulture, so conservation measures must be applied more widely into non-protected areas, but we have not found any reference to that even in the Park Management Plan (KWS 2009).



Figure 1: A game ranger holds a wire snare found beneath Hell's Gate Rüppell's Vulture colony, Kenya.



Figure 2: Dead adult Rüppell's Vulture on the cliff of Hell's Gate colony, Kenya.

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