

FINAL REPORT

Addressing knowledge gaps on
Rüppell's vulture and Egyptian
vulture populations in the Koutous
massif, Niger



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Overview

Location

Koutous massif, Region of Zinder, Niger

Period of implementation: 01/01/2022- 31/07/2022

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Cover page

Rüppels vulture flying over Koutous Massif, Niger. Photo credits: Abdoul Razack Moussa Zabeirou / SaharaConservation

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Cooperation

The field missions were made possible with the collaboration of Direction de la Faune, de la Chasse, des Parcs et des Réserves du Ministère de l'Environnement et de la Lutte Contre la Désertification du Niger and specifically the Regional Directorate of Zinder.

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Introduction

As in most of Africa, vultures used to be widely present in Niger, but their populations have declined significantly and are now mostly concentrated in protected areas. Among the six vulture species breeding in Niger, four are listed as Critically Endangered and two are classified as Endangered and those populations are likely to be relatively small. It was evidenced that illegal killing due to belief-based use should be currently considered as the main threat for vultures in Niger. Despite being protected by law, direct and indirect evidence of illegal killing of vultures were collected from different sources in the country, stressing the need for urgent actions.

The current knowledge related to these avian scavengers in the country is quite limited to implement tailored conservation actions. Until now, most of the work on vulture has been focusing on protected areas. SaharaConservation with this project was able to extend and develop its activities in key areas where vulture populations are still present but not benefiting from any conservation measures.

Located in the region of Zinder, in the southern half of the country, the Koutous massif is the heart of the Sahel. It is mostly characterized by its ferruginous plateaus raising up to 800 meters interrupting the dunes and the sandy plains sprinkled with acacia. Located 140km away from Zinder, the Koutous massif is relatively isolated and only surrounded by small rural villages. Several cliff nesting raptors are breeding in Koutous massif, including the Critically Endangered Rüppell vultures (*Gyps rueppelli*) and the Endangered Egyptian vulture (*Neophron percnopterus*).

In 2015, monitoring was initiated in the Koutous massif on Egyptian Vultures, as a resident population was identified in addition to Palearctic migrants of the same species. Since then, consistent surveys were conducted by SaharaConservation and 11 active territories of Egyptian Vulture are now registered, representing the only Egyptian Vulture resident population documented in the country. In 2018, activities dedicated to this species were intensified with the launch of the Egyptian Vulture New LIFE project, for which SaharaConservation is responsible for implementing activities in Niger.

For the past years, Rüppell's vultures were occasionally seen but in spring 2019 a small population was observed in the massif. A deeper study in 2020 enabled to identify nine Rüppell's vulture territories in the southern part of the massif. A total of 11 active Egyptian vulture territories and 11 active Rüppell's vulture nests were counted in February 2020. Up to now, these populations are the only ones documented outside of protected areas in the country.

Both populations have been relatively little studied and no coherent monitoring allowing detailed data to be gathered were realized. Therefore, this project is part of a broader program on vultures in Niger was an opportunity to specifically address high priority needs for Critically Endangered and Endangered species to help develop tailored conservation actions.

In the framework of this project, three field missions were led in the project area.

- 30th of December 2021 to the 3rd of January 2022
- 14th to 17th of March 2022
- 21st to 24th of June 2022

All field missions were led in close collaboration with the regional office for the environment of Zinder.

1. Goal and objectives

The goal of this project was to monitor the Egyptian vulture and Rüppell's vulture populations in the Koutous massif in Niger to improve our knowledge on their distribution and ecology while raising awareness among local communities.

Objectives:

- To follow up on the registered territories and evaluate their breeding success;
- To deepen the knowledge on vultures' ecology in the area;
- To improve the data available on the species to conservationists and decision makers;
- To provide recommendations for future monitoring;
- To raise awareness among the surrounding communities on the conservation of vultures, the threats to these species, their role and the need to protect them.

The aim of this report is to present the work done in the framework of the project supported by the African Bird Club.

2. Methodology

Three missions were organized during the breeding season and all registered territories were visited. Comparing these data allows us to follow the evolution of nests over the seasons, using the year 2020 as a reference. For each territory, its occupation and the reproduction status were evaluated. The nests were observed from a certain distance with binoculars Zeiss Terra Ed 10x42, a telescope Kowa TSN x 30 and a Canon D500 was used for photographs.

A territory is considered active if signs of activity are observed: at least one of the vultures is present in the territory, the nest is in good condition and maintained, signs of recent defecation are observed, and pellets, bones, feathers, etc. are present in the nest. However, if the nest is damaged, if there are no signs of activity as listed above or if no vultures are observed or if another species has taken over, the territory will be considered inactive.

The breeding status in each territory is categorized as follows: nest building, incubation, chick rearing, production of a fledging or failure to breed.

Each vulture observation is registered and characterized according to the bird age class, based on its plumage: juvenile; immature; subadult; adult. All data is entered directly into a Cybertracker sequence installed on a rough smartphone and transferred to a computer for analysis and publication. The data gathered in the framework of this project is available to conservationists and relevant authorities upon request and will be integrated into WABDaB, in a protected format.

During the monitoring activities, a guide from the local community always accompanied the field team. He oversaw the navigation within the massif but also acted as an intermediate with local communities and sensitized them on the role of vultures, insisting that those are among the last populations in the country.



Illustration 1: Sahara Conservation team member conducting monitoring

3. Monitoring

If Rüppell's vultures are usually known as cliff nesting raptors, in Niger they mostly nest on trees. Out of the three Rüppell's vulture population documented in Niger (the two others being in the Gadabeji Biosphere Reserve and in the Termit Tin Toumma National Natural Reserve), the Koutous massif population is the only one nesting on cliffs. It has been noticed that their breeding season starts earlier in the Koutous massif in comparison to other places mentioned above. Incubation starts as early as December until early February and by mid-May the chicks have already left the nest.



Illustration 2: Rüppell's vulture nesting on a cliff in Koutous massif

So far, nine nesting sites of Rüppell's vultures have been identified in the Koutous massif. As Rüppell's vultures live in colonies, some of these territories include several nests, located on the same cliff. Thus, a

total of 12 nests were identified as active this breeding season. In comparison, 11 nests were registered in 2020 and 13 last year.

The last monitoring mission was conducted in June, when the breeding season was already over for the Rüppell's vultures, and the nests were empty. All data was collected in December and March. However, being in the heart of the Sahel and close to the Sahara, the Koutous massif is often subject to dust and sandstorm. Their intensity was particularly high this year, bringing the visibility down to a very low level (few meters) for extended periods of time. The observation and data collection were inevitably impacted as most of the nests could not be seen. As a result, the breeding success could only be confirmed for two nests.

Egyptian vultures usually start incubating in the second half of February, hatching happens in the first half of April and first fledging in the second half of June/early July.

Given the weather conditions, the breeding could not be confirmed at the start of the season, as no observation could be made in March impeding the proportion of active nests to be made, out of the 11 nests registered.

Breeding success on the other hand could be confirmed in June for two nests, namely EV5 and EV13. No observation could be made for the other nests, suggesting either the failure of the breeding or the non-detection of the chicks.

EV 13 is the only nest in Koutous massif with proved breeding success in 2020, 2021 and 2022, in other terms, every year since it is discovery. Over three years, this pair produced four chicks. In June this year, two chicks were observed in the nest: it is the first time in Niger that a pair producing two chicks is documented. It is important to note that if the territory is the same, the nests changed over the years and were built in different part of the cliff (EV13A to EV13C).

This well documented success, in addition to the great productivity of the pair, could also be explained by the relatively easy access and observation of the nest. Indeed, the inside of most of the nests is not visible from the ground as the cavities are relatively deep and dark, which could partially explain the low confirmed breeding success of the other nests.

Illustration 3: Adult Egyptian vulture flying next to an Abdym stork



As a result, it is not possible with the means currently available for monitoring to conclude on the Egyptian vulture Koutous population breeding success rate but only on its minimum, being two nests out of 11- or 18% of the total.

It is interesting to note that unlike the Rüppell's vulture nests, predominantly located in the southern side of the massif where less villages are present, Egyptian vulture nest are mostly concentrated in the northern part. Some of those nests, such as EV 13, are situated very close to villages but do not seem to be disturbed as it is the most productive territory documented over the last 3 years.



Illustration 4: The two chicks in EV13 in June 2022

Finally, a constant number of vultures were observed (ten or so of each species during every field mission), even outside of the respective breeding seasons, when feeding, roosting or flying. If Egyptian vultures have always been seen year around in the area, it is a relatively new phenomenon for SaharaConservation team regarding Rüppell's vultures, as only rare sightings were made before 2019. These regular sightings are encouraging and could feed the hypothesis than both populations are resident in the Koutous massif.



Illustration 5: Two Rüppell's vulture roosting observed in June 2022

Another great finding made in the scope of this project is the identification of a permanent pond used as a congregation site for vultures. It was identified thanks to the transmitter data of a Palearctic migrant bird and visited during monitoring missions. Being the only permanent waterhole in the area, its relatively busy with livestock and a fisher community is established. They confirmed the regular presence of vultures.



Illustration 6: Egyptian vultures observed at the waterhole

All additional birds observed during field missions are registered and the complete list is available in appendix.

4. Awareness raising

Surrounding local communities play a crucial role in conservation but information is a requirement for action. As it has been witnessed during previous work, few people only are conscious of the level of threats vulture are facing. Similarly, lots of members of the young generations interviewed in project areas did not know the local vulture species or had never seen one. Conjointly, most stakeholders

involved in the believed based use of vulture parts have proven to be unaware of the vulture conservation status and their level of protection at national and international levels. Despite witnessing the decline of vulture populations, they have had no clear evidence of the role played by those practices in the reduction of their numbers.

Particularly in areas like the Koutous massif, with no classification or dedicated protection and where communities live very close to the vulture nests, it is essential to engage them. Therefore, to efficiently protect vulture breeding populations, this project also focused on local communities living close to vulture breeding grounds.

Different and complementary approaches were used:

- Identification of key villages during monitoring activities, based on their proximity to nests, to further conduct focus group involving local leaders as well as members of the younger generations as it has been proven than they are an effective vehicle to approach and disseminate a message.
- Opportunistic sensitization when monitoring by engaging with local community members encountered, with the assistance of the local guide to explain the role and value of vultures, the threats they are facing but also the importance of the Koutous massif for their reproduction.
- Support initiatives led in the framework of other projects working towards the same objective, such as visiting schools supported by the Egyptian Vulture New LIFE project as part of its environmental education program when monitoring in the area.

By engaging members of the local communities, we strongly believe that they can disseminate the message successfully and encourage them to participate in the preservation of the vultures surrounding them. In total, 12 villages and over 1000 people were targeted.

Conjointly, in the framework of SaharaConservation activities under the Egyptian Vulture New LIFE project, awareness raising and capacity building activities to develop local capacities to fight the illegal killing of vultures are led in different areas, including in the Koutous massif. The preliminary results are encouraging as they show a decrease in the demand and offer of vulture parts in the region.

Illustration 7: Local herders met at the permanent waterhole



5. Conclusion

Interesting results were achieved this year, despite the difficulties faced. Indeed, for the first time a nest with two Egyptian vulture chicks could be documented in Niger, while the breeding success of this nest could be proven for the third consecutive year- an unprecedented result as well. Additional proofs of the residency of the Rüppell's vulture populations were collected while its ecology and different breeding period was confirmed. Finally, a new congregation site was identified and explored and will from now on be closely monitored.

Therefore, this project significantly participated in the effort to address knowledge gaps on vulture populations by supporting the unstudied and vulnerable populations of Critically endangered and Endangered vultures in key areas in Niger.

Lastly, the number of people reached by sensitization are above expectations and all activities undertaken at the community level will help ensure more integrated community engagement towards vulture conservation.

The results and achievements will therefore be used for the program continuation as SaharaConservation intends to pursue its work on those threatened species and use the results of this project to guide, inform and develop other initiatives within this program. The Koutous massif vulture population is currently the one of biggest population documented in Niger, highlighting the need to implement complementary activities to secure this population.

Given the limited data collected this year, all results provided in this report do not intend to present the vulture population status or its ecology but likely wise the minimum rate of their population numbers and productivity. Mostly, this season, and the partial results obtained highlighted the limit of the current monitoring model and the urgent need to upscale and adapt to have a more consistent monitoring on the ground. To move forward, hiring at least one trained local community ecoguard who could regularly monitor the nests will allow a close follow-up and to deepen the knowledge on their ecology by spending more time observing the nests. It will also be an effective way to overcome the weather difficulty faced this year as his proximity will allow flexibility and adaptation.

Additionally, to step up on the knowledge on their ecology and distribution, fitting satellite transmitters on few individuals would be an important step forward. As it has been proven with the migrant Egyptian vulture tagged under the Egyptian Vulture New LIFE Project, its transmitter provided crucial data, keys to the study of the local populations, in this vast region still relatively unexplored.

SaharaConservation will continue to explore opportunities to obtain the needed resources to continue this important work.

Appendix 1: List of birds observed in Koutous massif in 2022

| English | French | Scientific name |
|--------------------------------|--------------------------|------------------------------------|
| Abdim's Stork | Cigogne d'Abdim | <i>Ciconia abdimii</i> |
| Abyssinian Roller | Rollier d'Abyssinie | <i>Coracias abyssinicus</i> |
| African Collared Dove | Tourterelle rieuse | <i>Streptopelia roseogrisea</i> |
| African Grey Hornbill | Calao à bec noir | <i>Tockus nasutus</i> |
| African Hoopoe | Huppe d'Afrique | <i>Upupa epops senegalensis</i> |
| Bateleur | Bateleur | <i>Theratopius ecaudatus</i> |
| Beautiful Sunbird | Souimanga à longue queue | <i>Cinnyris pulchellus</i> |
| Black Scrub Robin | Agrobate podobé | <i>Cercotrichas podobe</i> |
| Black-headed Plover | Vanneau à tête noire | <i>Vanellus tectus</i> |
| Black-winged Kite | Elanion blanc | <i>Elanus caeruleus</i> |
| Brown-necked Raven | Corbeau brun | <i>Corvus ruficollis</i> |
| Chestnut-bellied Sandgrouse | Ganga à ventre brun | <i>Pterocles exustus</i> |
| Chestnut-bellied Starling | Choucador à ventre roux | <i>Lamprotornis pulcher</i> |
| Cinnamon-breasted Rock Bunting | Bruant cannelle | <i>Emberiza tahapisi</i> |
| Common Kestrel | Faucon crécerelle | <i>Falco tinnunculus</i> |
| Crested Lark | Cochevis huppé | <i>Galerida cristata</i> |
| Cricket Warbler | Prinia à front écaillé | <i>Spiloptila clamans</i> |
| Cut-throat Finch | Amadine cou-coupé | <i>Amadina fasciata</i> |
| Dark Chanting Goshawk | Autour sombre | <i>Melierax metabates</i> |
| Desert Eagle Owl | Grand-duc ascalaphe | <i>Bubo ascalaphus</i> |
| Egyptian Vulture | Vautour percnoptère | <i>Neophron percnopterus</i> |
| Fulvous Babbler | Cratélope fauve | <i>Turdoides fulvus</i> |
| Lanner Falcon | Faucon lanier | <i>Falco biarmicus</i> |
| Laughing Dove | Tourterelle maillée | <i>Streptopelia senegalensis</i> |
| Little Green Bee-eater | Guêpier d'Orient | <i>Merops orientalis</i> |
| Mourning Dove | Tourterelle pleureuse | <i>Streptopelia decipiens</i> |
| Namaqua Dove | Tourterelle masquée | <i>Oena capensis</i> |
| Pied Crow | Corbeau pie | <i>Corvus albus</i> |
| Pygmy Sunbird | Souimanga pygmée | <i>Hedydipna platura</i> |
| Red-billed Hornbill | Calao à bec rouge | <i>Tockus erythrorhynchus</i> |
| Red-billed Quelea | Travailleur à bec rouge | <i>Quelea quelea</i> |
| Rufous Scrub Robin | Agrobate roux | <i>Cercotrichas galactotes</i> |
| Rüppell's Griffon Vulture | Vautour de Rüppell | <i>Gyps rueppellii</i> |
| Shikra | Epervier shikra | <i>Accipiter badius</i> |
| Short-toed Snake Eagle | Circaète Jean-le-Blanc | <i>Circaetus gallicus gallicus</i> |
| Sudan Golden Sparrow | Moineau doré | <i>Passer luteus</i> |
| White Stork | Cigogne blanche | <i>Ciconia ciconia</i> |
| White-crowned Black Wheatear | Traquet à tête blanche | <i>Oenanthe leucopyga</i> |
| White-throated Bee-eater | Guêpier à gorge blanche | <i>Merops albicollis</i> |
| Yellow-breasted Barbet | Barbican perlé | <i>Trachyphonus margaritatus</i> |