

Movement ecology and conservation of the King Vulture in the Andes of central Bolivia
2nd Report to The Rufford Foundation

Country: Bolivia

Region: Eastern Andes, *Cordillera Oriental*

Partner organisations: Universidad Autónoma de Madrid (UAM)
Museo Nacional de Historia Natural – Bolivia (MNHN)
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1. Summary

My major activity was attempting to capture King Vultures in central Bolivia; I spent a total of 42 days in the field, divided in four field trips: 12-19 August 2018, 6-18 December 2018, 27 December 2018 – 3 January 2019 and 24 March – 5 April 2019; so far without success. I plan to continue the King Vulture capture attempts throughout the next months.

2. Statement of objectives

- a) Carry out capture attempts of four King Vultures (*Sarcoramphus papa*) to tag them with GPS transmitters.

3. Research accomplishments

I spent a total of 42 days in the field, divided in four field trips: 12-19 August 2018, 6-18 December 2018, 27 December 2018 – 3 January 2019 and 24 March – 5 April 2019. A typical field trip is divided in three parts: one day to drive to the study area from the nearest town, arrive to the study site and set the campsite; a variable number of days of field work and a day to leave the study area towards the nearest town.

3.1. Field trips' notes

Field trip 1 (12-19 August 2018) | Locality: Palmarcito / ANMI “El Palmar” [Lat. -18.583297, Lon. -64.866800]

Party size: 2; David Mendoza, park ranger at the ANMI “El Palmar” and me.

This was the last trip to this protected area as a consequence of a bad conduct of its Director regarding the research project. This situation will be explained in section 6 if this report.

During this trip we attempt to capture King Vultures using a pit trap and a horse as bait (Fig. 1). We placed the carcass on 15 August and decided to not go inside the hole the same day because our

previous experience in the same locality had shown that vultures and condors arrived to a carcass +2-3 days after the animal was dead. Unfortunately for us, that time, a single King Vulture descended to feed on the same day. We observed this scene from a considerable distance (500-700m), when we were coming back to our campsite from the creek where we obtained fresh water, consequently we could not obtain any photo. We waited for three more days for King Vultures to visit our carcass again, nevertheless not a single one showed up again. We left the study site on 19 August, when we observed that any scavenger seemed to be interested in the carcass remains.

Field trip 2 (6-18 December 2018) | Locality: Aguada Grande [Lat. -18.441534, Lon. -64.925310]

Party size: 2; Fabricio Claire, my field assistant, and me.

The interval between this trip and the last trip was of 3 months and 17 days. Such a long pause in fieldwork was a consequence of the problems that I mentioned I had while working at the ANMI “El Palmar” protected area. I used this period of time to look for another study site, present the project to the local actors and to arrange new logistics and permits to be able to continue my fieldwork there. The municipal protected area “ANMI Mollepampa-Lagarpampa” of the municipality of Aiquile, department of Cochabamba, was selected as the new study site for the following reasons: 1) it is located at less than 15km of the original study site in El Palmar, 2) most of the potential capture sites are reasonably accessible, 3) locals are interested in bird conservation in general and positively reacted to the possibility of conducting this research in their area.

During this trip we also used a pit trap as capture method and a donkey carcass as bait (Fig. 2). We placed a first carcass on 7 December, at dusk. I entered in the trap’s hole since 8 December at dawn. On December 10, a King Vulture landed to feed on our carcass at around 09:30 (Fig. 3) only to be scared away by a barking dog that showed up a couple of minutes later. We waited for King Vultures to come back for that day and an additional one, without success. We placed a second carcass on 12 December, at dusk. At this second carcass we waited for five days but no King Vulture showed up. We left the study site on 18 December, when we observed that any scavenger seemed to be interested in the carcass remains.

Field trip 3 (27 December 2018 – 3 January 2019) | Locality: Callao [-18.446395, -64.902172]

Party size: 2; Fabricio Claire, my field assistant, and me.

We used a pit trap and a goat carcass as bait. The carcass was placed on 27 December and we waited until it was totally consumed, mostly by maggots. The only avian scavengers that visited this carcass were a juvenile Southern Caracara and a Turkey Vulture. We left the study site on 3 January 2019. Two of the six full-days that we spent in the field during this trip had heavy rains that marked the beginning of the rainy season.

Field trip 4 (24 March – 5 April 2019) | Locality: Cruz Pampa [Lat. -18.423027, Lon. -64.980953]

Party size: 2; Fabricio Claire, my field assistant, and me.

The interval between this trip and the last trip was of 2 months and 21 days since January and February are the rainiest months and rainy conditions are not favourable to access the study sites or try to capture vultures. Moreover this year we are having an unusually long rainy season even with late April rains (Fig. 4).

During this last trip we used a propelled net and a horse carcass as bait (Fig. 5). We placed the carcass on 26 March at dusk, and waited for the King Vultures for nine days until the carcass was totally consumed. All the four cathartids present in the area visited the place (Fig. 6), but no King

Vulture descended to feed. The maximum number of King Vultures that we saw was four individuals, three adults and one immature, on 31 March. All of them soared or flight straight very high above the capture site (Fig. 7), although one individual seemed to have roosted nearby the carcass for one night, nevertheless it did not show up at the carcass on the next day.

4. Other accomplishments

In my previous report to the Rufford Foundation I had informed about the remarkable record of a pair of the Endangered Chaco Eagle. During my fourth field trip of the reported period, I could photograph what I think was a Solitary Eagle (*Buteogallus solitarius*) (Lat. -18.429438; Lon. -64.978821) (Fig. 8). In the light of these photos, I am reconsidering my first appraisal, since the observed pair of eagles could have been Solitary Eagles and not Chaco Eagles. I mention this because even though the locality would also be unexpected for the Solitary Eagle, it is closer to the known distributional range of this species than to that of the Chaco Eagle. The fact that I could not photograph the eagles of my first observation and that at a given distance and light conditions both species could be confused with each other, I prefer to not formally report any of the two records until I have not better surveyed the area for what would be enigmatic species for this part of the continent.

After receiving an invitation on 26 March 2019, I am now an Associate Member of the Vulture Specialist Group of the IUCN. This group is the most authoritative instance regarding vulture research and conservation worldwide and I am confident that being part of it will boost my initiatives regarding this group of birds while I am also certain that I can contribute to make this group more active in this part of the world, aiming to increase the interest and attention that New World vultures should receive.

5. Proposed activities over the next three months

Over the next six months I will continue with the capture attempts of King Vultures according to the following referential calendar:

· Proposed dates for the coming field trips in 2019 to the Río Grande basin (Cochabamba and/or Chuquisaca departments) to attempt King Vulture captures:

29 April – 12 May

15-29 May

3-16 June

20 June – 4 July

6. Problems and assistance needed

The main problem that I had to face during the period that is here reported was an unfortunate situation at the protected area ANMI “El Palmar”.

My previous experience researching Andean Condors in that protected area, using experimental carcasses, showed that it was a good place to conduct the capture attempts of King Vultures, thus the area was selected as a study site. All arrangements went without problems until the last field trip there, when the director unilaterally decided to reduce the time the park ranger who was assisting me in the field could stay with me, and then simply decided that no park ranger could do field work with me anymore, as the area had other priority activities that needed the participation of all the park rangers which, in the director’s opinion, were obviously more important than my research

project.

Without a park ranger's assistance, my best option was to look for another study area and an assistant that could permanently stay with me in the field. I assume that this director's attitude arose due to the lack of "quick results", which are of course beyond any guarantee when it comes to capturing wild vultures. I have been coordinating my raptor research activities in Bolivian national protected areas since 2012 and this is the first time something like this happened and I hope such a situation will not repeat again.

After I decided to change the study site I started the conversations with the personnel of the Área Natural de Manejo Integrado Municipal "Mollepampa-Lagarpampa". This area is located in the municipality of Aiquile, Cochabamba department, and is virtually contiguous to ANMI "El Palmar", separated only by the Río Grande River. Fortunately the people at Mollepampa-Lagarpampa understood the importance of the research project and accepted its conduction in their area.

I acknowledge that my task is challenging, but I will persevere with the capture attempts and I am confident that I will invariably succeed. I will keep putting my best effort on this, proceeding in full commitment to the Grant Agreement and for the good of the research.

– **Appendix** –



Figure 1. Me, coming out the pit trap at Palmaricito. 15/08/2018. © David Mendoza



Figure 2. Capture site at Aguada Grande. 7/12/2018. © Fabricio Claire



Figure 3. King Vulture on the carcass at Aguada Grande. 10/12/2018. © Fabricio Claure



Figure 4. Rainy day in Cruz Pampa. 1/04/2019. © Diego Méndez



Figure 5. Fabricio Claure (right) and me, preparing the net at Cruz Pampa. 26/03/2019. © Willy Lira



Figure 6. Andean Condor, Turkey and Black Vulture at Cruz Pampa. 1-2/04/2019. Photos: D Méndez



Figure 7. Adult King Vultures soaring at Cruz Pampa 31/03/2019. Photos: D Méndez



Figure 8. Presumed Solitary Eagle at Cruz Pampa. 2/04/2019. Photos: D Méndez