

Movement ecology and conservation of the King Vulture in the Andes of central Bolivia
1st Report to The Rufford Foundation

Country: Bolivia

Region: Tropical Andes

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

I gave a seminar at the MNHN to introduce my doctoral research project to the ornithological community. I started the fieldwork in the first half of July with the objective of capturing and marking four King Vultures (*Sarcoramphus papa*) in the Interandean Dry Valleys of central Bolivia. I conducted four capture attempts which were unsuccessful; nevertheless, I obtained a good amount of field experience as this is the first time any researcher tries to capture King Vultures to equip them with GPS-GSM transmitters. Field work also brought remarkable raptor sightings such as 70-80 Andean Condors (*Vultur gryphus*) gathered at a single carcass and a completely unexpected observation of a pair of the endangered Chaco Eagle (*Buteogallus coronatus*), c. 200 km far from the nearest known record in Bolivia.

2. Statement of objectives

- a) Start the field work in Bolivia.
- b) Contribute in the development of activities that promote vulture conservation in Bolivia.

3. Research accomplishments

3.1. Field work

We started the field work in the Área Natural de Manejo Integrado “El Palmar” (18°32'49.17"S ; 64°51'0.58"W) where we attempted the capture of the four King Vultures. I used the noose carpet technique and an ovine or equine carcass as bait (Fig. 1). I think that all of the attempts failed as a consequence of either Andean Condors or Black Vultures (*Coragyps atratus*) being too numerous to allow the King Vultures to feed at the carcasses. We tried to ‘selectively drive away’ condors and Black Vultures by whistling and making noise from our hide (which was approximately 20m far from each carcass), but in the end the most numerous species prevailed and we had to dismantle the nooses during night of the last capturing day, once we confirmed that King Vultures were no longer interested in our carcasses and had abandoned the area.

For future trials I will chose flatter capture sites in places covered with more bushy vegetation, on the understanding that such sites would deter condors from landing to feed, as it would be too difficult for them to later take off from these kind of sites; whereas King Vultures should feed before Black Vultures, so that in this way they will be more exposed to our nooses.

King Vultures naturally occur at low densities and visit carcasses at extremely low densities when compared to the other vulture species. For instance, at each of the four carcasses we observed one, three, four and two individuals respectively (Fig. 2), whereas c.30 Black Vultures and at least 15 Andean Condors were observed per carcass (Fig. 3).

Nevertheless I am optimistic about capturing the King Vultures soon, as during the last week I explored an area close to the Río Grande that seems suitable to trap the species (Fig. 4).

4. Other accomplishments

My research is being instrumental to impulse the elaboration of a national action plan for the conservation of the Andean Condor in Bolivia, the other most charismatic vulture in the country. On 18 June we had the last workshop with the national authorities (Ministry of the Environment) with the objective of continuing with the design of the plan. As a result we had significant progress because the ministerial personnel agreed to produce a first draft of the document by the end of July.

While conducting field work activities, I recorded a pair of the endangered Chaco Eagle (*Buteogallus coronatus*) (18°32'22.05"S; 64°47'23.68"W). The observation was made approximately 200 km far from the closest record in Bolivia and is a new altitudinal record for the species. Given the conservation status of the Chaco Eagle and the characteristics of my observation I will produce a manuscript of it, likely a letter, as soon as I can. Likewise, another remarkable field observation is the congregation of between 70 and 80 condors at a single carcass. I observed similar congregations in the same area four years ago so this observation serves as an indicator that the condor population may be still stable.

I found a roost of Black Vultures (18°32'36.46"S; 64°47'18.25"W) where 10 to 30 individuals were observed spending the night (Fig. 5). The roost was a group of *caraparí* cactus (*Neoraimondia herzogiana*), an endemic species of Bolivia and a quick review of the available information show no

previous data on such an interaction between both species.

On 29 June I gave a seminar presenting the basics of my research at the MNHN auditorium. The public were some colleagues, biology students and birdwatchers (Fig. 6)

On 8 July I trained the park rangers at ANMI “El Palmar” on the identification of King Vultures and Andean Condors (Fig. 7).

5. Problems and assistance needed.

So far my project is progressing well. Mine is the first experience of capturing and tagging vultures in Bolivia thus I expect to have a laborious beginning. I am optimistic that once the first birds are trapped I will continue in that path until all the intended number of birds is marked and is already sending us the most valuable data.

Figures: All the cited figures are shown and described in the Appendix of this report. All photographs were taken by Diego Méndez.

- Appendix -



Figure 1. Ovine (left) and equine carcasses where used as bait. The nooses were hidden the best that we could. (11/07/2018, 22/07/2018)



Figure 2. A King Vulture perched on a Caraparí alongside Black Vultures. (24/07/2018)



Figure 3. Between 70 and 80 condors gathered around the last carcass we placed. (24/07/2018)



Figure 4. The Río Grande valleys seem suitable to trap King Vultures. Future attempts will likely be conducted there (28/07/2018).



Figure 5. A Black Vulture roost over a group of *carapará* cactus (25/07/2018)



Figure 6. At the beginning of the seminar entitled: “Neotropical vultures: movements, home range and resource selection”, at the MNHN auditorium (29/06/2018).



Figure 7. Group photo at the Rodeo El Palmar campsite in ANMI El Palmar (8/07/2018).