

Project update (December 2024):

Effect of Seasonal Humidity on Crop Damage and Interspecific Interactions Between Wild and Domestic Large Herbivores in the Rural Areas of the Atacama Desert

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So far, we have complied with the proposed schedule and the main goals of this Rufford project: “a) Supporting the activities of a long-term conservation initiative in the rural areas of the Highland Atacama Desert of Chile, and b) Identifying how seasonal changes of environmental humidity modifies the rates of crop damage, interspecific competition and disease transmission between wild and domestic large herbivores”. We have only experienced one unexpected issue during this project so far: two of the eighth camera traps we bought to monitor species using croplands were broken and did not work once deployed in the field. We sent them both back to the factory and we are now waiting for their replacement.

The activities that have been carried out to date are:

1. Buying equipment (May-August 2024). We bought 8 camera traps, batteries, SD cards, 4 solar electric fences, wire and all the materials that we needed for deploying electric fences.
2. Documenting and filming the human-wildlife conflict (April 2024- Present). This activity is conducted by the undergraduate student Facundo Mercado (BSc in Cinema and Tv, University of Chile) who is doing an internship in this Rufford project. Facundo started as an intern during the previous Rufford Grant, and he has continued filming our work as well as the conservation problem during this current Rufford grant. Facundo has stated he will start studying a Master Degree in Documentary this 2025, and he expects to use these recordings to produce a short documentary movie.
3. Microhistological studies to evaluate diet preferences of taruka deer and feral donkeys in the areas they coexist (April-December 2024). This activity is performed by the undergraduate student Nicolas Segovia (BSc in Conservation of Natural Resources, Austral university of Chile) who is doing an internship in this project. Nicolas is currently doing lab work which consists of preparing all the faecal samples collected in the field to perform diet analyses.
4. Deployment of camera traps at 4 cropsites (October 2024). We visited 4 different farmers (Don Rubén from Putre, Don Jesús from Chapiquiña, Don Serafin from Chiapa and Doña Juanita from Chiapa) and installed two cameras per site (one in the area that was going to be fenced and another “control” with similar characteristics but that was not going to be fenced). Considering two cameras were broken, we only installed six of the eight camera traps.
5. Field Campaign to assess distribution and abundance of large mammals (November 2024). We performed the 8th field campaign of our long-term monitoring program. The campaign was 11 days long, and we covered our entire study area. We : i) counted large herbivores that uses the rural areas of the Highland Atacama Desert in Northern Chile, ii) collected faecal samples to perform disease, parasite and diet analyses, and iii)

collected SD cards from camera traps, and deployed three of the four electric fences at crops that are damaged by taruka deer and feral donkeys. We did not have enough time to deploy the fourth fence. This will be installed during our next field campaign.

The activities that will be carried out during the next months are:

1. Infographic poster to improve coexistence with wildlife (January-February 2025). This poster will be generated by our designer Sebastián Barría (<https://www.instagram.com/sebaritic/>). This document will contain information about how to reduce damage of crops by large herbivores, as well as how to use wildlife to reduce other types of damage (eg. attracting birds and bats to control insects as well as attracting bird of preys to control small mammals). This poster will be given to local people during our last field campaign (March 2025).
2. Collecting camera traps from crops (March 2025). We will collect camera traps and assess if electric fencing worked for controlling crop damage by large herbivores. We will donate all the electric fence to the affected community as well as we will train them on how to use these equipment.
3. Analysing Photos from camera traps (March 2025). Once camera traps are collected we will check their photos and analyse if electric fences reduced large herbivores visiting the crops.