

### **Final Evaluation Report**

Your Details				
Full Name	Diego Gallego García			
Project Title	Expanding the Chaco Eagle Outreach, Research and Conservation Project towards New Areas in the Dry Chaco Ecoregion			
Application ID	39927-2			
Date of this Report	18/04/2024			



## 1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
PERCEPTION AND AWARENESS (I): SCHOOLS  Give talks in more than 20 schools				A total of 43 talks were given at more than 30 schools, mainly at elementary and secondary levels, but also tertiary (university). We reached more than 1,000 students from elementary level (aged 6-12), more than 1,000 from secondary level (aged 12-18), around 300 from other levels (kindergarten, tertiary), and more
PERCEPTION AND AWARENESS (II): LOCAL PRODUCERS AND RURAL WORKERS  Reach ~600 landowners and rural workers				than 150 teachers from all levels  We organised 12 talks at rural associations of local producers, and six in situ meetings in fields and ranches. We also participated at a livestock auction in eastern Santiago del Estero, talking to more than 100 rural people. We reached ~650 local producers, vets and landowners in these activities.
				Additionally, we performed 134 in-person interviews at private ranches with rural workers, and 157 people belonging to the local community (bird watchers, scientists, authorities and teachers), attended our talks.  The number of field people reached with our outreach project in rural areas of Santiago del Estero is close to 800.



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RESEARCH (I): NEST			We discovered nine new
SEARCHING			reproductive Chaco eagle
			territories, and confirmed a
Discover between 3			territory that was found during the
and 6 new			last Rufford Small Grants project in
reproductive Chaco			2021/2022 (32612-1). So, the total
Eagle			of Chaco eagle territories in
territories and nests			Santiago del Estero is now 10. We
			did this thanks to sightings from the
			outreach campaign and
			confirmed it because we saw the
			adult pair.
			In five of the 10 territories, we
			·
			found the old nests where Chaco
			eagle adults had bred in past
			years (we know this thanks to local
			people, or because of old prey
			remains in the vicinity), although
			they were not occupied this year.
			In the remaining territories, we
			were not able to locate the
			active, nest.
			GC1170, 11031.
			We found no active Chaco eagle
			nests this year.
RESEARCH (II): NEST			Since we did not find any active
MONITORING			Chaco eagle nests, we were not
			able to monitor any breeding
Breeding monitoring			activity, or behaviour, at the
of 3 to 6 Chaco			territories explored of Santiago del
Eagle nests			Estero province.
Lagio 110313			Estate provinces.
			However, we did monitor five nests
			found in the Santa Fe region (the
			province which is close to
			Santiago del Estero), two of them
			discovered thanks to the talks at
			the province of Santiago del
			1
			Estero, and three of them
		1	discovered during the past Rufford



	Small Grants Project in 2021/2022 (32612-1). Three nests failed, but in the remaining two, the fledglings (one for each nest) were banded and GPS-tagged, just near the border between Santa Fe and Santiago del Estero provinces.  This highlights the importance of expanding the outreach, research, and conservation actions at transboundary levels
CONSERVATION: RESCUE RAMPS  Install around 100 rescue ramps	(province, country, etc.).  We installed ~60 rescue ramps in 20 different fields during October and December 2023 and February and March 2024.  Additionally, we gave 30 rescue ramps to 15 field workers and landowners, which were installed by them.  Lastly, three landowners of big fields (>10,000 ha) installed 10 rescue ramps each (30 in total), which they built using own materials from fences and farmyards.

#### 2. Describe the three most important outcomes of your project.

#### a) Massive outreach campaign, very positive response from the community

One of the main outcomes of this project has been the number of people directly reached with our outreach talks (nearly 3,000), and the numerous interviews and press releases in newspapers, TVs, and radio programmes, which surely have expanded our conservation cause towards thousands of people more.

As in the previous project (32612-1), fewer than 5% of the people reached were able to correctly identify the Chaco eagle. However, thanks to a big effort by the educative authorities, and a significant interest from the rural associations of producers, we had positive responses from the community in general, including:



- Schools: five elementary schools created, after our talks, a series of arts and crafts exhibitions to present them at national, and regional, science fairs and competitions. A secondary school made a project for their last week of courses before austral summer (December) showing parents the importance of conserving Chaco eagles in their habitats. Additionally, two tertiary classes of alumni studying to be teachers brought this conservation cause as a practice project for children. Last but not least, the educative institutions allowed us to carry out the first ever research on the impact of outreach talks on the knowledge, perception and action of students. To do that, we made the students fulfil a short survey before the talk, and 2 weeks after it. These results will be published between 2025 and 2026.
- Birdwatching group "COA Kakuy": a regional birdwatching group, COA
  "Kakuy", of Santiago del Estero province, significantly collaborated in the
  development and execution of the project. Their main tasks performed were
  searching for schools and associations to give the talks about the Chaco
  eagle, spread our research and conservation cause to anyone interested in
  the province, help us during fieldwork, and start working together with
  authorities to protect some specific areas where the Chaco eagle has been
  sighted frequently.
- Rural associations of producers: this time, the rural world was a priori more
  interested in listening to our project, and we were able to organise more talks
  with rural people, which are now interested in our project, in conserving the
  eagle, and in reporting any sighting. Of the nine new reproductive territories
  discovered, seven were directly reported by them.

#### b) <u>Significant increase in Chaco eagle sightings after the outreach campaign</u>

In a region where around 35 Chaco eagle independent sightings had been reported before our arrival (eBird and literature, more than 50 years), our outreach project has yielded more than 50 independent sightings in just 8 months of project work (September 2023 to April 2024). This is clearly a demonstration that, to conserve, first we have to get to know the species. The response of people from the field, the schools, the authorities, the media has been key to understand the success of this project. All this information is already being used in land management plans by the environmental and forestry authorities of Santiago del Estero province.

#### c) New, valuable information on Chaco eagle conservation and mortality

This project has revealed some disturbing realities concerning Chaco eagle conservation and mortality.

• The first one is the relatively <u>high amount of mortality by direct persecution</u> (e.g., shooting) of this species: with eight Chaco eagle individuals illegally killed in 8 months, and two additional individuals found as pets. This "record" is too serious to be overlooked. A dead eagle a month could be devastating for a slow



maturing endangered species like the Chaco eagle, for which fewer than 1,000 adult individuals remain in the wild.

- The second one, is the <u>discovery of a new potential mortality source, drowning in water canals</u>. Our experience in "Canal de la Patria", an open air concrete water canal in northern Santiago del Estero, with more than 250 individuals drowned of more than 35 wildlife species in just 6 months (including a couple of birds of prey), is warning us about the possibility that the Chaco eagle, which already falls in water reservoirs (a data that we confirmed also for Santiago del Estero province), could be seriously affected by this mortality source. In this case, however, the potential solutions (bridges, fences, etc.) are always ineffective, and rescue ramps are not useful, because the water runs too fast for animals to grab on the rescue ramps.
- The third one, difficult to demonstrate scientifically (at least by now), is that the lack of active reproductive territories and nests found in 2023, which has been highlighted as one of the driest years of the last decades, is pointing towards a worrying fact, Chaco eagles might significantly be harmed by global warming, in what refers to reproductive success. Apparently, the drought reduces plant productivity, and makes the prey of the Chaco eagle (snakes, lizards, tortoises, armadillos) less abundant, thus making it difficult for this endangered species to breed.

### 3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

Difficulties during this project have been relatively numerous, when compared to the previous one:

#### Lack of owner (or manager) permissions to enter fields

- This has probably been one of the most worrying situations that we have had to face. Although we had the permissions from the Dirección General de Bosques y Fauna of Santiago del Estero province to do research, there have been a dozen fields and ranches where our entrance has been forbidden, in most cases due to the distrust and suspicion of field owners, managers and rural workers.
- In this province, the socioeconomic and hierarchical situation is an issue, since a small number of rich people own a relatively high number of fields in the area, and they employ (without a contract) a great number of low-income people in risk of social exclusion (e.g., from native tribes). These people are usually reluctant to do anything "different" in the fields where they work (e.g., allowing researchers to enter), because they fear being fired by the owners. Another situation is that many landowners are afraid of illegal hunters that enter the fields for cattle rustling and native species persecution; in a context of general absence of authorities and rural police, they will not allow anyone to enter their fields, even if they carry the names "university", and "research council", as we do.



• These situations have prevented us from conducting our research in a correct manner. Of those "forbidden fields", we can assume that in at least four of them Chaco eagle pairs had their territories (i.e., we saw the reproductive pair flying into them most of the times), and probably their nests. Tackling these situations has been impossible, even invoking legal issues with the authorities (which, most of the times, looked the other way).

#### Deforestation (and absence) of Chaco eagles in some parts of the province

- As in the past project in 2021, we have confirmed the massive habitat fragmentation, loss and general devastation in eastern Santiago del Estero province, adding new areas to these "black holes for diversity" in other spots of the province. The advance of agricultural crops such as soybean, and the spread of harmful activities such as pesticide use, is removing the traditional Chaco ecosystem. This results in a complete absence of the Chaco eagle in the area.
- This is a worrying fact that calls for urgent research in the Great Chaco ecoregion. Possible natural corridors between Santa Fe and Santiago del Estero provinces are now threatened, and this could isolate Chaco eagle populations, with deleting effects on their genetic structure.
- We have already sent a detailed document to the authorities of Santiago del Estero province, highlighting the areas of interest to preserve the native forests to prevent this conservation issue. We hope that they could use this information to better manage the land-use priorities of the different regions of Santiago del Estero province.

#### Locals confused Chaco eagles with other potentially conflictive species

- In a society like the one at Santiago del Estero (strongly hierarchical, generally low-incomed and with low levels of development and alphabetisation), it is very difficult to tackle human-wildlife conflicts. One of them, in our case, has been to explain the society that the Chaco eagle IS NOT the other raptor species that they know and hate.
- Apparently, these raptor species, namely Harris' hawk (Parabuteo unicinctus), southern-crested caracara (Caracara plancus), black-chested buzzard eagle (Geranoaetus melanoleucus), savanna hawk (Buteogallus meridionalis), and falcons of the genus Falco, are known in the area for predating upon livestock or species of human interest (e.g., chicken, lambs, and goat kids), although we suspect that some of them are probably not doing that. Anyway, the traditional activity is to shoot at any relatively big bird of prey (this also includes vultures) just in case they predate upon one's livestock. This has been the case for many of the Chaco eagles that we found shot.
- Fortunately, we have been able to tackle this issue with the outreach campaign.
   Many children have asked their parents not to shoot at these eagles, teaching



them how to correctly recognise its characteristics and how to avoid confusion with the other species. Now the province is considering adding the species as "Natural Monument" to better protect it from a legal and social way.

However, there is a lot to do. We know that in many places this eagle is still
unfairly hated, and even if we solved the problem with the Chaco eagle, there
would still be many issues with all the other species that the local inhabitants of
this region are illegally killing.

### 4. Describe the involvement of local communities and how they have benefitted from the project.

As happened during the past project in 2021, the local population in Santiago del Estero province has experienced a huge change, from lack of awareness on the Chaco eagle identification and conservation to an attitude towards helping this endangered species. Some specific milestones which show the commitment of local communities are:

- Birdwatching group "COA Kakuy": as mentioned before, this group of birdwatchers has shifted their attention, from general identification of birds (average activity of the birdwatching group), to the development of new ways of collecting Chaco eagle data in the region, and also to the involvement of their members in outreach and conservation tasks. Nowadays, they are working hard on new declarations and resolutions by the authorities, to protect the Chaco eagle. We can say, without doubt, that they are our best representatives in this province when we are not there.
- Declaration of our outreach, research and conservation project "OF INTEREST". In Banda department (central Santiago del Estero), a university professor, an amateur birdwatcher and a local landowner are working together with the political representatives of the department to declare our project "OF INTEREST", a fact that will facilitate any future action regarding our research and conservation of the Chaco eagle.
- Organisation of photographic events in Santiago del Estero city. In the capital city of Santiago del Estero province, a couple of photographic contests/events have been organised during last weeks, where the main logo has been "endangered species". For the first time ever in the province, the Chaco eagle is emerging as a flagship for ecosystem conservation via the introduction of this species to the general public.
- Some schools and classes are participating in scientific festivals with the Chaco eagle as the theme. As said before, the educative system in the province of Santiago del Estero is benefitting from the outreach work that we did, as it has given them the idea to work on projects to send to national and regional scientific festivals, where the Chaco eagle will be the central point of different activities (handcrafts, visual material, music).



 Our project has appeared more than 12 times in regional newspapers, more than 20 times in radio programmes and in five TV episodes of the area. A milestone includes the appearance of our conservation cause in a national TV channel, where hundreds of thousands of people watched the interview.

#### 5. Are there any plans to continue this work?

Yes, of course. Our research, outreach and conservation project in the Chaco ecoregion (northern Argentina) is still ongoing. This year we have concentrated our efforts in Santiago del Estero (mainly) but also in the region of the previous project (Santa Fe), and we still have a long way to go, not only in the Great Chaco ecoregion of northern Argentina, but also in other countries where this outstanding biome is (Paraguay, Bolivia, Brazil).

Mainly, there are four aspects that we have to tackle in the mid-to-long term:

- Mortality by electrocution: we still need to address a major source of mortality for the species, at least in central Argentina, electrocution in power lines. In Santa Fe province, this year three Chaco eagles have been reported dead by electrocution, so we need to establish a long-term monitoring of this potential mortality source in northern Argentina.
- Chaco and Formosa provinces (or the new horizons): geographically speaking, the Great Chaco ecoregion of northern Argentina covers the provinces of Santa Fe, Santiago del Estero, Formosa and Chaco. This last province (which not in vain brings the name of the ecoregion) has a significant number of Chaco eagle sightings and is also suffering from a high deforestation rate. The exploration of this new area (where no nests have been officially documented) will probably be a next step towards understanding the dynamics of Chaco eagle populations in northern Argentina. Formosa, with a question mark, remains as a mystery, since we are not sure if the habitat characteristics, the human-wildlife conflicts and in general the ecosystem situation allows the Chaco eagle to establish there.
- The need to establish binding agreements in the places where we do research and conservation: although we are travelling and exploring great and wide areas in Argentina, sometimes we feel that we should try harder in forcing authorities not only to "symbolically" collaborate with us, by signing declarations of interest and partial agreements. To effectively protect this endangered species, we truly should convince authorities to sign ambitious agreements that compel landowners, managers and other actors to protect the Chaco eagle in their everyday activities. This is probably a difficult task, because here we are going to face socioeconomic and political interests that we are not used to address.
- What if we scale our Chaco eagle conservation cause to other countries?: this is probably the most ambitious, yet difficult, tasks that our team is considering: expanding all our fieldwork towards new countries where this eagle is. More



concretely, the Chaco eagle is present in all countries where the Chaco ecoregion exists, namely Bolivia, Brazil and Paraguay. There was a meeting in Brazil 2 years ago that my supervisor (José Sarasola) attended, to start a monitoring programme. Also, we have some colleagues in Bolivia who have already documented some old nests with prey remains. Finally, Paraguay, for being almost completely covered by the Great Chaco ecoregion, and because it is not as big as Brazil, could be the most likely destination for our project in future years. The absence of scientific and conservation groups and organisations is a strong disadvantage for this endangered species, which needs more allies to favour its conservation.

#### 6. How do you plan to share the results of your work with others?

Regarding social media, we have shared content on our field campaigns in Santiago del Estero province, through more than 60 publications, and stories, between the different networks since The Rufford Foundation project started:

- Facebook: <a href="https://www.facebook.com/cecaraunipam">https://www.facebook.com/cecaraunipam</a>; 4,200 followers.
- Instagram: @proyectoaguilachaco; more than 3,000 followers.
- X: @CECARA ARG; 120 followers.
- YouTube: https://www.youtube.com/@cecara\_unlpam574; 250 subscribers.

Also, and as I mentioned above, we have appeared in several local radio, TV and newspaper programmes, notes and interviews.

Concerning scientific papers, we already submitted a manuscript to Conservation Biology to be published as a peer-reviewed article to make it available for the international scientific community. The topic of this paper is the wildlife drownings at Canal de la Patria. We are also preparing a paper with the direct (and indirect) impacts of the talks and outreach activities on the sightings and discoveries of new territories and nests of Chaco eagle, and we plan to have it published by the beginning of 2025. We are also analysing the data on the surveys of knowledge, perception and action made at schools, and probably we will prepare the manuscript for its publication during 2025 and 2026. Finally, a paper on the results of all interviews performed on the perception of Chaco eagle, and another on Chaco eagle mortality in Argentina, will be prepared during 2025, for its publication during 2026.

Last but not least, the new Ph.D. student at CECARA-CONICET (Sergi Gómez-Espí) is currently working on the data of diet, ranging areas and habitat resource selection, using the pictures of the camera traps from the last Rufford project, to name a few topics.



#### 7. Looking ahead, what do you feel are the important next steps?

Since our project's name includes the words "outreach, research, and conservation", these are probably the first, next and concluding steps of every project of this kind.

- Firstly, it is important to keep on raising awareness in the Great Chaco ecoregion, both in Santa Fe and Santiago del Estero provinces, and in new provinces of this ecoregion (Chaco and Formosa). Without knowing the species, and their conservation issues, we cannot protect them in any case. Our massive outreach campaigns (> 2,000 people in Santa Fe and >3,000 people in Santiago del Estero) are surely making a huge impact in the way people perceive this eagle, and are a positive point towards avoiding its extinction. Also, outreach is one of the best tools to assess the status of conservation of the regional populations of endangered and elusive species such as the Chaco eagle.
- Secondly, we need: (1) to reinforce our presence in both Santa Fe and Santiago del Estero provinces; and (2) explore new areas of the Great Chaco ecoregion (provinces of Chaco and Formosa). Both actions, as said before, will consolidate the Chaco eagle monitoring program, will allow us to continue building baseline knowledge and thus will help managers, authorities and decisionmakers to protect this endangered species from extinction.
- Thirtdly, in semi-arid areas of Argentina (both in central and northern Argentina), we have already evidence that Chaco eagles suffer from electrocution in power lines. With more than 30 individuals reported dead so far, we need to establish effective monitoring programmes to evaluate the impact of this human infrastructure on Chaco eagle, and other raptor, populations.
- Fourthly, to allow our project to continue, we have to make sure that the Chaco eagle has the legal protection behind it. We are already working with administration officers and bureaucrats of the different provinces involved (Santa Fe and Santiago del Estero, mainly), to fulfil this task, but we should try to carry out more actions of this kind.

# 8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

Yes. As in the previous project of 2021, The Rufford Foundation was acknowledged at all times during the outreach campaign. Some of the slides of the PowerPoint presentations that were presented during the talks and meetings had the logo on them, as well as the promotional materials (i.e., brochures and leaflets). For instance, this is the last slide of many of the talks at schools and meetings:



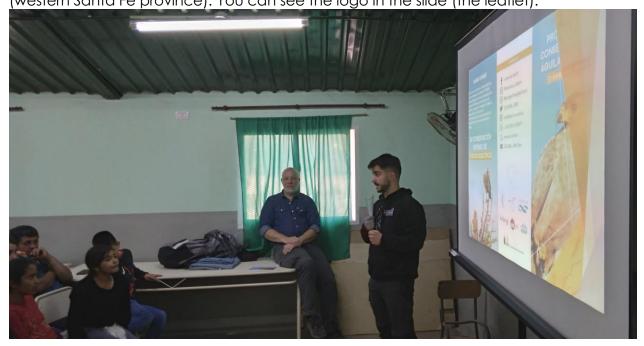


This is one of the leaflets that we give to anyone interested (landowners and managers, local producers, rural workers, school teachers and students, authorities...).





This is M.S. Sergi Gómez-Espí giving a talk at an elementary school in Gramilla (western Santa Fe province). You can see the logo in the slide (the leaflet).



This is me at the meeting with the Rural Association of Producers of Quimili (eastern Santiago del Estero province), where more than 100 people listened to the ecology and conservation status of this endangered species. This last slide has the logo of The Rufford Foundation on it.





Screenshot of the announcement of an informative talk at Villa Ojo de Agua (Ojo

de Agua department, southern Santiago del Estero province).



Picture of a talk by Dr. José Hernán Sarasola in northern Santa Fe province of this year, in Tostado (at the border with Sanitago del Estero province).



After our own outreach campaign, other social actors continued giving talks in other places. This is a slide from a talk by Rodolfo Domnanovich, managing director of COA "Kakuy" Birdwatching Group, at the Faculty of Forest Sciences of Universidad de Santiago del Estero (central Santiago del Estero province).





#### 9. Provide a full list of all the members of your team and their role in the project.

First, a list of members that belong, directly or indirectly, to CECARA (Center for the Study and Conservation of Birds of Prey in Argentina).

**Diego Gallego García, M.S. Zoology (myself):** I was in charge of every step of this project, from the writing and structuring of the proposal to the writing of this final evaluation report. I took a primary role in every activity of education, research and conservation. I organized and carried out the outreach campaign (talks at schools and meetings with producers), performed all interviews with local people, kept contact with everyone involved in nest searching, gathered information about potential nesting sites, actively searched for territories, and installed rescue ramps at water reservoirs. I will also be in charge of analysing the data during next months and of publishing any related material.

**Sergi Gómez-Espí, M.S. Zoology:** our new Ph.D. student at CECARA-CONICET has joined me in three out of four field campaigns (all but the last one). Sergi has experience in wildlife monitoring in general. He has collaborated in the outreach talks, in nest searching and in rescue ramp installing, to name a few. For him, these have been the first outreach, research and conservation experiences with this project in Argentina. He is nowadays starting his own projects in central Argentina with the Chaco eagle.

**Itxaso Larrinaga Castresana, M.S. Ecosystem Biodiversity and Management:** as a science and conservation trainee at CECARA, Itxaso joined the Chaco eagle project in December 2022 and until September 2023. Thus, she participated during the first field campaign of this project, namely the outreach campaign. Itxaso has experience in environmental education and outreach, so her help was important during the talks and meetings.

Telmo Portugal Baranda, M.S. Ecosystem Biodiversity and Management, and Ángela Galarza Baños, M.S. Veterinary Sciences: as science and conservations trainees at



CECARA, they joined the Chaco eagle project in December 2023. Thus, they participated during the last (fourth) field campaign of this project, helping with the vital data on the wildlife drownings at the Canal de la Patria, and installing rescue ramps at water reservoirs.

José Hernán Sarasola, Ph.D. Biology: supervisor of my PhD and my director in this project. This time, and due to time constraints and other obligations with this project (central Argentina) and other projects in the research centre, José has not joined me during the field campaigns, but he has provided sufficient logistical and bureaucratic support to allow me to perform the field campaigns successfully. For example, we were both in charge of fixing the pick up truck, which was in bad conditions at the start of the campaign. He is nowadays supervising the process of declaration of the Chaco eagle as Natural Monument with the bureaucrats and natural resource managers in Santa Fe province.

Also, our project in Santiago del Estero counted with the valuable participation of people from local communities. A huge amount of them have joined us in our research and conservation mission, making our path easier towards giving talks at schools or Rural Associations of Producers, discovering new Chaco Eagle territories or installing rescue ramps, to name a few. Although they are not part of our scientific team at CECARA, I will outline our main collaborators in the territory because of the key role they have played in this project:

**COA Kakuy Birdwatching Group**: since explaining, one by one, the characteristics, experience and activities performed by all members of this group in our project (>15 people) would make this report too long, I will start stating that the collaboration of all birdwatchers from this organization (which belongs to the national NGO Aves Argentinas) has been determinant and key to reach places, schools, associations and people that otherwise we would not have been able to reach. Rodolfo Domnanovich, José Navarro, Sergio Quinzio, Oscar Coria, Oscar Quiroga, Javier Lima, Cinthia Cavila, Daniel Lescano, Victoria Tasso, Roly Achával, Marile García, Hugo... all these people, most of which do not work in anything related with biology, or conservation, have provided us with their experience in the fields, with birds, and with local communities, bringing us to the province as if we were locals.

**Guillermo Carignano, B.S. Biology**: director of Copo National Park (Santiago del Estero). He organized our visit to the protected area (National and Provincial Park) and was in charge of the permissions to make it possible.

**Lucas Gelid, and Luis Gelid, M.S. Veterinary Sciences**: native from Quimilí (Santiago del Estero). They organized and arranged some of the meetings and talks at schools in Moreno and Juan Felipe Ibarra departments (Santiago del Estero). They are continuously reporting us with Chaco eagle sightings. They have also aided us in difficult moments (e.g., stuck in the mud, flat tyres...).

**Luis Ataide, firefighter:** chief of the volunteer firefighters of Ojo de Agua (southern Santiago del Estero). Aided us during a couple of field campaigns and organized meetings with producers.



**Leandro Repetti, firefighter:** chief of the volunteer firefighters of Quimili (eastern Santiago del Estero). He reported us with some Chaco eagle sightings and also wildlife drownings in Canal de la Patria.

**Federico Rivas, director of Protected Areas:** he is responsible for giving us the permissions and facilitating our work in the protected areas such as Copo Provincial Park.

**Marcelo Alfaro, journalist:** Marcelo has covered all the steps of our Chaco eagle outreach, research and conservation project in Santiago del Estero province. With around ten communications in EL LIBERAL newspaper, we have reached a handful of people thanks to him.

**Ramiro Ruiz de los Llanos, landowner:** owner of El Mangrullo (south-western Santiago del Estero). He has helped us find a new Chaco eagle territory.

**Noelia Zanichelli, director of Forests and Wildlife:** she has been in charge of giving us the permissions to allow our fieldwork.

**Rea family in Pirpintos:** a huge mention to a family that has facilitated transport, housing, contacts, and a handful of sightings in Los Pirpintos (northeastern Santiago del Estero province).

**Pablo Gonza**, **secondary teacher**, **and Analia Chavez**, **elementary teacher**: they teach Biology in Copo department (northeastern Santiago del Estero province), and they have been responsible for organizing the activities and work for the students to attend the national and provincial science fairs and contests, once they received our visit. All these activities have had the Chaco eagle as the main character.

Juan Ignacio Liébana, Carlos Dorado, and Sergio Quinzio, priests: these three priests (one is a member of COA Kakuy, Sergio Quinzio) are passionate about birding and wildlife photography. Their sightings have been vital to search for these eagles in Santiago del Estero, and they have also reported wildlife drownings in Canal de la Patria (northern Santiago del Estero).

**Daniel Carrizo, and José Baecke, park rangers:** they are the first to report us with a Chaco eagle nest (and old one, now inactive). They are some of our biggest helpers in Copo department (northeastern Santiago del Estero).

**Fabián Ledesma, field manager:** field manager near Santos Lugares (northern Santiago del Estero). In his field, we found a Chaco eagle pair and an old nest, thanks to his sightings and indications.

**Javier Padilla, field owner:** field owner near Campo Gallo (northern Santiago del Estero). In his field, we found a Chaco eagle pair thanks to his sightings and indications.



**Maximiliano Churruarín, amateur ornithologist**: naturalist and ornithologist from Tostado (9 de Julio, Santa Fe). Since he lives near the border with Santiago del Estero, he provides the project, from time to time, with new sightings.

**Javier Ruiz, field owner:** after hearing a talk in La Nena, eastern Santiago del Estero, he reported an active nest on the other side of the border (in Santa Fe province), which we monitored until it failed.

**Luis Eliasim**, **rural worker**: employee near Pozo Hondo (central Santiago del Estero), that has facilitated housing, transport, sightings and contacts of the area every time we have needed them.

**Carlos Juárez, rural worker:** employee from El Mangrullo field (south-western Santiago del Estero). He joined us during seven tiring journeys when we walked dozens of kilometers to search for old and new nests of the Chaco eagle.

**Luciana Legunda, secondary school student:** after watching us give a talk in Los Pirpintos (Copo department, northeastern Santiago del Estero), she reported a Chaco eagle pair near the locality, allowing us to find another new territory.

#### 10. Any other comments?

We again want to acknowledge The Rufford Foundation for their financial support to this project through the Rufford Small Grant. These types of grants make a big difference to the conservation of species of conservation concern on our world.

Also, a last comment. Since this species is endangered worldwide, with less than 1,000 mature individuals in the wild, we need to continue working on subjects like outreach, and conservation. The evidence that we have collected in this project is disturbing, with a high amount of Chaco eagle mortality by direct persecution, but also a high risk of mortality by drowning, electrocution, and a still unknown effect of habitat fragmentation and climate change on its breeding populations. Thus, I will probably keep applying to The Rufford Foundation grants, probably in more integrative studies that gather different subjects, not only directed towards water reservoirs and shooting, but also towards power lines and habitat fragmentation. I really hope that I (we) can continue expanding this project with the support of The Rufford Foundation.

Thank you very much! (Or, as the Quichua speakers of Santiago del Estero would say: "Añay Pay Sunqullay!").