This is the third update from the project “An integral approach to the conservation of the endangered Chaco eagle in semiarid habitats of Argentina” (Rufford 1st Booster Grant 44634-B). During February, we carried out two different fieldwork campaigns, one (early February) aimed at tagging the remaining Chaco eagle fledglings, monitoring the fate of active nests and removing camera traps from them, and the other one (late February) with the objectives of installing rescue ramps at water reservoirs, and performing field surveys of wildlife mortalities at power lines. During both campaigns, we also explored new territories with the help of local communities.

EXPLORATION OF NEW TERRITORIES → In both Córdoba and San Luis provinces, the exploration of Chaco eagle territories during February has yielded very useful data which will be used in the following reproductive seasons. Indeed, we found two Chaco eagle nests that have not been active this year, and saw a pair of adult Chaco eagles with their recently fledged juvenile in another site. These three sites will be explored next breeding season with the hope of finding more nests of this elusive eagle. The collaboration of local communities and the valuable data yielded by talks and meetings with rural workers has been key to achieving more data.

NEST MONITORING AND NESTLING BANDING → During the previous field campaign we still had two Chaco eagle active nests. One of them failed due to a hailstorm, and the other one had a successful nestling on it, which we banded. In total, this 2024/2025 Chaco eagle reproductive season in the Dry Chaco realm has yielded our research group with ten Chaco eagle nests, of which five have failed and five have been successful. From these Chaco eagle active nests, six of them were in Santa Fe province, three of them in San Luis province, and one in Santiago del Estero province. On the overall causes of failure, we highlight two failed nests due to hailstorms (one during nestling stage, the other during incubation stage), one chick being predated, and two of unknown cause. Of the five successful nests, we have been able to band three of the five fledglings, the other two were already flying when we discovered the nest. All but one of the camera traps have already been removed from the nests, and now our team collaborators will start looking at the pictures of the camera traps.

CHACO EAGLE CAUSES OF MORTALITY, SURVEYS AND MITIGATION MEASURES

First, we received unequivocal data by a park ranger on a case of two Chaco eagle adults kept in captivity in north-western San Luis province. Apparently, this happened two years ago, the eagles not having survived. Although rare, events of Chaco eagle trapping for captivity have already been recorded in other provinces, and highlight the importance of outreach to reduce its relative impact on the populations of this endangered raptor.

Second, we performed the first surveys ever done in San Luis province (the others had been done in Santa Fe province) at power line pylons to assess the risk of mortality for Chaco eagle (and other raptors) due to electrocution. To

do that, we traversed 150 km of power lines, all of them walking, in transects of 10 km each, at 5 different sites of northern San Luis, with different pylon characteristics and configurations (with and without lighting rods, with crossarms made of wood, concrete and metal, with the cables above or under the crossarms, with or without jumpers…). We found in total nine individuals electrocuted, belonging to five different raptor species (Black Vulture, Turkey Vulture, Variable Hawk, Southern-crested Caracara, American Kestrel). Now, we are analyzing the sites (and pylons) where they were found, to assess the relative risk of mortality of each section of power line, and to detect which power line pylons may pose a higher risk and thus need to be retrofitted, or changed.

Third, with the collaboration of the Environmental Secretary of San Luis province, we launched an official program of installation of rescue ramps at water reservoirs in the northern part of the province. We visited 18 fields and ranches, where we either installed the ramps ourselves, or gave it to the managers and/or rural workers to install them themselves. In total, 45 rescue ramps were installed or given, covering more than 50.000 hectares from this mortality source for Chaco eagle (and other wildlife). During our talks with rural workers, we gathered data of at least 15 individuals belonging to 8 species (birds and mammals) having drowned in these human infrastructures.

Fourth, we are at the last stage of development of the application for cell phones aimed at reporting wildlife mortality due to anthropogenic causes.

CHACO EAGLE LEGAL PROTECTION → Next week (17-18 March), an official meeting will occur in northern Santa Fe province, regarding the Chaco eagle Conservation Program signed months ago. The aim of the meeting (to which our group CECARA was invited) is to review what has been done during the last months to ensure the conservation of this endangered species. In April or May, we will also have a meeting with the environmental authorities of Córdoba province to boost the initiative of declaring the Chaco eagle as a Natural Monument of the province.

NEXT STEPS, LAST CAMPAIGN PROSPECTS → At the end of March, we will carry out a field survey on the open-to-air water canal called “Canal de la Patria” in Santiago del Estero province, of which we already documented how risky it was concerning wildlife drowning and population isolation (the paper was already published last year: https://www.sciencedirect.com/science/article/abs/pii/S0006320724002763). This time, however, we are collaborating with a national NGO called Fundación Vida Silvestre Argentina, which became interested in this conservation issue lately and wants to address the real impact on wildlife of this irrigation infrastructure, which also affects Chaco eagle populations. After that, since I am delivering my Ph.D. manuscript during April, and since the breeding season of the Chaco eagle has finished and all the other activities do not have a specific timing to be achieved, we will make a “break” with this Rufford project during April, leaving the last field campaign for early May. During this last campaign, we will (1) continue with the outreach and environmental education objectives,

taking advantage that now the holidays are over (from mid-December to late-February, most public administrations, offices and schools are shut down in Argentina), (2) carry out more power line surveys to assess bird mortality at these infrastructures, (3) install more rescue ramps at water reservoirs, and (4) hold meetings with the authorities of Córdoba and San Luis provinces, to keep working on measures to legally protect this endangered raptor.