

Project's Final Report

Protecting and Restoring Habitat for the Endangered Cochabamba Mountain-Finch with Local Communities



Conducted by:



Report written by:

José A. Balderrama Torrico
Rodrigo W. Soria-Auza

Supported by:



NUTTALL
ORNITHOLOGICAL
CLUB

September 2016

Introduction

Armonía established the first tree nursery where the Bolivian endemic *Polylepis subtusalbida* is being produced. This is the first tree nursery producing this native plant species which is threatened of extinction (Vulnerable). *P. subtusalbida* is the most important habitat for numerous bird species that depend on this habitat for reproducing and finding food resources. The Endangered Cochabamba Mountain-finch (*Compsospiza garleppi*), the most emblematic bird of this region, depends on the extremely fragmented *Polylepis* woodlands of the central Bolivian high Andes. Most of this species global population occurs in the remaining *P. subtusalbida* forest fragments of the cordillera del Tunari (north of the city of Cochabamba). Patches of *P. subtusalbida* are restricted to gorges and other sites of difficult access, where agriculture and livestock farming cannot be practiced. These patches are still affected by uncontrolled fires provoked to renew grasslands for livestock and agriculture fields, firewood collection, and the widespread introduction of pine and eucalyptus plantations. The introduction of these exotic plant species that are gradually replacing the remaining native *Polylepis* woodland patches is today a serious threat for the Cochabamba Mountain-Finch, as this species cannot survive in areas where *Polylepis* patches have been completely extirpated. Therefore, it is urgent to implement measures to prevent the total destruction of the key reproductive habitat for the Cochabamba Mountain-finch.

As the nursery we constructed in Ch'aqui Potrero is the only one producing saplings of this species, this nursery became the provider of saplings of *Polylepis subtusalbida* for the habitat restoration program of ENDE (Bolivian state company in charge of producing and distributing energy) to compensate the environmental impact of the Misicuni project. Through the Misicuni project a dam has been constructed at the top of the Cordillera. Water pipelines are being installed along the slopes of this cordillera, affecting several patches of *Polylepis* woodlands. Finally, a hydroelectric plant will soon be constructed at the base of the cordillera. The opportunity of becoming the provider of *Polylepis* saplings for this project has motivated local people, as funds raised through selling of saplings benefit the community.

As helping native forest patches of *P. subtusalbida* to regenerate is extremely important, through this proposal we aimed to expand our habitat restoration activities to the community area of San Miguel. San Miguel is located approximately 8 km northeast from the Ch'aqui Potrero, and it is frequently visited by bird watchers who want to observe the Cochabamba Mountain-Finch and other *Polylepis* specialist bird species (Fig 1). We also aim to integrate this community into the ongoing bird watching eco-tourism.

The specific objectives and outcomes proposed were:

Objectives	Outcomes
Habitat Restoration with <i>Polylepis subtusalbida</i> saplings.	<ul style="list-style-type: none">• 1,500 seedlings of <i>Polylepis subtusalbida</i> reforested in San Miguel.

Developing local eco-tourism and other incentives for forest protection.	<ul style="list-style-type: none"> • One workshop to convey to local people the valuable ecosystem services the forest can offer to the community. • One workshop to train at least 5 community members as guides. • Construct at least two trails within the forest • Install at least three trail signs • Publish a pocket guide to birds of San Miguel and print 500 copies. • Provide the San Miguel community with a copy of the first field guide to birds of Bolivia to be published in 2014.
--	--

Project Development

The production of seedlings surpassed our expectation due to the continuous demand for *Polylepis* saplings for the Misicuni's reforestation program. This year 1500 saplings were delivered to be planted in Caluyo, along the water pipeline (Fig 1). We additionally acquired 1,500 saplings from Ch'aqui Potrero's nursery that were planted in San Miguel (Fig 1 & Fig 2).

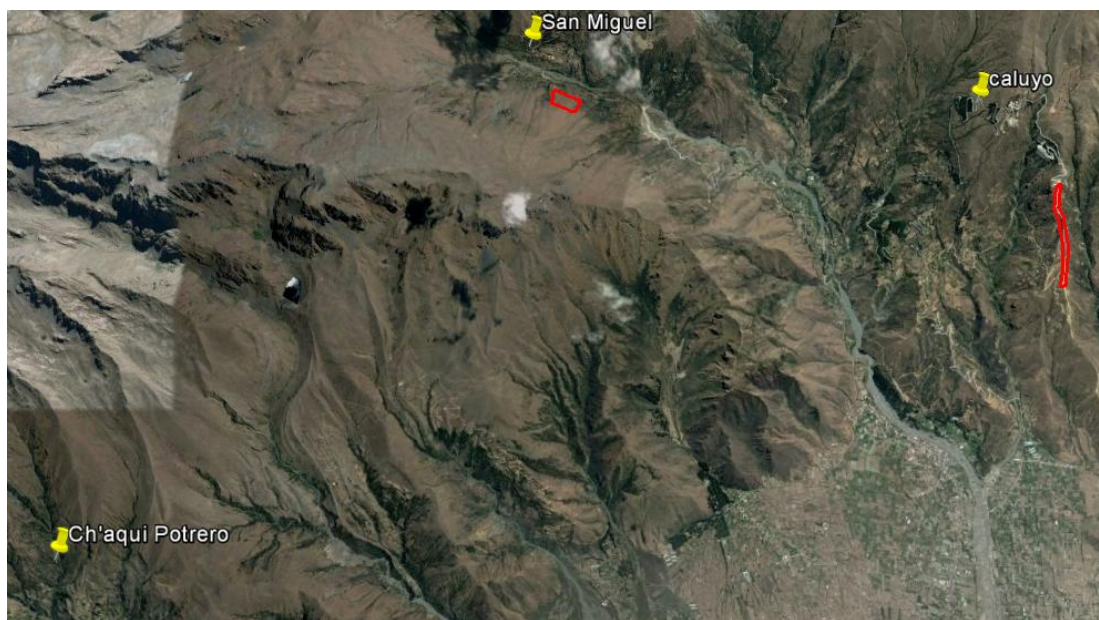


Figure 1. From left to right: The location of Ch'aqui Potrero (where the community nursery is established). San Miguel (the red polygon shows the area where the Polylepis saplings have been planted) and Caluyo where ENDE has planted 1500 Polylepis saplings.



Figure 2. J. Balderrama participating in the reforestation campaign in San Miguel (left), and a community member from Caluyo participating in ENDE's reforestation campaign.

Developing Local Eco-Tourism And Other Incentives For Forest Protection

We had several meetings with people from San Miguel to socialize the project's goal. During these meetings we conveyed to local people about the wide range of potential benefits (ecosystem services) that native forests offer. We emphasized in the ongoing bird watching tourism. We communicated local people that through the implementation of small actions to improve conditions for bird watchers, the community might be able to obtain some additional benefits. Together we identified three trails where bird watchers will be able to observe birds (Fig 3). Sendero 1 is the easiest and goes along the road and river. Here it is possible to see species associated to río San miguel (e.g. Torrent Duck, White-capped Dipper), but also the Cochabamba Mountain-Finch (endemic), Rufous-bellied Saltator, the Bolivian Blackbird (endemic), Tawny Tit-Spinetail (*Popylepis* specialist), and others. Sendero 2 starts at the bridge (río San Miguel). The trail goes through at least two Cochabamba Mountain-Finch territories, and it is especially good to take pictures of birds. Here it is also possible to see Rock Earthcreeper, Tawny Tit-Spinetail, Brown-capped Tit-Spinetail, Giant Conebill, Short-tailed Finch (the upper extreme of the trail), etc. Sendero 3 is also excellent for those persons who want to spent time waiting for the right moment to obtain the perfect picture of the Red-tailed Comet, (if lucky Green-tailed Trainbearer), the Cochabamba mountain-Finch, Cordilleran Canastero, Rufous-sided Warbling Finch, and others.

We also prepared several signs to show bird watchers the location of the trails in San Miguel (Fig 4).

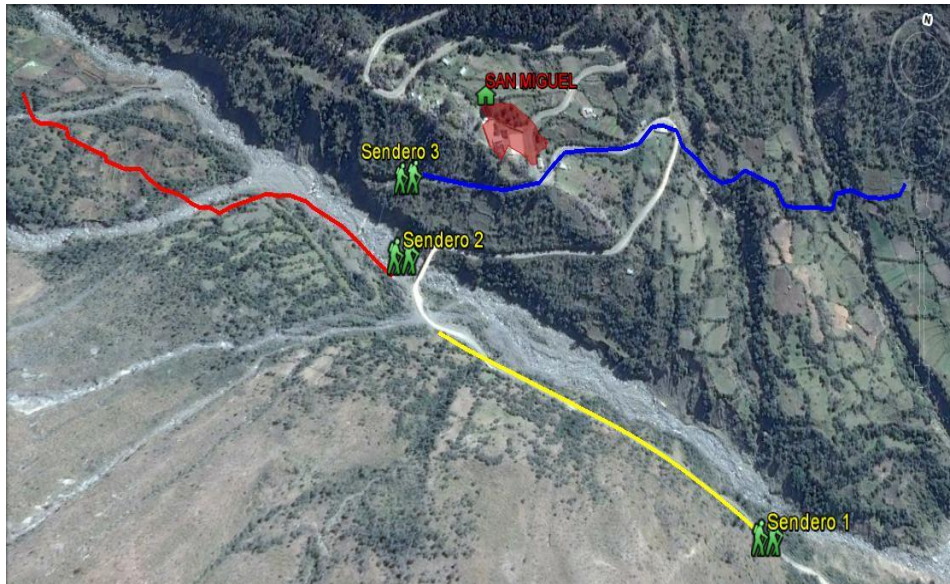


Figure 3. Trails identified in San Miguel



Figure 4. A sign to show the start of trail 2

We prepared a photographic guide to the birds of San Miguel. This guide contains the thirty four most characteristic birds that can be observed in San Miguel, and therefore the Cordillera del Tunari. This guide was developed as a tool to foster bird watching within the community of San Miguel, and as an educative tool. Five hundred copies of this foldable photographic guide were delivered to local people. In the coming months we will further strengthen the ecotourism

initiative through the promotion of San Miguel as the best place to observe the Cochabamba Mountain-Finch (Fig 5 & 6).



Figure 5. Mauricio Torrico (project volunteer) delivering the foldable photographic guide to community leaders of San Miguel



Figure 6. First page of the foldable photographic guide of San Miguel