

REDUCING THREATS TO THE Cochabamba Mountain-Finch ENDEMIC TO BOLIVIA

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Asociación Civil Armonía



FINAL REPORT – 070409 CLP PROJECT

REDUCING THREATS TO THE Cochabamba Mountain-finch ENDEMIC TO BOLIVIA

This project was developed to contribute the Conservation of *Poospiza garleppi* or *Compsospiza garleppi* (Cochabamba Mountain-finch) studying the biological aspects, raising awareness with man, woman and children of two local communities in the High Mountains of Cochabamba, Bolivia

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Also, the two communities Palcapampa and Ch'aqui Potrero, they are very grateful for the CLP support and all they have learned by "Poospiza".

Down you have a thankful letter directly from the local people to CLP, the letter says:

Palcapampa, 25th December, 2010

*Conservation Leadership Programme
Project "Poospiza garleppi"-Asociación Civil Armonía
Present.-*

Thanks letter

The Palcapampa Community – Cochabamba, Bolivia want to say hello to all of you, and we hope all is fine in your activities and projects.

We write you because we are grateful for your support. The "Poospiza garleppi Project" have taught us to care of this bird, who lives with us in our community. We have learned to identify, we feel so happy and proud to live with Poospiza. Thanks so much for the t-shirts, our children also were very happy, and are we. Thanks for the nursery, for all materials you gave us as a gift. We are going to use them in order to improve the habitat of Poospiza. Our wives also are very grateful because thanks to Poospiza they have learnt to cook new recipes.

We commit ourselves to continue caring and protecting this beautiful and small bird.

Sincerely

Palcapampa Community

Palcapampa, 25 de Diciembre de 2010

Señores:
Conservation Leadership Programme
Proyecto de Conservación *Pospiza garleppi*
Asociación Civil Armonía
Presente -

Ref. Carta de Agradecimiento

La Comunidad de Palcapampa - Cochabamba Bolivia les hace llegar sus saludes deseando que les vaya bien en todas sus actividades y proyectos.

Les escribimos para agradecerles por todo el apoyo que hemos recibido de parte de ustedes. El proyecto de *Pospiza garleppi* nos ha enseñado a cuidar esta ave que solo vive en nuestra comunidad, hemos aprendido a identificarla y nos sentimos muy contentos y orgullosos de tener esta ave viviendo junto a nosotros. Muchas gracias por las paleras, hemos visto a nuestros hijos muy contentos y nosotros también lo estamos al tener a *Pospiza* en nuestras paleras, gracias también por el vivero, todos los materiales que nos han regalado los vamos a utilizar para mejorar el habitat de *Pospiza*. Nuestras esposas están muy agradecidas por las recetas que aprendieron, sabemos que es gracias a *Pospiza* todo lo que hemos aprendido. Nos comprometemos a seguir cuidando y protegiendo este pajarito muy bonito.

Nos despedimos muy atentamente

Comunidad de Palcapampa

Casimiro Fernandez
Secretario



Simon Lopez
Dirigente



Emilié Fuentes
Secretaria

GRACIAS CLP = THANKS CLP

The local people of Ch'aqui Potrero are happy and grateful to CLP, now they are committed to preserve this endangered and beautiful bird "Cochabamba Mountain-Finch".

Similarly the women who participated in the Project learning new recipes are thankful, because they can practice now new and delicious recipes at their homes, improving the preparation of food.

Children from both schools are also very grateful to CLP, they learned to love and they are going to continue caring to Poospiza.



Local people and children from Palcapampa and Ch'aqui Potrero.

PROJECT MEMBERS



Noemí Esther Huanca Llanos (Team Leader)

She is a Biologist (32 years old), she worked studying bird populations from the high Andes in Cochabamba, Bolivia since ten years ago. She studied the Cochabamba Mountain-Finch since 2006 working with local people, and her challenge now is to continue working with local people and children teaching them about the importance of the conservation of the Cochabamba Mountain-Finch and to continue studying this endangered and endemic bird.



Claudio Anibal Vázquez Salinas

He is an Agronomist (32 years old), he has the experience in the conservation of natural resources, working with men from local communities, helping them to change their agrochemicals products by agro ecological techniques.

He had new challenges working with the men from Palcapampa and Ch'aqui Potrero and he learned new experiences. He would like to continue helping with his knowledge the local communities in which Cochabamba Mountain-Finch lives.



Jeannette Borda Ortuño

She is a Teacher (27 years old), since many years ago she worked with children; she likes to work with them. Also she is an expert cook; her ability was helpful working with the ladies from Palcapampa and Ch'aqui Potrero earning their trust. She has identified with the project and has worked with optimism to achieve all our objectives. She has her first experience working with ladies, and she feels motivated to continue teaching her cook knowledge to local women.

SUMMARY

The Cochabamba Mountain-finch "*Poospiza garleppi*", is endemic to the mountain slopes surrounding the city of Cochabamba, Bolivia. It is considered Endangered because of its small range (3660 km²) and small, fragmented population. Much of the species' native *Polylepis* habitat has been cleared for agriculture and remnant patches are degraded by firewood collection. Recent studies have found the Cochabamba Mountain-finch to use cropland and shrubby vegetation associated as well. The use of agricultural land by the Cochabamba Mountain-finch presents conservation threats not before considered, such as pesticide use and clearing of shrubby vegetation. Therefore we invested a lot of effort to change the use of agrochemical products by more environmentally friendly practices. We also encouraged reforestation and protection of the severely fragmented *Polylepis* forests. We strengthened education of children from Ch'aqui Potrero and Palcapampa through coordinated work with school teachers. Women from both communities were also integrated by improving their cooking skills. Finally, we raised the awareness of people from the cities of Quillacollo and Cochabamba about this species' uniqueness. A significant portion of this species' range is located in the province of Quillacollo. The council of the province of Quillacollo adopted this species as one of the province's symbol.

INTRODUCTION

The Cochabamba Mountain-finch "*Poospiza garleppi*" or "*Compsospiza garleppi*" is a bird species endemic to Bolivia, 2700-4200 m. above the level sea (Hennessey et al., 2003; BirdLife International, 2012). It occurs in the semi-humid montane slopes of the Tunari Cordillera near the city of Cochabamba (Fjeldså and Krabbe, 1990), and in northern Potosí (Balderrama, 2009). It is considered Endangered because of its small fragmented population which is declining due to the destruction of its natural habitat composed mainly by *Polylepis* woodland. Most of the native *Polylepis* forests have been cleared for agriculture, and also they have been replaced by *Eucalyptus* and *Pinus* plantations. The remaining patches are being degraded by firewood collection (BirdLife International, 2012; Balderrama and Huanca, 2009).

Recent studies have found the Cochabamba Mountain-finch to use croplands. However their nests are mostly located in native vegetation associated with *Polylepis* (Huanca, et al., 2009). The use of agricultural land by the Cochabamba Mountain-Finch presents conservation threats not before considered, such as pesticide use and clearing of shrubby vegetation.

Several quechua communities inhabit this cordillera. These communities' main income comes from agriculture (mainly potatoes), whose production satisfy the market demands of Quillacollo and Cochabamba. Roads to access all communities are scarce. In fact, there are just three ways to ascent the cordillera, and one of them belongs to Palcapampa and Ch'aqui Potrero. Each community meet only one time every month to treat all matters of interest for the community. Consequently, it is possible to ask for permission to access their community only during this meeting, it was quite hard to be accepted in these communities when we started our conservation project in 2006. But now Palcapampa and Ch'aqui Potrero adopted us as part of their lives, and our initiatives have reacher a great level of acceptance.

AIM AND OBJECTIVES

The project was aimed to assess threats to the conservation of the Cochabamba Mountain-Finch associated with its use of agricultural land reducing threats within a framework relevant to sustainable community development.

The objectives were:

- 1) Study de habitat use and foraging behavior of the Cochabamba Mountain-Finch during the breeding and non breeding seasons.
- 2) Raise local awareness and involvement in the conservation of the Cochabamba Mountain-finch in the local communities of Palcapampa and Ch'aqui Potrero, and in the urban areas as Cochabamba city and Quillacollo province.
- 3) Evaluate conservation threats associated with Cochabamba Mountain-Finch use of agricultural land.
- 4) Identify realistic threat reduction measures.

METHODS

STUDY AREA

The studies have been realized in two adjacents key sites located in La Llave basin, they are Palcapampa and Ch'aqui Potrero (17° 19' S, 66° 23' W)., in the high mountains of Tunari Cordillera, 3500 meters above the level sea in Cochabamba, Bolivia (Fig. 1, 2, & 3). The sites are located within the Endemic Bird Area 56 (Stattersfield, et al., 1998), and the Important Bird Area (IBA) BO 023 (Soria & Hennessey, 2005), which is the only IBA where Cochabamba Mountain-finch inhabits. The awareness activities were carried also in Cochabamba city and in Quillacollo province (Fig 1).



Fig. 1. Study area, Cochabamba and Quillacollo – Bolivia.

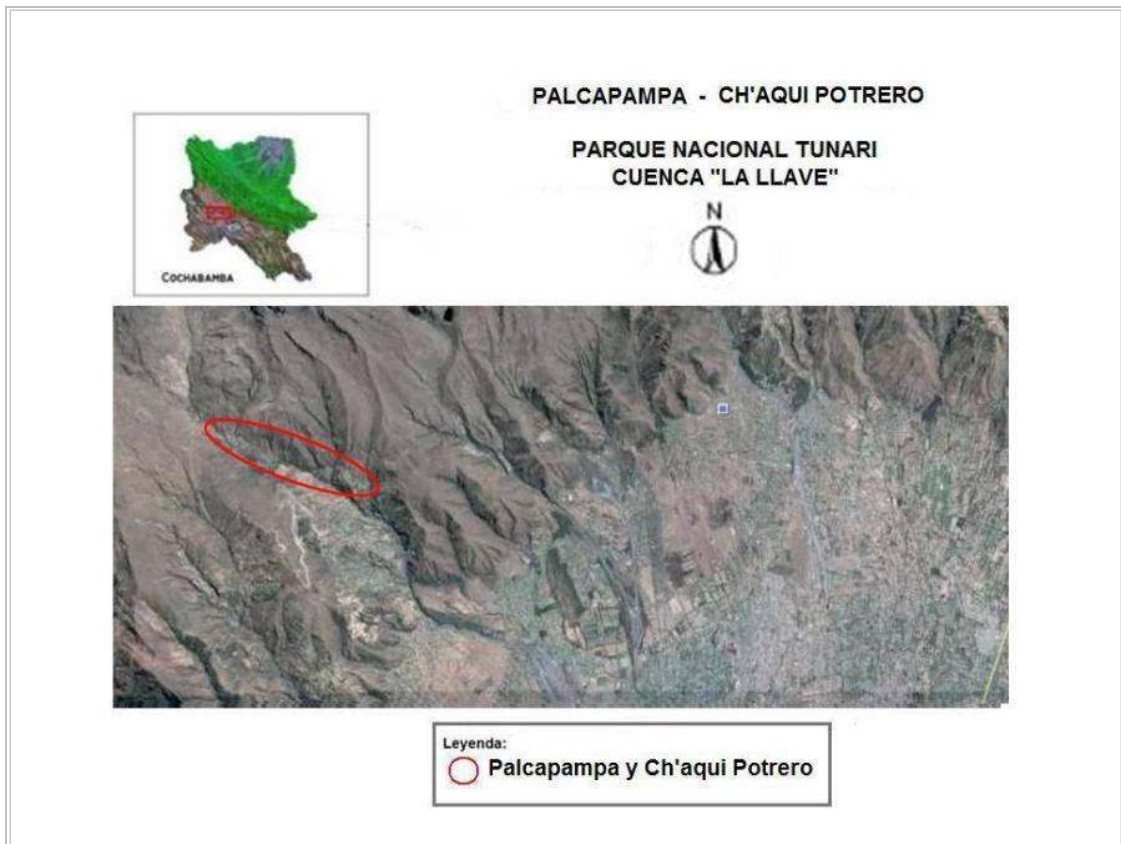


Fig. 2. Study Area: Image of Palcapampa and Ch'aqui Potrero.



Fig. 3. Study Area: Picture of Palcapampa and Ch'aqui Potrero.

DATA COLLECTION AND DATA ANALYSIS

HABITAT USE and FORAGING BEHAVIOR: In order to study Cochabamba Mountain-Finch (*P. garleppi*) habitat use, we searched for pairs during the breeding and non breeding season in Palcapampa and Ch'aqui Potrero, and recorded with GPS the location of each observed individual to identify the territories of each pair. The breeding territories sizes, the dominant cover types were estimated in three pair's territories processing Ikonos satellite images using the software ILWIS 3.3. We also noted whether individuals foraged alone or in groups and the specific sites during the whole year. Finally we worked also evaluating the reproduction of *P. garleppi*, searching and monitoring pairs, nests and nestlings.

RAISE LOCAL AWARENESS AND INVOLVEMENT IN THE CONSERVATION OF THE COCHABAMBA MOUNTAIN-FINCH: We worked raising awareness with the local children of the schools from Palcapampa and Ch'aqui Potrero, developing walks, games, drawings, murals, tablecloths, pictures according their observations of Cochabamba Mountain-Finch in the nature, and about organic farming, and conservation of the Natural Resources. Also we raised awareness with the students, parents and teachers of the regional Schools "La Llave" and "Llave Chico", and with the local woman of Palcapampa and Ch'aqui Potrero, making up new recipes with them and their families in order to gain their confidence. Finally we promoted the appropriation of the Cochabamba Mountain-finch with the habitants of Palcapampa and Ch'aqui Potrero.

In the urban areas of Quillacollo province and Cochabamba city, we worked raising awareness with: Teachers from the 11 schools group called “Huayna Tunari”, the Mayor of the Quillacollo Province and her team, the High Schools of the Quillacollo Province, the students of the Biology career of the Universidad Mayor de San Simón in Cochabamba, the Agronomists from the College of Agronomists Engineers (CIAB) in Cochabamba, the citizens of Cochabamba city during the Spring Festival and at the Cinema Center.

EVALUATE CONSERVATION THREATS ASSOCIATED WITH COCHABAMBA MOUNTAIN-FINCH USE OF AGRICULTURAL LAND: We worked with the local men raising awareness about using the agro-ecological techniques instead agro-chemicals techniques, to get our objective we organized: Interviews, presentations and talks with farmers about “Sustainable agriculture”, “Material organic” and agro-ecological agriculture.

IDENTIFY REALISTIC THREAT REDUCTION MEASURES: We worked with local men organizing workshops about talks and practical training in elaboration and application of organic products, awareness for the building of a forest nursery at Palcapampa and Ch’aqui Potrero, and about the reforestation with the native tree in order to increase the natural habitat of Cochabamba Mountain-finch.

RESULTS

HABITAT USE AND FORAGING BEHAVIOR OF THE COCHABAMBA MOUNTAIN-FINCH DURING THE BREEDING AND NON-BREEDING SEASONS.

Habitat Use

All territories of Cochabamba Mountain-Finch were in areas of mixed agricultural land and native shrubs. We analyzed three breeding territories, and we found that the territory size during the breeding season was 1.5 ± 0.36 has. The dominant vegetation in the territory was crops (41%), shrubs (20%), bunch grasses (10%) and *Polylepis* (9%) (Fig. 4). We observed that the *Polylepis* forest is severely fragmented and restricted to areas not suitable for agriculture. Plantations of pines and eucalyptus are scattered through the area, and between agricultural lands. When single or small clumps of exotic *Pinus* and *Eucalyptus* were present in territories, they were also frequently used as perches.

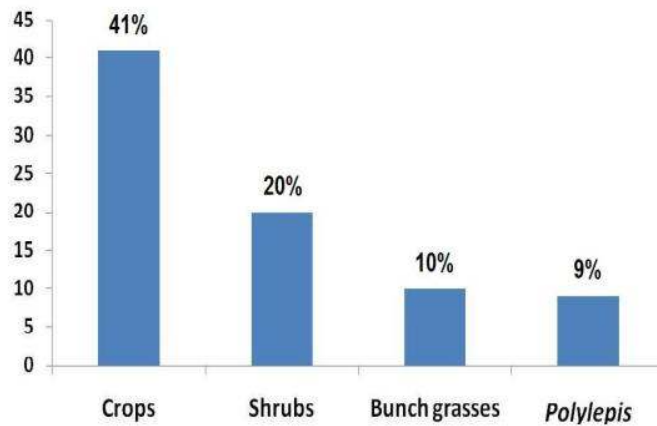


Fig. 4. Percentages of the dominant vegetation in each breeding territory of Cochabamba Mountain-Finch.

During the breeding season Cochabamba Mountain-finch uses the Native vegetation (84%) that includes native shrubs, native trees as *Polylepis* and *Alnus*, 16% of Agricultural land and 1% of others (Fig. 5). It is a territorial species, each year uses the same territory, staying within its own territory by 96% of our observations and 4% next to the adjacent territories (Fig. 6).

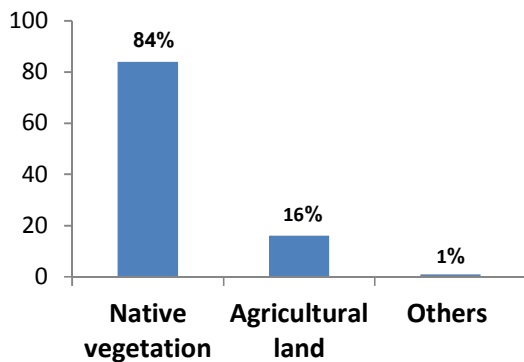


Fig.5. Habitat use of Cochabamba Mountain-finch during the breeding season.

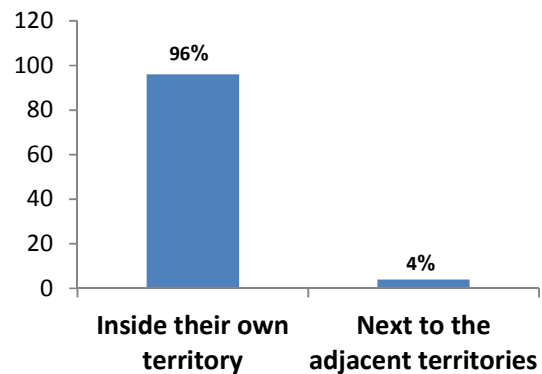


Fig.6. Territory use of Cochabamba Mountain-finch during the breeding season.

During the non-breeding season, we found that Cochabamba Mountain-Finch uses the Native vegetation (57%) that includes native shrubs, native trees as *Polylepis* and *Alnus*, 40% of Agricultural land and 3% of others (Fig. 7). If the couple was with their chicks we registered that they used their territory by 83% and they were next to the adjacent territories by 17% (Fig. 8).

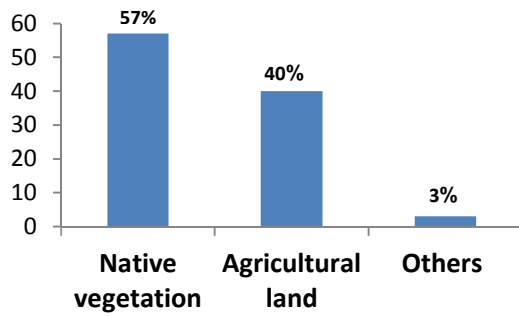


Fig. 7. Habitat use of Cochabamba Mountain-finch during the non-breeding season.

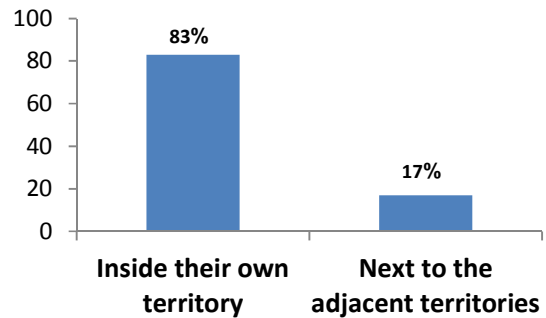


Fig. 8. Territory use of Cochabamba Mountain-finch during the non-breeding season.

The individuals of Cochabamba Mountain-Finch are still using their own territories previously identified. It could be happening because the parents are protecting their chicks near the nest site. Although in many sectors the habitat remained dry, however other sites with less vegetation were present showing sane vegetation in the territories, in which we saw most of the Cochabamba Mountain-Finch activities as foraging behavior and parental care.

Foraging Behavior

Cochabamba Mountain-Finch frequents crops such as maize, beans and potatoes and also native vegetation as *Polylepis* (Fig. 9). Inside of crops the species forages in the maize inflorescence and the beans leaves, also in the potato field ready for harvest, and feeds on the pulp of potatoes. About the native vegetation Cochabamba Mountain-Finch prefers to forage inside *Polylepis* (Kewiña) trees and native shrubs like *Baccharis*, *Satureja boliviana*, *Berberis*, *Gynoxis*, *Vallea stipularis* and *Cortaderia*, and we observed foraging inside the peach tree.



Fig. 9. Cochabamba Mountain-Finch in different foraging places.

Cochabamba Mountain-Finch prefers to forage in native shrubs, foraging for some minutes looking for the insects or seeds there, and in the potato field looking for the worms especially during the parental care, also they found worms inside the *Polylepis* during the breeding season.

During the non breeding season, Cochabamba Mountain-Finch continues feeding in crops, and in the few green native shrubs, and may be due many of these were dry, the individuals were observed eating grass roots. We observed also that the species foraged inside of the inflorescences of *Cortaderia*. In each inflorescence many small insects are contained together with the small seeds of this Poaceae plant. We also found that Cochabamba Mountain-Finch ate small seeds of a tree called “Jalillo” *Vallea stipularis*, besides crops of potatoes and shrubs.

Monitoring Cochabamba Mountain-finch nests

Nests were built inside dense shrubs and other species of native vegetation such as *Polylepis* trees. We believe this year’s rains affected egg and chick survival (Fig. 10 & 11). Six from 11 nests were successful, and we managed to ring our first chick (Fig. 12).



Fig. 10. Cochabamba Mountain-Finch nestlings.



Fig. 11. Cochabamba Mountain-Finch with dead nestlings (the same nest in Fig 10).

We identified six couples in Palcapampa, each pair had their own nest, but at the end of the investigation we found 7 adult individuals (two couples and one alone), 3 juveniles from three successful nests. In Ch´aqui Potrero we found five pairs, each pair had their own nest, but at the end of the investigation we found 6 adult individuals (two pairs and two alone), 3 juveniles from two successful nests.



Fig. 12. First Cochabamba Mountain-Finch chick ringed

Parental Care

Parents continued to parental care during the whole year, but during the first six months they brought food to their chicks (Fig. 13). In the case of the couple who had two fledglings, a division of labor in parental care was observed. Each parent was in charge of one fledgling, after foraging separately gathered the four and foraged together with a pretty meeting song.



Fig. 13. Adult of the Cochabamba Mountain-finch carrying food to its nestlings.

Cochabamba Mountain-Finch does not have sexual dimorphism; we could not to affirm if this fledgling was with its father or mother. The behavior of the parents with their fledglings were very dedicated in caring of them, leaving them in protected sites, usually in the middle of bushes, in which they feed their chicks.

RAISING LOCAL AWARENESS AND INVOLVEMENT IN THE CONSERVATION OF THE COCHABAMBA MOUNTAIN-FINCH.

Activities with Children.

We organized walks, in coordination with teachers from Ch'aqui Potrero and Palcapampa (two-hour long expeditions for the children per month). The goal of this activity was to identify (by their local names) plants, vertebrates and invertebrates of the surroundings of both communities. Birds, and specially the Cochabamba Mountain-finch were observed by binoculars (Table 1). We designed and invented several games to entertain and also teach several aspects of the Cochabamba Mountain-finch's biology, the competition with other birds by space and resources and the potential predators, the games were: "Poospizas & Saltator", "Poospizas & Hawks", "The Poospizas", "Land and Water", "Searching for the snake's Tail" and "Looking for seeds" (Table 1). As a part of the appropriation of the species, the children painted to Cochabamba Mountain-Finch on tablecloths, which they are going to use at their homes (Table 1).

We encourage children to draw, and to made pictures about their observations on the Cochabamba Mountain-finch. They basically detailed several aspects of this species' biology such where they feed, where their nests are placed, etc. Through this activities we can show that children learned a lot about the biology of this species (Table 1). One example of this is the large Mural that included the sentence "Kusisqa tiakuyku Pospizitawan", that means we are happy to live with Poospizita (*Poospiza* is the old genus to which the Cochabamba Mountain-finch belonged), and the common name for Cochabamba Mountain-Finch in both communities is "Poospiza", when the people express love calling some name they add "ita" next to the name, for that reason the name for Poospiza pronounced with love is "Poospizita" and in Quechua the word "Pospizitawan" means "with Poospizita" (Fig. 14).

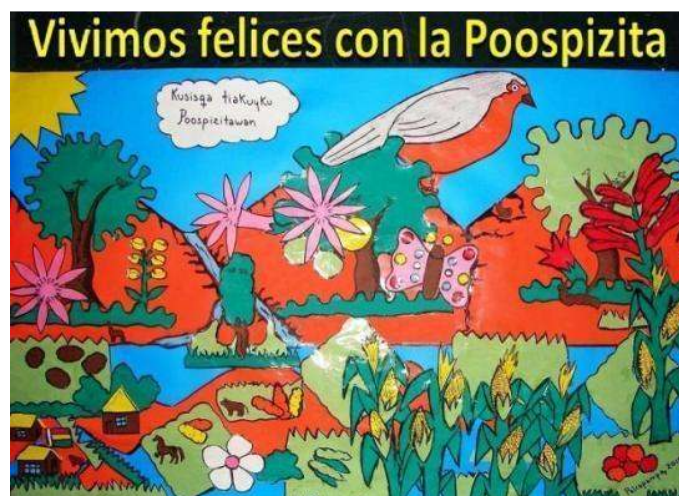












Fig. 14. The beautiful mural of Poospiza finished.

Table 1. Activities with Children in Palcapampa and Ch'aqui Potrero

Activity	N°	N° Participants	Comments	Picture
Walks	9	35 Children of Palcapampa	The children of both communities had fun during the walks and watching Cochabamba Mountain-finch.	
	9	21 Children of Ch'aqui Potrero		
Games	20	35 Children of Palcapampa	The children enjoyed the games very much.	
	20	21 Children of Ch'aqui Potrero		
Drawings	2	35 Children of Palcapampa	The children were happy drawing the Cochabamba Mountain-finch.	
	2	21 Children of Ch'aqui Potrero		
Pictures	3	35 Children of Palcapampa	The children were creative and passionate working on their pictures about Cochabamba Mountain-finch.	
	3	21 Children of Ch'aqui Potrero		
Murals	1	34 Children of Palcapampa	The children had a protective attitude toward the Cochabamba Mountain-finch and its habitat.	
	1	19 Children of Ch'aqui Potrero		
Tablecloths	1	30 Children of Palcapampa	The children were very excited painting the tablecloths.	
	1	20 Children of Ch'aqui Potrero		
Farming and Conservation of the Natural Resources	5	35 Children of Palcapampa	The children were taught about the benefits of native forests for soil conservation, and organic agriculture.	
	5	21 Children of Ch'aqui Potrero		

We raised awareness to teachers and students of primary and secondary level of the Schools “La Llave” and “Llave Chico”, and we noted the local interest to know about “Poospiza”. Also we attended to a festival in La Llave, there we promoted our project's goals, the importance and uniqueness of the Cochabamba Mountain-finch and its habitat (Table 2).









Table 2. Activities with Students at the Schools “La LLave” and “LLave Chico”

Activity	N°	N° Participants	Comments	Picture
Raising awareness about of Cochabamba Mountain-Finch	1	75 students (children, teenagers and youth), 8 teachers.	For the 95% of the students, were the first time listening the new information about Cochabamba Mountain-finch.	
Raising awareness about of Cochabamba Mountain-Finch	1	29 children, 4 teachers.	For the whole children and teachers, were the first time getting the new information about Cochabamba Mountain-finch.	
Llave Grande Festival	1	95 students (children, teenagers and youth), 12 teachers, 25 parents.	We had the chance to talk personally with the people, they were interested knowing about Cochabamba Mountain-finch	

Activities with Women

Though women participation in public meetings is somewhat limited, their influence within the home is very important. One important activity to gather women together were workshops to improve their cooking skills. Besides teaching them new recipes to diversify their families' nutrition, we discussed of our concerns about the survival of the Cochabamba Mountain-finch, and the critical conservation status of the highly fragmented natural habitat. Women from both communities were highly receptive of our concerns. This activity had also significant positive social effects. Women interacted to produce new recipes and share them. Main ingredients were based on potatoes, oca, and other local products. Besides learning new recipes using their local goods, we also taught them to bake. Women learned to cook 8 meals. In Ch'aqui Potrero was more difficult because they do not have a social organization. In this regard, our activities strengthened women organization in this community. This represents a great advance, and the first step to involve women in social activities.

Table 3. Recipes made with women of Palcapampa and Ch'aqui Potrero.

Activity	N°	N° Participants	Comments	Picture
Empanadas de queso	1	20 women of Palcapampa	The women were excited working together by the first time.	
Panqueques	1	18 women of Palcapampa	The women were happy learning for the first time this recipe.	
Tawa Tawas	1	26 women of Palcapampa	The women were glad working with this recipe, because for them were easy to learn.	
	1	3 women of Ch'aqui Potrero		
Rellenos de Papa	1	12 women of Palcapampa	They enjoyed working this recipe, because they were using potatoes, and they told us that their husband were happy trying it.	
	1	10 women of Ch'aqui Potrero		
Mashed Potatoes	1	14 women of Palcapampa	The whole women were glad, because they used potatoes again as the principal ingredient of this recipe.	
P'ampaku	1	10 women of Palcapampa	All the women participated on this recipe, and then they enjoyed eating it with their families.	
White Cake, Carrot Cake, and Chocolate Cake.	1	15 women of Palcapampa	The women were so glad, because they learnt by the first time to bake a cake.	
Poospiza's Cake	1	14 women of Palcapampa	The women were so happy, because was the first time in which they decorated a cake. They affirm their commitment to take care Cochabamba Mountain-finch.	
	1	10 women of Ch'aqui Potrero		

Finally, we organized the exhibition of the recipes in order to show and encourage the exchange of experiences between local women (Fig. 15).



Fig. 15. Recipes exhibition

The local women thanked us by everything that they learned and they share the experiences between them. Also the project presented to all of them some gifts (fountains and ladle to make mashed potatoes) to all women as gratitude for their time, attention and because they did not forget what have learned.

Promoting the appropriation and pride of the Cochabamba Mountain-finch

As part of our efforts to raise the awareness of local people about the uniqueness of this species we produced posters, pocket calendars and t-shirts with the image of the Cochabamba Mountain-finch (Fig. 16).



Fig. 16. Local people with Cochabamba Mountain-finch posters and calendars.

Local communities also showed some initiatives to demonstrate their opinion about the conservation of this species. We together designed signs for each community, and we wrote on the sign what the local people feel, based on what they told us about Cochabamba Mountain-finch. For example the sign of Palcapampa says: “*The Community of Palcapampa is taking care and protects **Poospiza garleppi** and its habitat. We feel very happy to have this unique bird of the world living with us*” (Fig 17). The local people said that their community now is closely identified with the conservation of Cochabamba Mountain-Finch, and that all people who will visit those communities will know that Palcapampa and Ch’aqui Potrero are working to protect this endangered bird.



Fig. 17. Local people of Palcapampa with their Cochabamba Mountain-finch sign.

Awareness with teachers of Huayna Tunari Group

We worked raising awareness with: 32 teachers from the 11 schools group called “Huayna Tunari”. Firstly, we talk about Bolivian biodiversity, the Bolivian vertebrate threatened species (fishes, amphibians, reptiles, birds and mammals). Then we talk about the Cochabamba Mountain-finch, the threats this species faces and what could be made to prevent their extinction (Table 4). At the end of the talk we were invited to visit new schools.

Awareness with the Mayor of Quillacollo

Quillacollo is an important Province that belongs to Cochabamba City. We have visited the Quillacollo Municipality offices to meet with the Mayor Dra. Carla Lorena Pinto (Table 4). We informed her about our work with the Cochabamba Mountain-Finch. The mayor showed interest on this species, mentioning that she will coordinate with her staff to elaborate a Municipal Ordinance destined to protect the Cochabamba Mountain-finch and their habitat.

The Mayor invited us to talk about the Cochabamba Mountain-finch during a Press Conference at the “Red Room of the Quillacollo Municipality” (see Appendix 2m), where several important media were present. Thus, we gave relevant information to the public about the existence and uniqueness of the Cochabamba Mountain-finch. Also the Mayor adopted the Cochabamba Mountain-finch as an official symbol of the Province of Quillacollo. Now this species appears next to the coat of arms of Quillacollo, and in all the official cars of the municipality, also in the official documents, the headletters, (see Appendix 2 n), there are pictures of this bird in the Municipality’s offices, and they produced new posters and solidarity activities including Cochabamba Mountain-finch.

Finally the Mayor Carla Lorena Pinto declared a protected area in Quillacollo called: "Area de Reserva Municipal de la Biodiversidad San Miguel, ave Poospiza garleppi y bosques de Kewiña" in order to protect Cochabamba Mountain-Finch and Polylepis woodland (the native tree "Kewiña") in the San Miguel Area (Fig. 18). Those results were a big step for the conservation for Cochabamba Mountain-finch, it is the first time in Bolivia when the Mayor had a high sensitivity and helped this endangered bird.



Fig. 18. Municipal Law declaring the “Protection of Cochabamba Mountain-Finch” and the new protected Area.

Awareness with Schools of Quillacollo.

With the support of the Mayor we gave talks of awareness to schools of Quillacollo at the Municipal Theater Teófilo Vargas (Table 4). We had assistance of secondary level students from different schools filling the room with around 100 students per talk (we had two talks), also we gave free talks at the Theater corridor (see Appendix 2 I), we could see the interest of students and citizens about Cochabamba Mountain-finch, and the conservation needs.

Awareness at the University: Universidad Mayor de San Simón – Cochabamba.

We gave a sensitized presentation about the importance of supporting and doing conservation actions of the endangered Cochabamba Mountain-Finch to the students of the Biology career of the “Universidad Mayor de San Simón - UMSS”, 25 students attended to the presentation (Table 4), and three of the students are now volunteers of the project.

Awareness at the “College of Agronomists Engineers” - Cochabamba.

We received an invitation from the College of Agronomist Engineers of Bolivia (CIAB), to give a talk (Table 4). The objective of our talk was to emphasize on the negative effects of the extensive use of aggressive Agro chemical products on the already decimated native vegetation upon which the Cochabamba Mountain-finch strongly depend. Agronomist understood the importance of birds and biodiversity that are threatened due non-responsible agronomic practices. They showed interest in applying new responsible practices. The Directive of the CIAB, include Cochabamba Mountain-Finch for the 2011 CIAB calendar. The calendar was distributed at the offices of 20 agrarian institutions and to the agronomist of the 9 cities of Bolivia.








Awareness at the Spring Festival – Cochabamba.

We participated in the “Spring Festival” in order to inform the citizens about our project. We prepared panels for this event; we reached to city habitants and regardless of age. We noted great interest of them toward the situation of the Cochabamba Mountain-Finch, and how they could help to preserve this endangered bird. In this day we had the collaboration of volunteers who helped us during presentations and awareness activities.

Awareness at the Cinema Center – Cochabamba.

We participate in the premiere of the film “RIO” at the Cinema Center. The movie is about a threatened bird in Brazil, and we raised awareness about our conservation actions to the citizens who came to watch that movie. We talked about our project and Cochabamba Mountain-Finch, also many other projects and ecological organizations were there talking about the conservation topic. Many of the citizens did not know anything about Bolivian bird threatened species, but they were sensitized about Cochabamba Mountain-Finch as well.

Table 4. Raising awareness in the urban areas of Quillacollo and Cochabamba

Raising Awareness Activity	N°	N° Participants	Comments	Picture
Núcleo "Huayna Tunari"	1	25 teachers 1 director	The teachers understood the importance about conserving Cochabamba Mountain-finch.	
Quillacollo Council	2	1 The Mayor 1 Secretary 8 Quillacollo authorities	They showed great interest, and we got the massive attention of the media.	
Quillacollo High Schools at the Theater "Teófilo Vargas"	3	200 students 8 teachers	They showed interest during our talk and, they enjoyed our activities that day.	
Biology Career – Universidad Mayor de San Simón	1	25 students	The students showed great interest about our project and some of them want to be part of it.	
Colegio de Agrónomos de Cochabamba - CIAB	1	19 Agronomists	They understood the importance of the conservation of birds in the agricultural landscapes.	
Spring Festival	1	56 people (children and adults).	Many citizens were sensitized about Cochabamba Mountain-finch by the first time.	
Cinema Center	1	Above 100 people	We had great acceptance and participation of people	

Media and Communications

Many reporters talk to us, and we were invited to talk about Cochabamba Mountain-Finch in an interview on the television 11 Channel, a television program “La Noche TV” at 47 Channel. Also we talked by phone in a live interview for the Radio FMBolivia, then they wrote a digital publication (Fig. 19), and the digital journal GAIA La Paz wrote another report (Fig. 20). Cochabamba Mountain-Finch was in the newspapers “La Voz” and in “Los Tiempos” twice times (Fig. 21), and “La Razón” in which Poospiza had 6 pages of report (Fig. 22), the reporter of “La Razón” won an award by Conservation International writing the article about Poospiza, and for that reason this important newspaper published the same article one more time (Fig. 23).

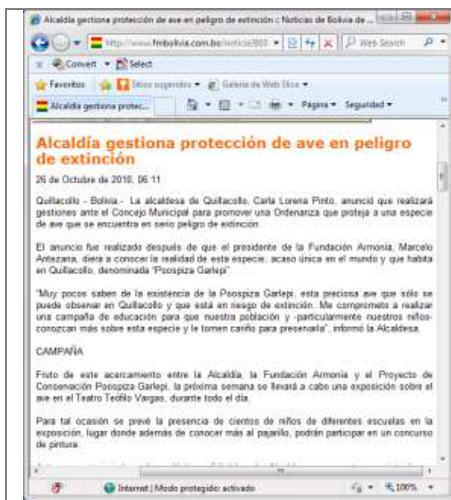


Fig. 19. FM Bolivia publication.



Fig. 20. GAIA La Paz publication.

<http://www.fmbolivia.com.bo/noticia39108-alcaldia-gestiona-proteccion-de-ave-en-peligro-de-extincion.html>
<http://www.enlared.org.bo/portal/default.asp?cg2=7406>



Fig. 21. Articles about Cochabamba Mountain-Finch in the important newspapers: “La Voz” and “Los Tiempos”.



Fig. 22. Poospiza “Los guardianes del ave del Tunari”, Report in LA RAZÓN newspaper.



Fig. 23. La Razón publishing the winner reporter and the winner report about Conservation in all Bolivia: “Poospiza”.

We published the results to the Journal Ecotone 3(1) 18-20 the results about our project (Fig 24). Local people decided to write their experiences about the new things they learned and additional opinions during our conservation project, especially our activities related to the introduction of agro-ecological practices. Thus, we published a local bulletin called: “Quiéreme para que no desaparezca”, in Quechua language means: “Munakuway mana chinkanaypaj”, and translating to English means “Love me, so I don’t disappear” (Fig. 25). This bulletin is a sort of memoir for them about the activities undertaken by Cochabamba Mountain-Finch Conservation Project.

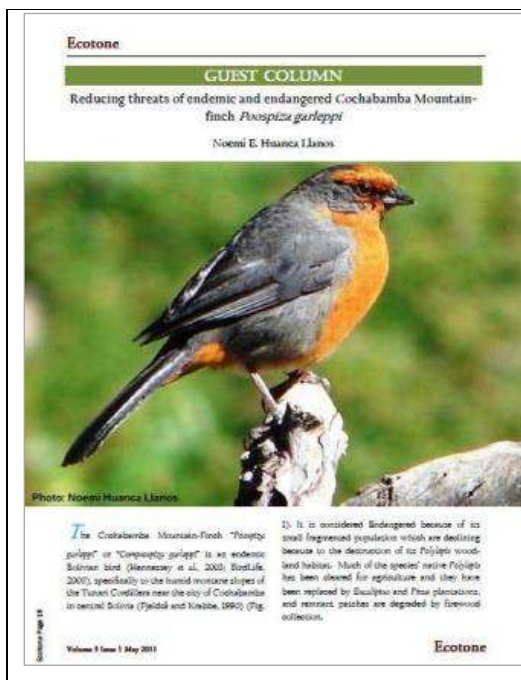


Fig. 24. The article in the Ecotone Journal about Cochabamba Mountain-Finch.



Fig. 25. Local People Bulletin






EVALUATE CONSERVATION THREATS ASSOCIATED WITH COCHABAMBA MOUNTAIN-FINCH USE OF AGRICULTURAL LAND.

We organized interviews to gathered information of which agrochemical products are currently being used at both communities. This information was useful to design the subsequent workshops, and also to prioritize the agro-ecological techniques to be implemented (Table 5). Subsequently, we organized a series of workshops about the different agro ecological practices, the benefits, and other considerations of implementing such techniques (Table 5).

We had monthly talks with the local men, and they showed interest and felt confident to ask questions and to participate in the discussions. We showed the men and the children some videos related to the topic: “Towards Sustainable Agriculture” in the two communities (Table 5), in

order to explain them the importance of Integrated Crop Management and the variety of controls that exists to prevent attacks from pests and diseases. The children showed a great receptivity and curiosity. We visited people at the time when they were working on their crops (Table 5) in order to talk about Material organic, they noted that is very important to have a considerable amount of it, because they could obtain a fertilizer of high quality to be used on their crops. We talk also about Agro-ecological agriculture in order to raise awareness and promote change in agricultural methods.

Table. 5.

Activity	N°	N° Participants	Comments	Picture
Interviews for local men	19	19 men 5 children from Palcapampa	The first times the local men were a bit shy, but then they got confidence.	
	14	14 men 4 children from Ch'aqui Potrero		
Agro-ecological Video session For men	7	56 men from Palcapampa	The local men were interested about the Sustainable Agriculture.	
	6	27 men from Ch'aqui Potrero		
Agro-ecological Video session for children	7	35 children from Palcapampa	The children were interested and curious learning about Sustainable Agriculture.	
	7	21 children from Ch'aqui Potrero		
Visiting men crops	16	16 families from Palcapampa	The men and their families were glad with our visit to their crops, so they could ask us personally many questions related to the agriculture.	
	10	10 families from Ch'aqui Potrero		
Conclusion Meeting	1	55 people from Palcapampa	The local men realized that using agro-ecological techniques their families will be healthy and Cochabamba Mountain-finch will be safe.	
	1	25 people from Ch'aqui Potrero		

Finally, we had the last meeting with men of both communities, in order to get the conclusions (Table 5). The men recognized the importance of not use the agrochemicals in their crops, they said that they are going to try to practice what they learned, and they want to continue learning more techniques in order to improve their crop production and with those news techniques to protect the habitat of Cochabamba Mountain-Finch.

IDENTIFY REALISTIC THREAT REDUCTION MEASURES

Talks and practical training in elaboration and application of organic pesticides






In order to avoid using pesticides that are a threat to Cochabamba Mountain-Finch, the local people and children of both communities were taught to set “Color Traps” and “Light Traps” (Table 6). Those traps will serve for the control and reduction of insect pests that damage crops and the places in which the local people keep their crops. We showed them that they can control the insect pest attack in an easy and economical cost. After practice and after seeing the results, because the traps captured many insects and the potato moth, some were encouraged to set traps of color in their own crops.

Also we taught them how to use a Bio-Insecticide called MATAPOL-PLUS (Table 6), with active component: *Baculovirus phthorimaea* y *Bacillus thuringiensis*, to stop using toxic insecticides. This bio-insecticide is useful to control the moth and Andean Potato weevil; they are very damaging pest in potatoes crops and other Andean tubers. The local people were agree with the new Bio-Insecticide, and they received their packages of MATAPOL, to apply to their crops and specially when they were saving the potatoes as seeds for the next season. We taught them in a practical application how to use MATAPOL to the potatoes. They need to mix this MATAPOL with the potatoes and then to save them for many time.

We made workshops to explain the life cycle of moth and weevil (the principal pest in the crops) and different ways to control them. We distributed printed material related to pest control to people of Palcapampa and Ch’aqui Potrero (Table 6).

We continued giving talks to reinforce their knowledge about the use of organic pesticides and some methods to control pests in a natural way. A pesticide based in tobacco, muña (the native shrub), soap, and garlic, were prepared during many meetings (Table 6), in order to be used by families as alternative to the use of chemical poisons. The commitment of the local men was to practice those news alternatives instead chemical practices.

Table 6.

Activity	N°	N° Participants	Comments	Picture
Color Trap Bio-insecticide	1	56 men from Palcapampa	They realized that they can control the insect pest attack in an easy way.	
	1	26 men from Ch'aqui Potrero		
Light Trap Bio-insecticide	1	56 men from Palcapampa	They realized that they can control the insect pest attack in an easy way.	
	1	23 men from Ch'aqui Potrero		
MATAPOL Bio-insecticide	1	55 men from Palcapampa	They realized that they can control the Andean potato weevil attack in an economic cost.	
	1	26 men from Ch'aqui Potrero		
Workshop about Pest Control	2	53 men from Palcapampa	They were glad receiving the manuals, and for this new knowledge.	
	2	24 men from Ch'aqui Potrero		
Organic Pesticides	4	54 men from Palcapampa	As those were based on tobacco, muña, soap and garlic, the local men were glad learning those new techniques, because the ingredients are easy to find, and they are cheap.	
	4	26 men from Ch'aqui Potrero		

Awareness for the building of a forest nursery at Palcapampa and Ch'aqui Potrero.

One characteristic of the high Andean Quechua communities of Bolivia is that the whole community must agree upon new activities as the protection of the native flora and the nursery building. Local people prefer to plant exotic plant species such as Eucalyptus and Pines because both species growth much faster, and produce high-quality wood for construction. Consequently,

Eucalyptus and Pines represent an additional income for local people. In spite of this disadvantage, local people supported our idea of building a nursery for native trees as *Polylepis* and *Alnus* trees, and some Chachacomas. The communities of Palcapampa and Ch'aqui Potrero were in charge of building the nursery at the school's yard. All the people were very excited, enthusiastic, and helped to build the nursery (see Appendix 2 g). For this activity, the community provides the wood and we contribute with the rest of material requested (Fig. 26).



Fig. 26. Delivering the materials for nursery building for native plant species of trees.

We also bought seedlings of "*Polylepis*", some "*Alnus*" and "Chachacomas" for the reforestation. After a period of strengthening for the seedlings, a total of 600 seedlings were available for the two communities we work with. We put up a sign calling the nursery: "*Vivero Poospiza garleppi*" that means "*Poospiza garleppi* Nursery" (Fig. 27).



Fig. 27. Seedlings of *Polylepis* tree, and the sign of the Nursery.

Communities and the children were very happy with the new plants for the reforestation. The local people of both communities chose the place, in which we would do the planting of seedlings,

and before planting them in the mountains, we had a meeting to organize and to explain the importance of this activity to all people involved. They used their own shovels and picks. We planted in four different places that the communities decided to protect by themselves in their mountains.

ACHIEVEMENTS AND IMPACTS

Poospiza: We ringed our first chick of Cochabamba Mountain-finch. From 11 nests, just six nests were successful we found new information about the habitat use and foraging behavior. The local people were glad with the first chick ringed, and they want we can continue ringing the chicks; they are interested to know what happen with each Poospiza's families.

People: We had the acceptance of the local people in Palcapampa and Ch'aqui Potrero, because since 2006 Asociación Armonía with Noemí Huanca worked first gaining their confidence, that let us to work successfully with during the activities of our project. The local people are friendly with us, and they are committed to protect this endangered bird.

Children: We gain the love of the children; they enjoyed very much our activities, games, talks, etc. The children were enthusiastic telling us their stories about their meetings with Poospiza, and now they can recognize the bird species very well. They decided not to use the slingshots and not to damage the nests. They are a potential group to continue promoting conservation actions in the future.

Women: The local women from Ch'aqui Potrero started to come to our meetings, their husbands were glad, because was the first time in which their wives were working together. We gain the confidence and the friendship of the local women of Palcapampa and Ch'aqui Potrero, they asked us to continue helping them with new recipes in the future.

Men: The agro ecological practices were very good accepted for the local men. They agreed that they should avoid using agro-chemical products, because is dangerous for them, for their families and for Cochabamba Mountain-finch, and they decided to practice the agro ecological techniques.

Teachers: The teachers showed disposition to develop programs with our project, and we were invited to visit new schools.

Students: The students were interested in our project and some of them decided to be volunteers of our project.

Agronomists: They were receptive and after our talk, the directive of CIAB decided to include to Cochabamba Mountain-finch to their Agronomists calendar for the year 2011.

Media and Communications: We had a huge impact on people through the media coverage by newspaper, radio and television. Important newspaper of Bolivia as “Los Tiempos” made us interviews and the reporter wrote by the first time in our country some information related exclusively to Cochabamba Mountain-finch. Another well recognized newspaper of Bolivia is “LA RAZON”, they had the initiative to visit Palcapampa and Ch’aqui Potrero in order to write an extensive report related to Cochabamba Mountain-finch and our project, they made interviews to the local people, mothers, children, and teachers, and then they published 6 pages exclusively to Poospiza.

The Mayor of Quillacollo surprising us with the decisions she had with her staff, she was so sensitive to listening the situation of Cochabamba Mountain-Finch, and she helped the species declaring a small protected area, using the bird in the letterhead of her office and using as a symbol next to the coat of arms of Quillacollo, and Poospiza now is in the official cars of the Municipality of Quillacollo.

CONCLUSIONS

All territories of Cochabamba Mountain-Finch were in areas of mixed agricultural land and native shrubs. La especie forragea en diferentes cultivos como: papa, oca, haba, arbeja, y en vegetación nativa como: Kewiña, Aliso, *Satureja*, *Gynoxis*, *Vallea*, *Cortaderia*, *Berberis*, *Bacharis*, *Vallea*. On average, territory size during the breeding season was 1.5 ± 0.36 has. The dominant vegetation in the territory was: crops (41%), shrubs (20%), bunch grasses (10%) and *Polylepis* (9%). During the breeding season the species were registered the most of the time using the native vegetation (84 %), and the crops in a less percentage (16 %), during the non breeding season the species were registered using the native vegetation in 57 %, and the crops in (40%) due the dry season. That means that the species is living using the natural habitat and the crops.

In Palcapampa and Ch’aqui Potrero, we started to reduce the important threats to Cochabamba Mountain-Finch, because we transferred information with new knowledge related to the integrated crop management with emphasis in the agro-ecological crops (we made pest control by natural and organic ingredients). Finally, we started to the reforestation of the Cochabamba Mountain-finch habitat with native trees.

The campaigns of awareness were efficient tool applied with all our stakeholders, we were successful because our team built a relationship within the local communities (children, women and men) and the authorities of Quillacollo, they have appropriated of the species, and they are commitment to protect and care Cochabamba Mountain-finch. Now this species is the symbol of the second largest city of the valley of Cochabamba, that is a great step for the conservation of Cochabamba Mountain-finch, and now the members of the local communities of Palcapampa and

Ch'aqui Potrero are our supporters, they are spokespeople for our Cochabamba Mountain-finch Conservation Project. And now many people know about the Cochabamba Mountain-Finch in Quillacollo and Cochabamba.

PROBLEMS ENCOUNTERED AND LESSONS LEARNT

The rainy season was hard and was difficult to monitor the nest and couples of Cochabamba Mountain-finch, we found some nests with chicks dead inside. But we continue monitoring the pairs, and the chicks that survived, and were glad to watch how the species survive in hard climate conditions.

We found some difficult with the local men because they just have one day per month in which they have a meeting together, and was a bit complicated to gather to all of them to our last activities as build the nursery and plant the seedlings in the mountain. But talking with them and our team being patient we found the time to do those activities successfully.

In Ch'aqui Potrero few women attended the first activities, because was their first time having a women meeting. But the next meetings we had the participation of many women and they were happy learning new recipes. In Palcapampa we did not have this difficult because the women are organized in a syndicate.

The change of some teachers of the local Schools seemed to be a difficult, because the last teacher was involved in our project and she used to helped us with our activities, but we started gaining the confidence of the new teacher and being friendly with her, finally she also was a important part of our team and project.

Politics are not stable in Bolivia. Starting this year (2012), there was a change in the Municipality of Quillacollo, now there is a new mayor. In consequence for the next step of the Project, we may need to invest effort to gain the good will of the new mayor.

We learnt to be patient, to be positive because sometimes the activity was not as we planned first, but our team found the solutions to continue working in order to get our objectives. We were happy working together, learning new tools, and new experiences in our project. We understood that it takes time to people to break the barrier of leaving their houses to go to a place and talk about Poospiza and the environment. But being persistent, it is possible. We believe that the respect to their values, livelihoods and their culture was an important attitude of our team, in order to gain the acceptance and confidence of the local people, because the conservation of Cochabamba Mountain-finch depends strongly of the people who live at the local communities.

IN THE FUTURE

Though we achieved significant success in these communities, they represent only a small part of the Cochabamba Mountain-finch's range. We do not even have an estimation of which is the percentage of this species' population that inhabit in Bolivia. In consequence, we need: (1) to cover most of this species range, searching and monitoring the populations knew until now, including the old records and new ones. (2) Contact people, new local communities and institutions, to coordinate our efforts, and involve them in our conservation initiatives. Since habitat destruction is the most direct threat, in combination of the intensive use of agrochemical products. We need to target these two problems at a regional scale. (3) To take Palcapampa and Ch'aqui Potrero as a models of local communities and reply the work with local people in new local communities in which Cochabamba Mountain-finch inhabits. (4) To work in order to get educational campaigns with local people, and citizens permanently established, and for an environmental education plan integrated into the academic curriculum of the schools.

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CONFERENCES

XXV International Ornithological Congress, Campos do Jordão, Brazil. August 2010

Presentation of the Poster titled: "Nests, vocalizations, and habitat use of the endangered Cochabamba Mountain-Finch *Compsospiza garleppi*" (Fig. 112).

IX Neotropical Ornithological Congress, Cusco-Peru. November 2011

Presentation of the talk titled "Desafíos en la conservación de *Compsospiza garleppi* en áreas rurales y urbanas de los Andes de Bolivia"

III Congreso Boliviano de Ecología, Sucre-Bolivia. November 2011

Presentation of the Talk titled "Uso de habitat de *Compsospiza garleppi* (Thraupidae) ave en peligro de extinción y endémica de Bolivia"

XXV International Congress for Conservation Biology, Auckland-New Zealand. December 2011

Presentation of the Poster titled "Challenges in conserving the endangered and endemic Cochabamba Mountain-Finch in a rural Andean landscape"

Student Conference on Conservación Science, Cambridge-England. March 2012

Presentation of the Poster titled "Challenges in conserving the endangered and endemic Cochabamba Mountain-Finch in a rural and urban Bolivian Andean landscape"

Appendix 1

a) News related to the project in “La Voz” and in “Los Tiempos” newspaper.

PROVINCIA
CICHUASIBAMBA, Domingo 24 de mayo de 2013

RARIZA | HAY INTERÉS DE INSTITUCIONES POR PROTEGERLA
Alcaldesa gestionará ordenanza para proteger ave en extinción

■ *Esta preciosa ave, que solo se puede observar en Quilacollo, está en riesgo de extinción.*

La alcaldesa de Quilacollo, María Leticia Pineda Buitrago, anunció que gestionará una ordenanza municipal para proteger a una especie de ave que se encuentra en riesgo de extinción.

El ave en cuestión, que se encuentra en Quilacollo, es la Pospiza de Quilacollo. Esta especie de ave es considerada como una especie en peligro de extinción.

La alcaldesa Pineda Buitrago dijo que la ordenanza municipal que se está gestionando tiene como objetivo proteger a esta especie de ave y garantizar su supervivencia.

“Esta especie de ave es muy preciosa y solo se puede observar en Quilacollo”, dijo la alcaldesa. “Es una especie que está en riesgo de extinción y es importante que tomemos medidas para protegerla”.

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LANZAN CAMPAÑA
Se entregarán credenciales a los conductores de taxis

El programa municipal para mejorar la seguridad vial en la ciudad de Cuzco, que incluye la entrega de credenciales a los conductores de taxis, se entregó a los conductores de taxis en la ciudad de Cuzco.

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AVISOS

Se informa que...

Se informa que...

Se informa que...

Los Tiempos
Local
SECCIÓN C DOMINGO 27 de mayo de 2013

FELIZ CONVIVENCIA

Las Pospizas de Quilacollo, que solo se puede observar en Quilacollo.

La Pospiza de Quilacollo, que solo se puede observar en Quilacollo.

La Pospiza de Quilacollo, que solo se puede observar en Quilacollo.

En riesgo de desaparecer la Pospiza y la qhewiña

Otras aves en peligro

El número de especies de aves en riesgo de extinción en la provincia de Cuzco es alarmante. Según un estudio realizado por el proyecto de conservación de aves, se han identificado varias especies de aves que están en peligro de extinción.

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b) News related to the project in "Los Tiempos" newspaper.

Los Tiempos

Local

SECCION C DOMINGO 22 de NOVIEMBRE de 2009

DOS COMUNIDADES CERCANAS A LA CORDILLERA DEL TUNARI APRENDEN A RECONOCERLA Y PROTEGERLA

Ave en peligro ya tiene padrinos

Cecilia Arias

“La primera vez que hallé una pareja intenté verla en todo lo que podía caer. Debía ir a una zona que tenía el permiso y yo no tenía resultados. Un día me fui a ver los frutos y, cuando pude entrar, las encontré volando. Me puse a hacerle fotos”, recuerda la ornitóloga Noemí Huamán, encargada de investigar esta ave en peligro de extinción.

La *Phoenicurus phoenicurus*, especie conocida, era bastante común, de hecho durante el año son muy comunes en las zonas y áreas en su hábitat, sin embargo en las comunidades de Cochabamba y Potosí, y Potosí, el número de aves se ha reducido por la pérdida de su hábitat. Gracias a estos esfuerzos, desde hace algunos años, se han iniciado acciones para proteger y promover una especie que, de todos los lugares del mundo, solo habita en zonas montañosas de Cochabamba y Potosí.

El proyecto de restauración del área en parte del programa de conservación de especies amenazadas de la Asociación Civil Ambiente, Vegetación y Agua trabaja en su favor en la sensibilización de comunidades rurales sobre la importancia de esta especie.

La *Phoenicurus phoenicurus* fue descubierta en 1985, habiendo en Cochabamba habido un total de 2.000 individuos de adultos y hasta los 1.000, necesitan suficiente agua y suficiente de bebida, así como con la suficiente alimentación de su hábitat, se encuentran a vivir en los cerros de Cochabamba y Potosí.

Según Huamán, una de las acciones es la educación de los niños que se venían en la escuela, que se les enseña a reconocer la especie y sus características físicas y sus características físicas en los cerros.

“El ave es una especie amenazada de extinción que se encuentra en las zonas de alta montaña y es una especie que se encuentra en las zonas de alta montaña”, dice Huamán, quien trabaja con el proyecto de conservación de especies amenazadas de la Asociación Civil Ambiente, Vegetación y Agua.

Huamán es la que fue la encargada de la investigación, que ahora continúa que muestra un año. “Al principio se me fueron dando

Algunas aves son similares, como las de la izquierda. Sin embargo, la de arriba es el *Phoenicurus phoenicurus*. La real está a la derecha.

Particularidades

La *Phoenicurus phoenicurus* se cría en las zonas de alta montaña y se alimenta de insectos y frutos. Se reproduce en las zonas de alta montaña y se alimenta de insectos y frutos. El período de cría comienza en mayo y se prolonga hasta agosto. El período de cría comienza en mayo y se prolonga hasta agosto.

“Las más accesibles son los niños, cuando llegan se alegraron al contar que la vieron. Pero los adultos también se entusiasman, ellos sugirieron calendarios de trabajo con la foto de *Phoenicurus phoenicurus*”.

NOEMÍ HUAMÁN
Asociación Civil Ambiente, Vegetación y Agua

Otra ave similar, que se diferencia de la anterior por la forma de la cabeza y los colores de las alas.

La nueva especie de Cochabamba y Potosí, de la familia de las aves, se encuentra en las zonas de alta montaña y se alimenta de insectos y frutos. El período de cría comienza en mayo y se prolonga hasta agosto.

Noemí Huamán



La *Phoenicurus phoenicurus*, ave en peligro de extinción y cuyo único hábitat en el mundo está en alturas cordilleranas de Cochabamba y Potosí. (Foto: Noemí Huamán)

Dicho, me gustaría que me fueran, ahora me esperan, me ayudan a llegar con más seguridad y hasta me ayudan en el camino”, dice Huamán.

La especie de la ave se encuentra en las zonas de alta montaña y se alimenta de insectos y frutos. El período de cría comienza en mayo y se prolonga hasta agosto.

Además, la misma especie se encuentra en las zonas de alta montaña y se alimenta de insectos y frutos. El período de cría comienza en mayo y se prolonga hasta agosto.

Por lo tanto, la *Phoenicurus phoenicurus* se encuentra en las zonas de alta montaña y se alimenta de insectos y frutos. El período de cría comienza en mayo y se prolonga hasta agosto.

RECONSTRUCCIÓN

Una población más alta para rehabilitar el hábitat y darle a la especie un hogar en alturas. Hasta ahora, de la especie de la especie se han encontrado en las zonas de alta montaña y se alimenta de insectos y frutos. El período de cría comienza en mayo y se prolonga hasta agosto.




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c) News related to the project in "LA RAZON" newspaper.



POOSPIZA

LOS GUARDIANES DEL AVE DEL TUNARI

Una especie en riesgo de desaparición enamoró a dos aldeas de Cochabamba, que ahora le brindan protección

No la agarramos, no la matamos, la cuidamos'. Lorenzo Puentes se refiere a ella como una habitante más de Palcapampa. Habla en quechua, con cariño. Hace seis años no sabía que existía ni que convivía con ella, menos que está a punto de desaparecer. Por eso, relata con emoción sus encuentros furtivos con el ave, cuando vuela por sus sembrados, o cuando se posa sobre la puerta de madera de su choza de adobe, o deja escuchar su canto entre los árboles y arbustos.

Mide alrededor de 17 centímetros. Su plumaje es gris y naranja. Le gustan las alturas: vive entre los 2.700 y 4.000 metros sobre el nivel del mar. Se estima que solamente hay entre 400 y 4.000 como ella en el país. Se llama *poospiza garleppi*, un ave-cilla que sólo habita en Bolivia y está 'en peligro' de extinción. Gracias a la Asociación Civil Armonía, las comunidades cochabambinas de Palcapampa y Chiqui Potrero se han convertido en sus fieles guardianas, así como Lorenzo.

Fue descubierta en 1893. Su árbol genealógico la liga a la orden *Passeriformes* a la familia *Emberizidae*. Su certificado científico de bautizo reza que es *poospiza garleppi*, aunque hay quienes la llaman *qoyupa puka-q'illita* (pájaro rojo-amarillo, en quechua), *Cochabamba Mountain-finch* (pinzón de montaña de Cochabamba, en inglés), o quisieren rebautizarla como la Montañita de Cochabamba. No importa, para sus nuevos certámenes ella es *poospiza*, o sea, nombre que se adapta a su lengua.

La ornitóloga Noemí Huarca dedica su vida al estudio y preservación de esta ave. Señala que más allá de las rapaces que la

6 Europa

Fanáticos "poospizeros". Abajo, dirigentes de Ch'aq'u Potrero muestran afiches del proyecto. Apolinar Solís muestra uno. Al lado, niños de Palcapampa exponen sus cuadros en goma eva sobre el ave



cuzán, las víboras y roedores que acechan sus nidos para comer sus huevos y polluelos, su principal verdugo es el humano, que daña su hábitat con la apertura de caminos, la expansión de cultivos y de ganados, el uso de pesticidas y de leña. Con la tala de árboles y arbustos, el pájaro tiene menos alimentos y lugares seguros para anidar.

Aún así, poospiza lucha. Una muestra es que ha aceptado convivir con las casi 100 familias de Palcapampa (planicie dividida, en quechua) y Ch'aq'u Potrero (potrero seco) y adaptarse a la urbanización de este territorio en las quebradas húmedas del Parque Nacional Tunari, en el municipio de Vinto. Además, hay reportes de que este animal amenazado también vuela por Lallahuani, en Potosí, y en otras zonas cochabambinas como Cotomí, Santa Bárbara, Ch'aq'u Qocha y San Miguel.

Adiós a la honda y el revólver

Los palcapampeños y ch'aquepotreños se enteraron hace seis años de que tienen de vecina a esta ave única, cuando Huanca y su proyecto apadrinado por Armonía apostaron a enseñarles a identificarla, valorarla y protegerla. Pero primero había que develar si la zona cobijaba a este espécimen. Así, la científica lidó con la desconfianza de los lugareños y dibujo en mano, recorrió sus casas. Pero todo era vano, nadie conocía a ese ejemplar que lleva una especie de antifaz naranja.

Cuando Huanca sintió que se le iban las esperanzas, pasó el milagro. La vio en el tendedero de ropa de un hogar de Palcapampa. Luego halló su primer nido y, por recomendación de los dirigentes, partió a Ch'aq'u Potrero. Allí la observó en el techo de una vivienda. El siguiente paso fue involucrar a los comunarios, hacerles sentir orgullosos de vivir con poospiza. Intentar mejorar su calidad de vida con el programa, para que sientan que el ave es vital.



Libro Rojo alerta de 60 aves en riesgo

El Libro Rojo de la Fauna Silvestre de Vertebrados de Bolivia informa que en el país existen 333 especies que están en las siguientes categorías de riesgos de extinción: "en peligro crítico" (22), "en peligro" (46), "vulnerable" (125) y "casi amenazada" (120). El departamento con el mayor

número de ejemplares amenazados es La Paz, con 116; seguido por Cochabamba, con 87, y por Santa Cruz, con 70. Asimismo, la ecorregión más afectada es Yungas, con 80 especies amenazadas, y le sigue la Puna Norteña, con 41. Del total inicial, hay 60 aves amenazadas. Poospiza es

un ejemplar "en peligro", o sea, según el documento, "enfrenta un alto riesgo de extinción o deterioro poblacional en estado silvestre en el futuro cercano, ya sea por una rápida disminución poblacional, área de ocupación pequeña, fragmentada o fluctuante, y población pequeña y en disminución".



Apolinar Soliz fue uno de los firmes aliados de Huanca. El 2007, el exbrigante chiquipotroño le autorizó a husnear por su territorio para buscar a "ese pajarito", y no se arrepiente. Más bien, resalta todo lo que poospiza ha traído para su pueblo y Palcapampa: material escolar y regalos navideños para los niños, pléreas, capacitación a los varones para preparar plaguicidas ecológicos, cursos de cocina para mujeres. Algo que Apolinar agradece con mucha picardía, frotándose el estómago.

"Antes la veíamos, pero no la reconocíamos entre tantos pajaritos que hay por aquí", relata el hombre, mientras alista su pala para trabajar en el camino de tierra que atormenta a los lugareños en tiempos de lluvia y por los derrumbes. "Estamos felices de tener esta avecita que sólo vive en Bolivia y no hay en otra parte del mundo". Es secundado por Genaro Fuentes, quien muestra su palma para explicar el tamaño de poospiza, antes de confesar que ella cambió los hábitos de vida en ese sitio.

En estas aldeas, era común ver a los pequeños y mayores con hondas y flechas colgadas en sus cuellos. Ahora, son cosas del pasado, al igual que la intervención de nidos, para permitir la reproducción de las avscillas. Dilemer, un niño de Chíaquí Potrero, comenta que tienen orden de no matarlas. "No tenemos que hacerles daño, desde que vino la doctora. Ya no usamos flechas. Antes utilizábamos y cazábamos palomas, hasta con revólveres".

La arquitecta de ramas y musgos

Este ejemplar alado es omnívoro, o sea, come de todo. Su dieta se basa en semillas, gusanos y bichos pequeños. Aunque su convivencia con los cultivos de papa, oca, arveja, haba, avena y maíz que se erigen en Palcapampa y Chíaquí Potrero, ha adicionado una delicia a su menú: la papa *ju-lusga*, aquella soleada, casi en estado de putrefacción y que en ese proceso adquiere un sabor dulzón. Por esto, hay campesinos que dejan secar algunas papas de su cosecha para que alimenten a estas aves.



La Asociación Civil Armonía y la ornitóloga Noemí Huanca crearon el proyecto de preservación y de concienciación desde el año 2006

También están los que botan diariamente una papita al patio de su casa, para que las reciban en sus visitas impredecibles, aquellas que hacen cuando dejan de lado su timidez para saltar cerca de las chozas de sus flamantes guardianes. "Todo hacemos por nuestra poospizita. La cuidamos y la vamos a proteger siempre", dice con un dejo de orgullo Felipa Vega, luego apunta con su dedo índice derecho a lo más alto de tierras palcapampeñas. "Por allá también camina, caminan de dos en dos".

La fidelidad manda en la relación de pareja de esta especie monógama. Su cortejo es entre diciembre y abril, en época de lluvias, tiempo de reproducción. Sigue un ritual previo al apareamiento, melódico y coqueto, que se inicia con el canto fuerte del macho y el destile de su plumaje im-

pecable. Para la hembra, esto es sinónimo de vigorosidad, de que el pretendiente está sano y será un buen padre para construir un nido y alimentar a su familia.

Cual si fuera un Sherlock Holmes de la ornitología, Huanca desentrañó varios misterios de poospiza. Por ejemplo, su hogar tiene forma de copa y es edificado en arbustos relativamente altos; la estructura son pajás y ramas terminales, la decoración exterior, musgos, y el sistema de calefacción interior para los huevos y polluelos es armado con plumas, lana de oveja o pelos de cola de caballo. Generalmente, la nidada asciende a dos huevos y el tiempo de incubación dura unas dos semanas.

Los padres no quitan los ojos de sus nidios. Se esmeran en cuidar a sus hijos hasta que forman su propia familia. Vigilan todo su proceso de desarrollo: primero su evolución de crías a "volantones", cuando intentan salir del nido a dos meses de nacidos; o cuando son "juveniles" y aprenden a volar por sí solos, a sus entre seis y siete meses de vida; o cuando son considerados "subadultos", casi a los 11 meses, y finalmente, al año, cuando ya son "adultos" y tienen todos los rasgos de la especie.

Son animales territoriales, es decir, hacen respetar sus fronteras entre sus similares, sobre todo en la época reproductiva aunque esta actitud no es tan radical con otras aves. Hasta ahora, Huanca identificó ocho territorios de parejas de poospizas en Palcapampa, y seis en Chíaquí Potrero. Cada uno de éstos abarca entre 1,2 y 1,9 hectáreas, y en cada cual estas aves estonan un "canto territorial" que sirve como alerta para los extraños que merodean.

Su repertorio musical guarda diferentes melodías. Tiene una para el encuentro de pareja, otra para alimentar a sus hijos, otras para el invierno y la época seca. Pero cuando más canta es en tiempo de lluvias, cuando vigila su territorio después de la reproducción. Es el momento en que se le puede ubicar y ver más fácilmente cuando salta entre los árboles y abandona su silencio y su carácter introvertido. Pero hay algo

Amor "verde". A la izquierda, una vista de los valles en las quebradas húmedas del Parque Nacional Tunari. Abajo, niños dibujando al ave y posando en el ingreso a la escuela de Ch'agua Potrero.



que Huanca tiene todavía pendiente por descubrir: cuánto tiempo vive esta especie. A la hora de usar los binoculares, no hay quien gane a los alumnos de Ch'agua Potrero. Junto a los de la escuela palcapampeña, resultaron ser socios incondicionales de Huanca en su búsqueda del ave. Dilmir y Jaime fueron testigos de la aventura y tienen voz y voto para guiar a los visitantes por los sitios por donde alguna vez saltó o voló poospiza. "Viene a mi casa de mañana", expresa el primero. "Yo no le hago daño, la veo más cuando llueve", subraya el otro.

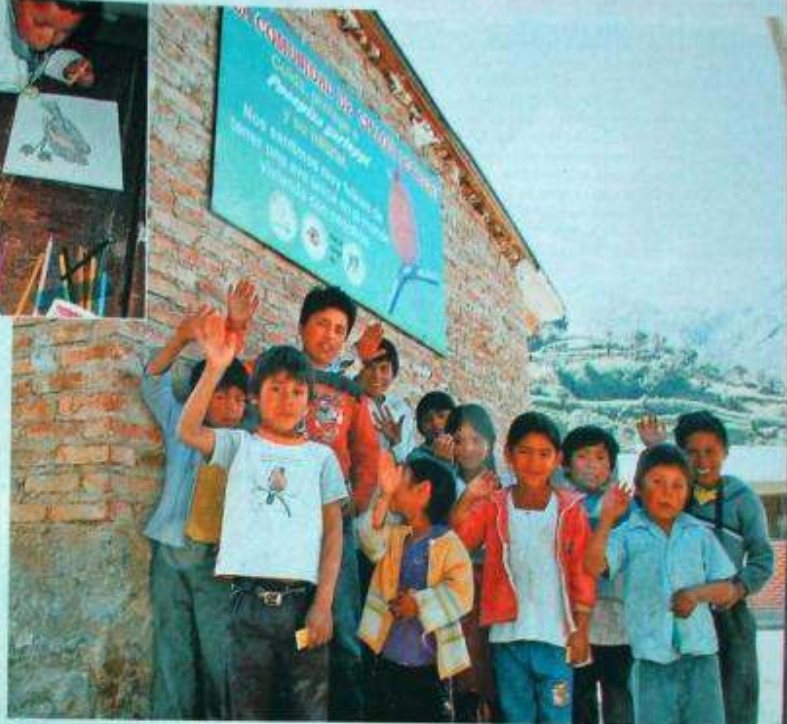
Los niños fueron el anfitrión para irradiar el amor por el ave. Todos tienen una historia, un recuerdo sobre algún encuentro cercano o lejano. No en vano los letreros que certifican a estos dos poblados como sus guardianes cuelgan en el ingreso de los colegios y portan la leyenda: "La comunidad (Ch'agua Potrero o Palcapampa) cuida, protege a *poospiza garleppi* y su hábitat. Nos sentimos muy felices de tener un ave única en el mundo, viviendo con nosotros".

Retratos en cartulina y goma eva

En los muros de los cursos no sólo hay cartulinas con los temas que se avanzan en clases, también dibujos coloridos del ave hechos en hojas de papel y en goma eva. Los afiches y calendarios con su imagen también afloran en los cuartos de reuniones y de profesores. Y cuando se pregunta a los pequeños sobre poospiza, todos alzan sus manos y sufren una metamorfosis: dejan su timidez y se convierten en eruditos.

"Descubrir a poospiza trajo alegría", resume Angélica Mansilla, potosina que tiene a su cargo a los 20 alumnos de Ch'agua Potrero. "Siempre estamos aquí buscando a los pajaritos: los niños dejan papita y migajas para que coman. Siempre me preguntaba cómo serían y una mañana, uno se paró en mi frente. Es plomito, con su pechito anaranjado". Desde entonces, ella también quedó prendada y hasta hizo bordar manteles con la figura de estas aves.

Otro de los objetos de colección de los lugareños es la foto en la que aparecen vis-



El Libro Rojo señala de que sólo hay entre 400 y 4.000 ejemplares de esta ave bicolor en poblaciones de Potosí y Cochabamba

tidos con las poleras que llevan el logo del pájaro, cual si fueran un equipo de fútbol. Las mujeres exponen orgullosas sus fotos de los cursos de pollo al horno, repostería, rellenos y puré de papas. Una es Enriqueta Fuentes, líder palcapampeña que colecciona esos recuerdos en un periódico mural. "Sin poospiza, no hubiéramos aprendido estas cosas". En su lógica, si ella les da para comer, ellos deben retribuirla.

El proyecto también ayudó a que los comunarios de esta región cálida del Tunari aprecien la conservación de un árbol nativo andino que habita sus tierras y que emplean como leña. Un símbolo prehistórico, único de su especie que crece entre los 3.000 y 5.000 metros sobre el nivel del mar. Como poospiza, está en peligro de extinción por la tala y la quema, y ella lo ne-

cesita para anidar y extraer de su corteza las larvas y gusanos para sus bebés.

Incluso la kesiña ayuda en el crecimiento de otros arbustos útiles para esta ave. Es así que los campesinos se unieron a Armonía para la colecta de plántones, que fueron sembrados en los montes. Apolinar Soliz informa de que los árboles desarrollarán con el tiempo, al pertenecer a un espécimen que crece sólo unos centímetros en varios años. Hoy están conscientes de que deben protegerlos, a pesar de que no cuentan con cocinas a gas y dependen de su madera para casar y hervir alimentos.

El palcapampeño Zacarías Delgado afirma que siente júbilo con la que se hizo por el medio ambiente. "Queremos más plantas, queremos que poospiza esté bien, nos sentimos contentos con ella porque nos trajo felicidad. Creo que las autoridades deben reconocerlo que hacemos". No pide dinero, sino obras para un territorio que queda frecuentemente incomunicado, que sufre por la falta de servicios básicos y de agua para sus casas y sembradíos.

Incluso los lugareños sueñan en grande. Hablan de crear una zona turística. Están

seguros de que poospiza les puede ayudar también en esto. Apuestan a que muchos estarían interesados en conocer la moneda de esta ave y sus protectores, que así se abrirían un mercado de artesanías con la imagen de ella. Quieren erradicar los agroquímicos para vender alimentos naturales. Pero para esto precisan más ayuda, y notan como que ésta se les esfuma.

El último trabajo del programa de conservación fue el anillado que hizo Huanca a las patitas de uno de los polluelos hallado en Palcapampa, para profundizar los datos del aumento o caída de la población de estas aves, y ante la curiosidad campesina por saber si hay bodas entre poospizas de ambas comunidades. Pero la labor de esta científica se quedó sin financiamiento.

Huanca informa que cumplió las metas trazadas con Armonía y el apoyo de American Bird Conservancy, Conservation Leadership Programme, Kibverstone-Wildlife

Proyecto exitoso.

A la derecha, el primer polluelo anillado: el rojo significa que nació el 2010, el azul, que vive en Palcapampa, y el verde, que está en el territorio 3 Abajo, la ornitóloga Noemí Huanca (con chamarra roja), posa junto a coturnarias tras las clases de repostería y con el pastel de poospiza.



Charitable Trust, Royal Society for the Protection of Birds, Association of Field Ornithologists, más el Centro de Biodiversidad y Genética de la Universidad de San Simón.

Aunque lo que más aprecia es que tras seis años, fue aceptada como una cháiquipotrenña y una palcapampeña más: igual que su querida poospiza. Este logro le da optimismo para que su proyecto consiga fondos. Mientras suman los aliados del ave. Como la alcaldesa de Quillacollo, Carla Lorena Pinto, quien dictó una ordenanza

que declaró área protegida al bosquecillo de San Miguel, donde se verificó la presencia de poospiza y kewiñas. Más aún, adoptó a este animalito como símbolo de su gobierno, que usa su imagen en membretes, folletos y hasta en las puertas de coches oficiales, al lado del escudo local.

Pinto anuncia de que tramita una ley para blindar su decisión y para nombrar a poospiza como 'ave de la integración'. Esto alega a cháiquipotrenños y palcapampeños, pero lamentan que no reciben el mismo impulso de su municipio. Vinto. No importa, ahora trabajarán junto a Armonía planes integrales que no solamente tomen en cuenta la preservación del ave, sino proyectos de agua, reforestación, camineros.

"Es tan nuestra"

El lema que se maneja es: "Si ellos están bien, también las aves, porque ayudarán a cuidarlas". Apolinar Soliz no duda de que él y sus vecinos darán todo por "ese papuño" al que mira como un habitante que adorna con su plumaje bicolor los valles de su tierra partida por el río Llave. A la hora de despedirse, le lanza una advertencia bromista a Huanca. "Así como los pastores no dejan a sus ovejas, no tienes que dejar a poospiza".

En Palcapampa, Lorenzo Fuentes no entiende de cierre de proyectos. Habla de que ella sólo vive en los árboles de su región, que vuela por su hogar, sus cultivos. Lo mismo pasa con Enriqueta Fuentes, que no para de contar que ella, a veces, la visita en el patio de su vivienda, y que no la bota como a otras aves. Se refiere a ella en quechua, con amor, así como todos los guardianes de su zona, la llama "poospizitanchej", es decir, "nuestra poospiza".

Sus centinelas colgaron hondas y revólveres para no matarla, dejan en paz sus nidos para que se reproduzca, y hasta dejan solear papa para que se alimente

TEXTO: MIGUEL E. GÓMEZ BALBOA
FOTOS: EDUARDO SCHWARTZBERG,
CORTESÍA NOEMÍ HUANCA

Appendix 2 MEMORIES

a) COCHABAMBA MOUNTAIN-FINCH: Adults, nest, eggs, nestlings, and juvenile.



b) HABITAT: Landscape and local communities.



c) PEOPLE: In their daily lives.



d) CHILDREN OF PALCAPAMPA AND CH'AQUI POTRERO



e) WOMEN OF PALCAPAMPA AND CH'AQUI POTRERO



f) MEN



g) REFORESTATION



h) POOSPIZA AT THE LOCAL COMMUNITIES



TAWA - TAWAS



INGREDIENTES*

- 3 Huevos
- 3 Tazas de harina blanca
- 1 Cucharilla de Royal
- 1 Cucharilla de sal
- 1 Cucharilla de vainilla
- 1 Cuchara de mermelada
- Canela (opcional)

PREPARACIÓN:

Mezclar la harina con el royal, la sal y la mermelada; frotar con las manos hasta que se formen migas.


Añadir agua o leche con los huevos, luego la vainilla.

Formar una masa suave, dejar reposar 20 minutos, luego fustearse y aplastar la masa delgado, cortar en tamaños medianos.

DULCE DE CAÑA:

Chancaca y Canela

Poner en una olla la chancaca desmenuzada hasta que se derrita a fuego lento y poner la canela, luego añadir un vaso de agua.



i) PROUD OF POOSPIZA



j) MATERIALS



k) COCHABAMBA



I) QUILLACOLLO



m) THE MAYOR OF QUILLACOLLO



n) COCHABAMBA MOUNTAIN-FINCH THE SYMBOL OF QUILLACOLLO



LEENAR FECHA Y HORA DE RECEPCIÓN Y DE SALIDA

Gobierno Autónomo Municipal de Quillacollo
CORRESPONDENCIA
HOJA DE RUTA N° GANAD. DESVITE

PROCEDENCIA

FECHA DE INGRESO HORA

FECHA DE SALIDA HORA PLAZO HASTA

REFERENCIA

PRIMER DESTINATARIO

<input type="checkbox"/> DIR. MUNICIPIO	<input type="checkbox"/> DIR. SALUD P.ÚB.	<input type="checkbox"/> DIR. NAVES DE PLAN	<input type="checkbox"/> DIR. AG. RIEGO	<input type="checkbox"/> ESPACIO
<input type="checkbox"/> DIR. FINANZAS	<input type="checkbox"/> DIR. G.O.F.P.	<input type="checkbox"/> DIR. C.O.S.T.R.O	<input type="checkbox"/> DIR. FISCALIZA.	<input type="checkbox"/> ASIST. LEGAL
<input type="checkbox"/> DIR. TR. M.ÚN.	<input type="checkbox"/> DIR. DEL P.ÚB. SER.	<input type="checkbox"/> DIR. URBANISMO	<input type="checkbox"/> DIR. O.C.M.P.L.E.	<input type="checkbox"/> ASIST. TÉCNICO
<input type="checkbox"/> DIR. REG. M.	<input type="checkbox"/> PLANOS Y LÍNEAS	<input type="checkbox"/> VIGILANCIA SANITARIA	<input type="checkbox"/> UNO TRANSP.	<input type="checkbox"/> COORDINADOR GENERAL
<input type="checkbox"/> DIR. R.U.A.	<input type="checkbox"/> ENO. M.A. ZONAS	<input type="checkbox"/> DIR. CULTURA	<input type="checkbox"/> SOC. CIDADANA	<input type="checkbox"/> S.P.C.B.N.
<input type="checkbox"/> INTERMUNIC.	<input type="checkbox"/> ALUMBRAM. PÚBLICO	<input type="checkbox"/> COM. DE ACCIÓN	<input type="checkbox"/> REC.M.O.	
<input type="checkbox"/> ACTIV. FISIC.	<input type="checkbox"/> DIR. DE REPOSIC.	<input type="checkbox"/> DIR. TURISMO	<input type="checkbox"/> DIR. SISE. C.O.M.	
<input type="checkbox"/> HOSP. U.L.L.O.	<input type="checkbox"/> DIRECCIÓN ENGEN.	<input type="checkbox"/> DIR. TURISMO	<input type="checkbox"/> DIR. SISE. C.O.M.	
<input type="checkbox"/> PRECAGACIÓN	<input type="checkbox"/> DIRECCIÓN ENGEN.	<input type="checkbox"/> DEFENSA		

INFORMAR A COORDINACIÓN CAMBIO DE DESTINATARIO

CÓDIGO DE INSTRUCCIÓN

<input type="checkbox"/> URGENTE	<input type="checkbox"/> PREPARE RESPUESTA	<input type="checkbox"/> FAVOR ORIENTAR	<input type="checkbox"/> ASISTIR
<input type="checkbox"/> DAR CUBRTO	<input type="checkbox"/> TOMAR NOTA	<input type="checkbox"/> PREPARE INFORME	<input type="checkbox"/> DEFENDER
<input type="checkbox"/> RECORSIONAR	<input type="checkbox"/> AUTORIZADO	<input type="checkbox"/> REVISAR ANTECEDENTES	<input type="checkbox"/> ARCHIVAR

INSTRUCCIÓN O PROHIBIDO

SEGUNDO DESTINATARIO

CÓDIGO DE INSTRUCCIÓN

<input type="checkbox"/> URGENTE	<input type="checkbox"/> PREPARE RESPUESTA	<input type="checkbox"/> FAVOR ORIENTAR	<input type="checkbox"/> ASISTIR
<input type="checkbox"/> DAR CUBRTO	<input type="checkbox"/> TOMAR NOTA	<input type="checkbox"/> PREPARE INFORME	<input type="checkbox"/> DEFENDER
<input type="checkbox"/> RECORSIONAR	<input type="checkbox"/> AUTORIZADO	<input type="checkbox"/> REVISAR ANTECEDENTES	<input type="checkbox"/> ARCHIVAR

INSTRUCCIÓN O PROHIBIDO

FECHA DE SALIDA: HORA FIRMA Y SELLO

TERCER DESTINATARIO

CÓDIGO DE INSTRUCCIÓN

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<input type="checkbox"/> DAR CUBRTO	<input type="checkbox"/> TOMAR NOTA	<input type="checkbox"/> PREPARE INFORME	<input type="checkbox"/> DEFENDER
<input type="checkbox"/> RECORSIONAR	<input type="checkbox"/> AUTORIZADO	<input type="checkbox"/> REVISAR ANTECEDENTES	<input type="checkbox"/> ARCHIVAR

INSTRUCCIÓN O PROHIBIDO

FECHA DE SALIDA: HORA FIRMA Y SELLO

CUARTO DESTINATARIO

CÓDIGO DE INSTRUCCIÓN

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<input type="checkbox"/> DAR CUBRTO	<input type="checkbox"/> TOMAR NOTA	<input type="checkbox"/> PREPARE INFORME	<input type="checkbox"/> DEFENDER
<input type="checkbox"/> RECORSIONAR	<input type="checkbox"/> AUTORIZADO	<input type="checkbox"/> REVISAR ANTECEDENTES	<input type="checkbox"/> ARCHIVAR

INSTRUCCIÓN O PROHIBIDO

FECHA DE SALIDA: HORA FIRMA Y SELLO



