



Armonía Update

December 2015

These notes are produced to update individuals and institutions regarding Armonía's general advances and conservation actions. For detailed information in English you may contact Armonía's Executive Director Bennett Hennessey (ahennessey@armonia-bo.org), or Armonía's project supervisor Rodrigo W. Soria-Auza (wilbersa@armonia-bo.org). Armonía is a partner organization to American Bird Conservancy, BirdLife International, Loro Parque Fundación, Rainforest Trust and World Land Trust. US tax-deductible donations designated to Armonía or a specific project can be made through our partners American Bird Conservancy at <https://www.abcbirds.org/membership/donate.cfm> (choose 'International - Asociación Armonia - Bolivia' in the 'I wish my donation to support' pop up window) and Rainforest Trust at <http://www.rainforesttrust.org/donations/> (choose other and write the name of the project in the pop up window).

This update can be distributed without authorization. We would appreciate receiving any comments, suggestions, or opinions that may help us in our work.



Red-fronted Macaw *Ara rubrogenys* Conservation Program

Program area: Inter-Andean dry valleys of the Mizque, Caine, Pilcomayo and Grande river systems; Departments of Cochabamba, Chuquisaca, Potosí and Santa Cruz.

The Red-fronted Macaw is endemic to a small area on the east slope of the dry Andes in south-central Bolivia. Locally common at a number of sites but declining throughout its range, the global population is estimated to number fewer than 1,000 mature individuals. Accordingly, it is listed as Critically Endangered in the 2009 Bolivian Red Book. The main threats of the Red-fronted Macaw are illegal trapping for the pet trade, habitat destruction through conversion to agriculture and extreme overgrazing by goats, and persecution as a crop pest (as natural food plants are increasingly scarce, birds often resort to crops such as peanuts and corn for food especially outside the breeding season).

Armonía has made substantial progress towards securing the protection of the most important breeding area on the Mizque River in Cochabamba. We have been working with three local communities (Amaya, Perereta and San Carlos, all located within the municipality of Omereque) since 2005 to develop sustainable solutions for the long-term conservation of the Red-fronted Macaw through community-based ecotourism, honey and papaya production. Here, in 2009, the Red-fronted Macaw Community Nature Reserve was created to protect the most important breeding cliffs for this species thanks to the support of Thomas Henry Wilson Sr. Jr. and Nature Fund. Armonía built the 14 bed Red-fronted Macaw Ecolodge at the breeding cliffs, the proceeds of which go to the communities. With support from the Olewine Family we are providing technical assistance to the community honey, papaya, integrated pest management and ecotourism projects. In 2013 we conducted a reforestation campaign with native plant species within the Red-fronted Macaw Nature Reserve. We also initiated a program to decrease the use of harmful agrochemical products. Thanks to our diverse sustainable development and conservation projects in this area, approximately 250 families improved their livelihoods and became protectors of the most important Red-fronted Macaw breeding site.

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As trapping for the illegal pet trade and persecution of wild individuals to protect crop fields continue to pose a major threat to the Red-fronted Macaw throughout its range, this 2014, the American Bird Conservancy and the Marshall Foundation supports the implementation of a regional educative campaign to raise the awareness of this species' uniqueness among inhabitants of this region of Bolivia. This year we started gathering data to identify the most vulnerable local populations to pet traffickers and/or persecution by farmers who kill them to protect their maize and peanut crops. Our goal is to obtain baseline data to propose effective conservation actions to avoid this species' extinction. This will be achieved through a participative workshop where national and local authorities, and other conservation organization will be invited to participate. This workshop will be coordinated with the national bureau in charge of biodiversity protection and management (Dirección General de Biodiversidad y Áreas Protegidas).

We also organized workshops to guide local authorities and local decision-makers to implement measures to protect this threatened species. As a result of our activities, authorities of Omereque declared the Red-fronted Macaw as a biological heritage of this municipality. Now we are working together to develop the regulation needed to implement this law. This is an important step to integrate the local government as key actor to protect the largest breeding site of this species (within the Red-fronted Macaw Community Nature Reserve), and other two sites that are also located within the municipality of Omereque.

Finally, thanks to our nest monitoring program we collected feathers from the base of several cliffs with nests along the Mizque River. We conducted a molecular sex-ratio analysis and found that males are more abundant than females. This unbalanced sex ratio may be a compounding factor preventing or limiting the population recruitment for this species (lower availability of females to produce offspring). Further studies are needed to confirm whether this unbalanced sex-ratio does occur throughout this species distribution.

Presently we are seeking US\$ 3,500 to produce educative material (banners, flyers, leaflets and posters) that will be distributed among communities and villages throughout the range of the Red-fronted Macaw. US\$ 10,000 is needed for population monitoring (the last four years the census was limited to the Mizque basin due to a shortage of funds) and complete pending molecular analyses.





Cochabamba Mountain-Finch *Poospiza garleppi* Conservation Project

Project area: Montane slopes of the Tunari Cordillera, Department of Cochabamba

The Cochabamba Mountain-Finch is an endangered Bolivian endemic restricted nearly exclusively to the montane slopes of the Tunari Cordillera near the city of Cochabamba in central Bolivia. Two small isolated populations are known to northern Potosi and central Chuquisaca. The species' decline is attributed to the widespread destruction of its *Polylepis* forests through conversion to agricultural land; *Polylepis* forest replacement with *Eucalyptus* and pine plantations; burning for pasture; and firewood collection. Small breeding populations occur in a mosaic of cultivated fields and small remnant patches of native vegetation, primarily shrubs and grasses with few scattered trees.

A result of several years of community outreach and educational activities with the Ch'aqui Potrero community, Armonía supported the installation of the first tree nursery where the threatened *Polylepis subtusalbida* (almost endemic to the cordillera del Tunari in Cochabamba) is produced. As we have the only nursery producing saplings of this threatened tree species, we became the provider of *Polylepis subtusalbida* saplings to other habitat restoration initiatives in the cordillera del Tunari. Since 2013 we have produced nearly 5,000 saplings for reforestation campaigns in Caluyo, Ch'aqui Potrero and San Miguel. This year we started working with community members from San Miguel to integrate them into the ongoing birdwatching tourism industry. San Miguel is an easily accessed site where the Cochabamba Mountain-Finch, and a variety of range restricted bird species endemic to *Polylepis* forests can be easily observed. We are constructing trails and installing signs to show visitors where the most interesting species associate to *Polylepis* woodlands (e.g. Cochabamba Mountain-Finch) can be easily observed and photographed.

We expect visitors to pay an affordable fee to freely walk through this community's land, and when needed, be guided by a trained community member. Thus, local people will be motivated to protect their woodlands.

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We are seeking US\$ 3,000 to produce informative material for tourists. Additional US\$ 8,000 is needed to conduct a pride campaign for the Cochabamba Mountain-Finch throughout its range.



Conserving Neotropical Migrants in High Andean wetlands (RAMSAR Site Lago Poopó)

Project area: The RAMSAR site Lago Poopó, Department of Oruro.

This project is implemented in coordination with the Centro de Estudios en Biología Teórica y Aplicada (BIOTA). Lago Poopó is one of the most important sites for the Endangered Titicaca Grebe, the vulnerable Andean Flamingo and the near threatened Puna Flamingo and Chilean Flamingo. Flamingo species are abundant in this wetland during the dry season (May to October). This wetland is also an important stopover site for numerous nearctic migrants travelling to southern South America during the boreal winter (December to March). Unfortunately the Lago Poopó is being disturbed by: mining companies in the northern region; the accumulation of household waste from the city of Oruro and several small villages; and the overexploitation of fishing resources.

In 2012 and 2013, Armonía and Biota worked together with stakeholders and decision makers to elaborate an action plan to decrease the impact of human activities on this wetland. Now thanks to the support of the Neotropical Migratory Bird Conservation Act of the U.S. Fish and Wildlife Service and BirdLife International's High Andean Wetlands program, we will have the opportunity to implement some of the actions included in the action plan. We will also motivate stakeholders and decision makers to fully implement the elaborated action plan.

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Presently we are seeking US\$ 2,500 to produce educative/informative banners that will be installed in crowded areas in Oruro city and five other small towns close to this wetland. We need US\$ 7,000 to elaborate and broadcast a TV spot. The TV spot to raise local people's awareness of the critical state of this wetland and the urgent need to implement actions identified in the action plan.



***Palkachupa Cotinga Phibalura boliviana* Conservation Project**

Project area: Apolo savannahs and semi-humid forests, Department of La Paz.

The Palkachupa Cotinga is endemic to the Apolo region of the department of La Paz. The species was unknown for ninety-eight years until it was rediscovered by Armonía in 2000. It is considered Critically Endangered owing to its small population and very small range (c. 770 miles²) in which destruction of its already severely fragmented and highly degraded habitat is ongoing. Accordingly, the population, estimated to number fewer than 600 individuals, is increasingly fragmented and suspected to be declining rapidly. Armonía's conservation actions are focused on the area of Aten, in the southern sector of the Palkachupa range, where the greatest number of breeding sites and individuals has been recorded, but where habitat destruction is escalating at an alarming rate through forest conversion to cattle pasture with annual burning of savannas.

As the impact of habitat loss on the viability of the remaining Palkachupa population is increasingly critical, the creation of a reserve is crucial for the long-term conservation of the Palkachupa stronghold in Aten. Armonía purchased 130 acres as the first step toward the creation of a Palkachupa Nature Reserve. The area has been fenced to keep cattle out and has a developing reforestation program. Our efforts are led by William Ferrufino, a native of Aten who previously worked as a park guard in Madidi National Park. William's leadership of the project has been fundamental to gaining local support for the reserve. In recognition of this and to build greater local participation in habitat conservation, Armonía

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provided assistance to renovate the Aten school. Since 2012, William has been monitoring fifteen nests between late August to early February. As we do not understand the this species' habitat requirements to establish their nests, we are currently conducting a research to investigate the habitat variables that better correlate with the reproductive success of this species.

In 2015 we plan to start a community-based beekeeping entrepreneurship program within the Palkachupa Nature Reserve. Thus, besides its primary role to protect nature, the reserve will also fulfill an additional social function. A number of hive-boxes will be initially installed within the reserve. In the long term we plan to expand this activity to other areas containing fragments of forests. Thus we will help to create a network of community protected forest fragments where the Palkachupa will find suitable habitat to feed, and people will be able to produce honey. We initially planned to implement this sustainable development project in Aten, however, three other Leco communities have recently manifested their desire to also participate in this project (Chirimayo, Muiri and Tupili). To include these other two represent will represent a great success, as the Palkachupa Cotinga is also common within the territories of these communities. We are currently looking for additional US\$ 25,000 to include these communities within this sustainable development project. We are also seeking US\$ 6,000 for the public awareness campaign (posters, brochures, radio spots, road signs, education materials etc.), and US\$ 5,000 to conduct a Palkachupa population census throughout its range in order to better assess its conservation status (which may be critically endangered). Through this study we will also estimate the percentage of land surface covered by forest, and the location of forest islands which are important breeding sites for the Palkachupa Cotinga.

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***Polylepis* forests in La Paz: Royal Cinclodes *Cinclodes aricomae* and Ash-breasted Tit-Tyrant *Anairetes alpinus* Conservation Program**

**Program Area:** Apolobamba, Madidi and Cotapata National Parks

Tiny remnants of *Polylepis pepeii* forest restricted to remote valleys at around 13,000 feet in the Andes of Bolivia and Peru are the primary habitat for two highly specialized and threatened birds: Royal Cinclodes and Ash-breasted Tit-Tyrant, which are listed as Critically Endangered and Endangered, respectively. Their habitat, already at 10% of original coverage, continues being reduced and degraded through cutting for firewood and building materials, burning, and overgrazing. As a result, the populations of both species are severely fragmented and extremely small.

With the support of the Marshall Reynolds Foundation and the Mohamed bin Zayed Species Conservation Fund, we focused our efforts on one key area for these threatened species (Pongo). Here we developed a land use plan with the community's active participation. Existing forest fragments were designated as protected areas in the land use plan. We also conducted several reforestation campaigns, and fenced one forest fragment to protect them from livestock. This year we established a cooperation with the Cotapata National Park. We are helping this protected area to establish a tree nursery to produce *Polylepis pepeii* saplings that will be planted within this protected area. We also trained the body of park ranger to monitor the population of the Royal Cinclodes and the Ash-breasted Tit-tyrant. We made unprecedented progress to protect the remaining forest fragments in this area. Now we urgently need to also initiate actions to protect the northernmost sites where probably the largest populations of both threatened bird species occur (Puina and Keara). People from Keara and Puina continue clearing the remaining *Polylepis* fragments for firewood and their livestock (especially cattle) preventing the regeneration of forest fragments. As mining is their main source of income, they show little interest to develop other activities that would help them to diversify their livelihoods. It is urgently necessary to develop responsible mining that will help to reduce the impact on native forests.

Presently we are seeking US\$ 10,000 to hire a socio-economist who will identify the key socio-economic characteristics of both communities, and identify the productive chain of minerals extracted in this area. Thus we will maximize the probability of successful conservation actions in this area. Keara and Puina are far away from any urban centre (over 18 hour from La Paz city by car). The access road is often in bad condition, so no public transportation goes to these isolated communities. It is urgent to gather an additional US\$ 13,000 to acquire a 4WD car to transport our personnel to this area.



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## Bolivian Bird Guide

With 1,430 species, Bolivia is the sixth richest nation in the world for bird diversity, yet lacks a field guide to its birds. Thus, the country's wealth in avifauna is not well known, and foreign bird watchers hesitate to embark on birding trips to Bolivia, hampering ecofriendly sustainable development through nature tourism. In addition, lack of awareness and appreciation abounds among Bolivians for their biodiversity and its conservation problems. Armonía has been working since 2005 on the production of a state-of-the-art field guide to the country's birds with intermittent support from the Bolivian office of the Swiss Development Cooperation (COSUDE), WWF Bolivia, the Secretariat of the Ramsar Convention on Wetlands, the Swedish Ornithological Society, the American Bird Conservancy, and several individual supporters reaching 95% completion.

US\$ 5,000 of additional funding is needed for printing of 400 additional copies of the field guide. Revenues from sales of those 400 copies (US\$20,000) will be invested into one or more Armonía bird conservation projects of the donor's choice (70% or US\$14,000) and into a revolving fund (30%) with the following aims: 1) ecotourism capacity building (training of naturalists/local guides for bird watchers) in rural areas with ecotourism ventures, particularly community-run initiatives; 2) the publication of a more detailed handbook on the birds of Bolivia (60% completion); and 3) the production of regional field guides in Spanish. For further information, please visit: <http://birds-of-bolivia.org/>.





### **Armonía/Loro Parque Fundación Blue-throated Macaw *Ara glaucogularis* Conservation Program**

**Program Area:** Llanos de Moxos (savannahs), Department of Beni.

The Armonía/ Loro Parque Fundación Blue-throated Macaw conservation program has been developing successfully following the priority actions in the Species Recovery Plan for this Critically Endangered Endemic species.

After a year and a half of fundraising effort, Armonía was able to expand the Barba Azul Nature Reserve by 14,827 acres thanks to the support of American Bird Conservancy, Patricia and David Davidson, International Conservation Fund of Canada, IUCN National Committee of the Netherlands (supported by the Dutch Postcode Lottery), Loro Parque Fundación, Neotropical Migratory Bird Conservation Act of the U.S. Fish and Wildlife Service, Rainforest Trust, Robert Wilson Charitable Trust, and World Land Trust. In the oncoming years, we will be managing the reserve in order to best protect the Blue-throated Macaw population, with one aspect of our sustainable development being tourism.

Through the support of the Loro Parque Fundación, Bird Endowment, American Bird Conservancy and the Mohamed bin Zayed Species Conservation Fund, we have been able to expand our highly successful nest box program through the north-western part of the Blue-throated Macaw's range. Our nest box program in the Southern zone had the most successful breeding year yet, with 10 fledged chicks, two nests producing three chicks each. And the record of the first breeding pair of banded birds from a previous nest box. As a consequence, we continue to see the population increase in the southern zone, now with flocks of Blue-throated Macaws travelling between five local ranches. This was unheard of five years ago in the area.

With support from Loro Parque Fundación and Chester Zoo we continue to expand the pride campaign education program to all communities around the Blue-throated Macaw's range. In the last decade, the pride education program has turned what was an unknown species into an emblem of regional pride, where illegal trade in the species has practically stopped.

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Our present priority is to expand the nest box program to other regions and to develop the Barba Azul Nature Reserve as much as possible to improve the number of Blue-throated Macaws that are protected in this area.



### Tucuman Parrot *Amazona tucumana* Conservation Project

**Project area:** Southern yungas cloud forests; Department of Santa Cruz

The Tucuman Parrot is endemic to the Southern Yungas eco-region, a narrow strip of cloud forest on the east slope of the Andes in southern Bolivia and northwestern Argentina. It is considered globally threatened with extinction as the population is declining rapidly due to habitat loss and capture for the illegal pet trade. The global population is estimated to be 9,000 individuals, less than a third the number of individuals captured for the international pet trade in the mid to late 1980s. Though international trade was largely cut off after the species was listed on CITES Appendix I in 1990, the population has continued to decline.

Habitat loss is a main concern. In Argentina, over 60% of the yungas forests have disappeared and remaining Tucuman Parrot habitat is highly degraded and occurs in small, isolated forest fragments. In Bolivia, where the largest fragments of suitable habitat remain, the Southern Yungas ecosystem is considered to be highly threatened due to escalating forest destruction through logging and conversion for agriculture and pasture. Illegal capture for the pet trade continues in Bolivia and, as a compounding factor of this, nest trees are usually cut down to collect chicks.

A priority site for conservation measures is the Laguna Esmeralda Departmental Reserve in Quirusillas in the department of Santa Cruz, at the northern limit of the species' range. Here, Armonía has been working with nine communities to raise awareness and build support for the conservation and protection of the Tucuman Parrot and its habitat. Significant progress has been made. In 2009, the Tucuman Parrot was recognized as a natural heritage symbol of Quirusillas and is now included as the central figure in the municipal coat of arms. In addition, the mayor of Quirusillas signed a declaration in support of the ban on capture and trade of the Tucuman Parrot. Armonía is assisting the

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development of a conservation and management plan for the Laguna Esmeralda Reserve. In 2012, Armonia purchased 45 acres next to this reserve where the highest density of Tucuman Amazon nests has been reported. This has now become the Tucuman Amazon Nature Reserve which is also considered important by the local government to protect this species. Now we plan to install at least 30 artificial nests within the Laguna Esmeralda and Amazon Tucuman Nature Reserves by August 2015. We also plan to monitor the impact of these artificial nests on the reproductive success of the Tucuman Amazon.

We seek US\$ 4,500 to construct and install the artificial nests. We also seek to raise US\$ 5,000 to monitor the impact of the installed nest on the reproductive success of this the Tucuman Amazon.



### High Andean wetlands: hotspots of migrant and resident aquatic bird diversity

**Project area:** The High Andes of Cochabamba, Oruro and Potosí departments

Thanks to the support of the Canadian Wildlife Service and Southern Wings to BirdLife International's High Andean Wetlands Programs, in 2013 Armonia initiated a monitoring program to obtain population sizes and the diversity of aquatic migrant and resident bird species in several high Andean wetlands and lakes. Our findings indicate that some migrants are abundant in the southernmost wetlands of Bolivia with populations larger than 8,000 individuals (e.g. Wilson's Phalarope), while the diversity of aquatic birds is higher at lower altitudes in the central Andes of Bolivia. The Puna Flamingo (*Phoenicoparrus jamesi*; near threatened) was amazingly abundant at Laguna Colorada with a population of 17,000 individuals (17% of its estimated global population in one single site). The Andean Flamingo (Vulnerable of extinction) was less abundant but contained populations higher from 200 to 500 individuals at several wetlands (Salar Monchahuaico, Salar Chalviri and Laguna Capina).

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High Andean wetlands undergo high human pressures that contaminate their waters. Climate change is also affecting numerous shallow wetlands, reducing the availability of key habitat for numerous aquatic migrant species that visit these sites every year, as well as resident species that depend on these wetlands throughout the year. Thus it is important to identify the most important wetlands to implement effective protection measures from human activities and climate change.

In February (2015), we will conduct censuses of aquatic bird species in 15 wetlands in the Bolivian high Andes. We seek USD 3,500 to be able to cover travel expenses to visit additional 10 wetlands and also collect wetland quality data to identify the key habitat requirements for aquatic birds.



## Andean Condor

**Project area:** The Bolivian Andes

Critically endangered throughout the northern Andes (Venezuela, Colombia, Ecuador), and abundant in the southern Andes (Argentina and Chile). This gigantic vulture is considered vulnerable of extinction by the Bolivian Ministry of Environment and Water (2009). It is persecuted by local people from the high Andes because it is believed to kill livestock, and because its body parts are believed to possess medicinal and mystical properties. In 2013 Diego Mendez of Armonia conducted the first regional population census throughout the eastern Andean slopes of Central to south Bolivia. Diego also conducted several educative activities to raise the awareness of decision makers about the threats this species faces.

Our results indicate an abundant population in the eastern slopes of the Bolivian Andes. The highest population density was recorded in Omereque, close to the Red-fronted Macaw Nature Reserve (above 99 individuals). In 2014, Diego conducted a new population study to include the western Bolivian Andes. Through this study we will estimate the population size of this species in Bolivia, and also the population structure (sex and age ratios). His

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fieldwork will be important to identify the key areas where this species contains high population densities. We are also collaborating with the Wildlife Conservation Society (WCS) to elaborate the conservation status of this species in Bolivia for the Latin-American group of specialists to develop a regional plan to protect the Andean Condor.

Diego's research is supported by the Peregrine Fund and the Metropolitan University of Manchester, where he will obtain his Master degree. We seek US\$ 2,000 to cover travel expenses to conduct Diego's fieldwork.

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Masked Antpitta

Project area: Riberalta, Department of Beni

This Bolivian endemic bird species occurs in a small area with varzea forest around Riberalta city, in the Bolivian Amazon. This habitat is gradually decreasing due to the high demand for timber from numerous brick factories located close to Riberalta. Additionally, its habitat is impacted by small scale agriculture, and hunters frequently disturbing the area. Little is known about this mysterious species. Armonia conducted a preliminary study to determine the priority important areas to protect the Masked Antpitta; to indicate the most important ecological characteristics, and requirements of this species; and to evaluate the complex socio-economic context. We are using this information to design the best strategy to prevent the extinction of this species.

We identified San Vicente as the most important area that contains a permanent population of this threatened species. The municipality of Riberalta declared San Vicente as a municipal protected area several years ago, but effective measures to protect this site have not been implemented. Armonia will work together with the municipality to develop a proper management plan for this area. Armonia will also conduct a pride campaign in Riberalta to support the enforcement of this protected area.

We seek US\$ 6,000 to elaborate and broadcast a mini documentary about this species and the threats it faces, and the needed measures to avoid its extinction. Additional US\$ 3,000 are needed to conduct an intensive campaign with local school children.



Armonía Bird Conservation Centre

Armonía- with 12 conservation programs, 24 staff members, and over 32 financial supporters- needs an organized administrative base to be productive and financially responsible. Armonía works to reduce administrative costs to the minimum necessary, insuring as much support can get in the field as possible. In order to decrease long-term administrative expenses, in 2003 Armonía purchased the land and the construction which makes up the Armonía Bird Conservation Centre. The centre offers a public bird and conservation library, information on our conservation programs, and has a reception room with support through memberships, book and T-shirt sales. As we are developing ecotourism projects within several of our projects, we need US\$ 17,000 for a tourism coordinator to insure that these projects are well publicized, productive and well organized.