



# Global Re-introduction Perspectives: 2016

Case-studies from around the globe

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IUCN/SSC Re-introduction Specialist Group (RSG)



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ii. Wetapunga, New Zealand @ Richard Gibson  
iii. Morelos minnow, Mexico @ Topiltzin Contreras-MacBeath  
iv. *Silene cambessedesii*, Spain @ Emilio Laguna  
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## Andean condor conservation program in Argentina

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### Introduction

For thousands of years, the Andean condor (*Vultur gryphus*), the largest bird in the world with flight capacity, has been honored by indigenous communities in South America who consider it to be a sacred link between space and men. Once abundant, this emblematic animal, a symbolic link to our past, has been converted, unfortunately, into a conservation challenge. The condors' range has shrunk rapidly in the last 100 years and it was even pronounced Extinct in Venezuela. The Condor is classified as CITES I and is listed as in Danger of Extinction by the USFWS, in addition to being on the IUCN's Red List and characterized as Vulnerable by the Secretary of the Environment and Sustainable Development in Argentina. For this reason, in 1991, the Andean Condor Conservation Program (PCCA) was founded. The PCCA started by performing genetic studies and documenting the captive condor population in a Latin American studbook. It developed artificial incubation programs and techniques for raising the birds in isolation from human contact and worked to rescue and rehabilitate wild condors. Through using these techniques, this conservation effort has succeeded in raising 47 chicks, rescue more than 120 wild birds and re-introducing 147 condors throughout South America.

### Goals

- Goal 1: Optimize the breeding, rescue, and rehabilitation of the Andean Condor in both *ex-situ* and *in-situ* conservation plans for the species.
- Goal 2: Implement a cultural and educational outreach plan to spread the achievements and results of the PCCA's efforts, generating a change in the community towards valuing all forms of life and respect for the ancient traditions.
- Goal 3: Promote the training of volunteers, both domestic and foreign, student and professional, to ensure the functionality of the program, strengthen its results and promote



Released Andean condor

technical exchange, thereby promoting scientific development and education associated with the conservation of biodiversity.

- Goal 4: Use the collective power of regional, national and international governmental and non-governmental associations to bring about institutional participation in order to inform and influence political change in relation to the environment.

## Success Indicators

- Indicator 1: Healthy and abundant *ex-situ* population, with reproductive capacity and identification of increased genetic stock documented in a Latin American Studbook under a cooperative management program. Increases in total number of condors (248 specimens registered in the Latin American Studbook), number of chicks born in captivity (47 within the PCCA), and number of birds rescued and rehabilitated (126 within the PCCA).
- Indicator 2: More condors successfully re-introduced into the wild (147 condors) with high survival rates (91.8%) and 5 chicks from released individuals. Growth in area of study of the flight of the Andean condor with more area monitored by satellite and GIS technology.
- Indicator 3: Increase in number of educative campaigns (9 in Argentina), ancestral ceremonies (at each stage of the PCCA and the annual calendar), exhibitions by the PCCA (7 exhibitions), publications, and media mention (all evaluated annually).
- Indicator 4: Successful recruitment of volunteers both domestically and internationally (40 volunteers annually).
- Indicator 5: Application of the ALPZA certification as an indicator of conservation leadership in Latin America (PC ALPZA #2). More such institutions involved with the PCCA (Total 81 institutions: two organized, five collaborated, 22 attend and 52 supported).

## Project Summary

**Feasibility:** The Andean condor (*Vultur gryphus*), a species endemic to South America, occupies an immense range distributed along the Andean Mountain Range and the Atlantic Coast of Argentine Patagonia. In the wild, these birds have a low reproduction rate, only mating every 2 - 3 years and arriving at sexual maturity at around 9 years of age.

This emblematic species has been honored for thousands of years by the original communities of the region, but since the conquest of the Americas, its survival has begun to encounter some serious obstacles. Many in the rural parts of South America mistakenly believe that the condor kills cattle to feed and will therefore hunt the condor to protect their herds, while in reality, the condor is a scavenger. Condors are often the target of unscrupulous hunters and are victims of illegal toxins and the ingesting of lead bullets from the dead animals from which they feed. In addition, the increased prominence of electric wires severely alters the environment and can cause crashes and electrocution in the condor population. Considering the extraordinary flight capacity of this species, it is necessary to allocate many resources to studying and preserving the environments that are important to the condor. Challenges include the great distances involved, the



**Andean condor community awareness program**

inhospitable and rugged terrain, the isolation of the work, and the lack of communication, all of which result in a costly and slow process enabling project participants and materials to arrive at all points necessary to sustain educational and environmental activities. Because the habitat of the condor encompasses

immense areas of land, targeted efforts to set aside condor-specific areas are extremely difficult. Political and economic instability in Argentina is another element that affect the project, but thanks to support from the international community and partnering zoos, PCCA has been successful in re-introducing over a hundred during the last 23 years in South America, helping to repopulate areas where the species had gone extinct.

**Implementation:** The PCCA maintains a Latin American Studbook for the Andean condor population. Under institutional agreements, the PCCA run an Artificial Incubation Center where eggs are incubated from both foreign and domestic Zoos. Likewise, the PCCA maintains a Rescue Center that provides a sanitary environment from which wild condors from all over the country can be rehabilitated. Both the individuals bred at the center and those that were rescued are kept in isolation from human contact until they are ready for release. Those condors that have flight experience can be re-introduced into the areas from which they were rescued. However, those who have not yet flown will be released in groups, from release platforms and monitored closely for at least a year afterwards until they are fully independent. The only place in Argentina that provides acceptable conditions for this sort of release is Paileman, on the Atlantic Coast, from which the PCCA has succeeded in re-introducing 44 condors into a zone they had been extinct in for over 100 years.

The project has also received support from indigenous South American communities who wish to continue honoring and coexisting with the condor. As a message of respect, ancestral ceremonies led by these communities occur before each release, at each stage of the program, putting forth prayers in the native language to encourage the veneration and support of the Andean condor and efforts to conserve it. This has proven to be a valuable education opportunity and draws hundreds of people to each release.

**Post-release monitoring:** Each condor is equipped with a subcutaneous microchip and numbered vinyl wing band for easy identification. The use of radio telemetry (Telenax, TXE-125W) and satellite transmissions (PTT 100 GPS Microwave) in conjunction with intense field work, has permitted the creation of a specific Geographic Information System that allows the close monitoring of each bird. Additionally, a special software called Decosat was developed that simulates the flight of the condors and enables the understanding of their flight patterns. The PCCA has been a pioneer in the development of this satellite technology, in 1997, which is particularly important in monitoring the birds in the vast swaths of rugged and isolated land that they occupy. As a result of this modern technology, it has been possible to monitor the adaptation of released individuals and recover much information about the species' roosting sites, nest, flight and habitat preference. Through this post-release monitoring, it is known that juvenile condors can occupy areas of up to 80,000 km<sup>2</sup> while adults can travel across a range of more than 150,000 km<sup>2</sup>. Already, the PCCA has been able to confirm that the first rehabilitated condors from 1997 and those introduced along the Atlantic Coast have started reproducing with success.

### Major difficulties faced

- The biggest difficulty is changing practices that directly affect the survival of the species, such as the use of illegal toxic baits (utilized by cattle ranchers, supposedly to control predators) and lead bullets, which are very popular among hunters.
- The great geographical range occupied by each bird makes field monitoring logistically difficult. The cost of satellite monitoring equipment makes it challenging to apply this technique to every released bird.
- Protected natural areas exist, but they do not cover the condor's basic needs.
- The wide ranges of the condor complicate efforts in the field further due to the lack of communication ability (no cell service or internet available in the rural base camp of the project), making the transport and coordination of workers and resources problematic.

### Major lessons learned

- By uniting the *ex-situ* and *in-situ* aspects of conservation, it is possible to generate an integrated conservation plan for the species. However, it takes time and effort to start seeing results; the PCCA has put in more than 23 years of labor.
- The Artificial Incubation Center has demonstrated that in order to create an efficient conservation tool, one must work to unite domestic and foreign institutions. The condors bred here in isolation from human contact and fed with latex puppets have adapted perfectly to life in the wild and have come to reproduce with success.
- The creation of the Rescue Center has been instrumental in caring for over 120 wild condors in Argentina. While a small fraction of the condors (30%) were not able to survive due to the gravity of their injuries, 70% were able to recover and half of the total birds rescued returned to the wild. Since the Rescue Center must give an immediate response to each case and existing international law makes trans-frontier movement of animals very difficult, it is



**Andean condor chick**

recommended that each Andean country establish a rescue center for the species to allow efficient responses.

- Education and outreach programs are central in provoking a change in the perceptions and behavior of people towards a view favors the conservation of the species and the protection of its

environment. The union of science (including the latest biotechnology) and the millennial worldview of the original South American communities, that has characterized the PCCA's work, has proven to be effective in implementing this strategy, spreading a clear conservation message and respect for all forms of life. The recruitment of qualified persons with experience in every level of the program is key in reaching these objectives and sustaining them over time.

- The collaborative efforts between the PCCA and partner institutions is also instrumental in achieving results. Each institution is like the feather of a condor: they are both small and large, strong and weak, but despite their differences each feather completes an important role in the flight of the condor.

## Success of project

Highly Successful	Successful	Partially Successful	Failure
	√		

### Reason(s) for success/failure:

- 100% of eggs incubated have hatched successfully; 47 condors were born under the watch of the PCCA and 100% have been released into the wild. Furthermore, more than 120 condors have been rehabilitated (though not all were healthy enough for release) after rescue in Argentina. In total, more than 147 birds were released throughout South America, including along the Atlantic Coast of Patagonia in Argentina, where they had been extinct. 44 Condors were released into the latter region, uniting areas of flight along the Andean mountains with those along the coast. The released condors have been reproducing since 2009.
- A focus on education has led to increased participation by the public and the success of a range of artistic and educative initiatives designed to spread information about the conservation needs of this emblematic species.

- Ultimately, the success of this project lies in its continuity. For 20 years the PCCA has worked towards protecting this species and has built a vast knowledge and technological base for the continued conservation of the Andean Condor.

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