

Third Technical Report:

Conservation of endangered parrot species in el Oro and Cotopaxi province, Ecuador.

Period: September 2019 – February 2020

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El Oro Parakeets in Zambotambo, Buenaventura Reserve. © Michaël Moens



Executive Summary

We present the third performance report of the Loro Parque project “Conservation of endangered parrot species in el Oro and Cotopaxi province, Ecuador”. Among our most important achievements are the successful reintroduction of 19 red-masked Parakeets back in the wild in the Buenaventura reserve on February 4th of 2020. We were also part of the official launch of the “El Oro Ecological Corridor” book which is a big step towards the declaration of El Oro Ecological Corridor. In October 2019, we completed our environmental education campaign with the incorporation of a new project mascot “Pericles”, new education materials that are making our workshops more impactful with the school children and a concept map methodology for the high school students designed by a pedagogy student from Göttingen University. Since the beginning of the year, our park guards have continued with the monthly monitoring of the 32 previously established observation points along the Buenaventura elevation gradient and the El Oro Parakeet nesting boxes. The breeding season of 2018-2019 has been the most successful year for our nest box program with 83 chicks fledged since the start of our nest-box programme in 2009. Since 2019, our research assistant Andres Castro has continued to monitor the main parrot trade markets both in the Ecuadorian and the Peruvian side of the border. The constant police presence at the border due to Venezuela’s migratory crisis has significantly decreased illegal bird trafficking activity, but traffickers are still finding ways to carry it out at other border points. That is why we extended our monitoring throughout the El Oro province and found several caged parakeets in houses close to the monitoring areas. In addition, we already received reports from local people in the north of the province that who have started commercializing parrots. We hope that this monitoring will also allow us to find an El Oro parakeet to be part of the rescue and breeding program that we started in Arenillas Zoo. Finally, we have been monitoring the Loro Parque Fundación properties in Sigchos to rediscover the Yellow-eared Parrot without any sightings of the species up to date. In addition, thanks to the visit to the properties of Loro Parque Fundación members we are currently establishing the following steps to effectively protect them.

Project Objectives

1. Address the parrot trade and the cultural custom of keeping parrots as pets around Buenaventura reserve (and the corridor) in coordination with Ministry of Environment.

Since the beginning of 2019, our research assistant Andres Castro has continued to monitor the main parrot markets both at the Ecuadorian (Huaquillas market) and the Peruvian side of the border. He reported that due to the increased police presence at the border because of Venezuela's migration crisis, illegal bird trafficking activity has decreased around the borders, but traffickers are still finding ways to transport parrots through other border points. Therefore, we expanded our monitoring campaign to other strategic sites in El Oro province. Since mid-2019, we have been monitoring eight new possible illegal traffic points. Based on the experience of the first months of monitoring, we decided to change some of the monitoring points in order to have a higher chance to find trafficking sites around El Oro province (Fig. 1).

We have not found any parrot traffic yet at the eight monitoring points. However, we do not rule out these points since we found many caged parakeets in some houses close to the monitoring areas. In September 2019, in addition to the monitoring, we carried out a survey of places where people have parrots as domestic pets or as tourist attractions (Fig 2). The Red-masked Parakeet and the Grey-cheeked Parakeet are the most commonly trafficked. During December, Andres Castro identified a family that collect red masked parakeets and sell them as pets. We passed the information to the Ministry of Environment of El Oro and they are currently monitoring the place to corroborate our information and start with the rescue process.

Our environmental education campaign finalized in October 2019. We visited 22 elementary schools (Fig. 3) and four high schools (Fig. 4) during our campaigns, reaching up to a total of 835 children and 500 teenagers. Our new mascot "Pericles", has been a great success convincing the children about the importance of protecting endangered parrot species and their habitats. We have been working with the "Pericles y sus amigos" booklet and printed new T-shirts, hats, bracelets and footballs. All these new educational materials have made our workshops more impactful and the children have responded really well to the campaign. Now, they clearly understand the message of the consequences of illegal pet trade and the significance of saving these species. Eva Sarango, our new volunteer supervisor joined the environmental education team in September 2019. With the help of volunteer Lena Sennewall (pedagogy student at Göttingen University), she implemented a concept map methodology (Fig. 5) to assess the ability to retain, understand and interpret information from groups of students between 12 and 18 years old on environmental issues, and specifically, the conservation of El Oro Parakeet. This methodology proved to be really useful in helping the students to learn about the importance of El Oro Parakeet and the relationship between its conservation and the well-being of the ecosystem where they live. During December, Eva organized 6 school visits (Fig. 6) to the Buenaventura reserve with a total of 200 students. The visits consisted of a tour to the nest boxes, the Red-masked Parakeets' pre-release cage and a final presentation about the project and the importance of conserving this endangered parrot species. This activity got the children really excited about the project and shows them first handed the impact that this project has in the conservation of parrot species. These visits helped the children understand the project and relate the previous workshops held at their schools with the conservation activities at the Buenaventura reserve. They even recognized the difference between the El Oro Parakeets in the nest boxes and the Red-masked Parakeets in the pre-release cage.

Figure 1. Eight possible illegal traffic points throughout the El Oro province. Buenaventura reserve is shown as a reference in greyscale.

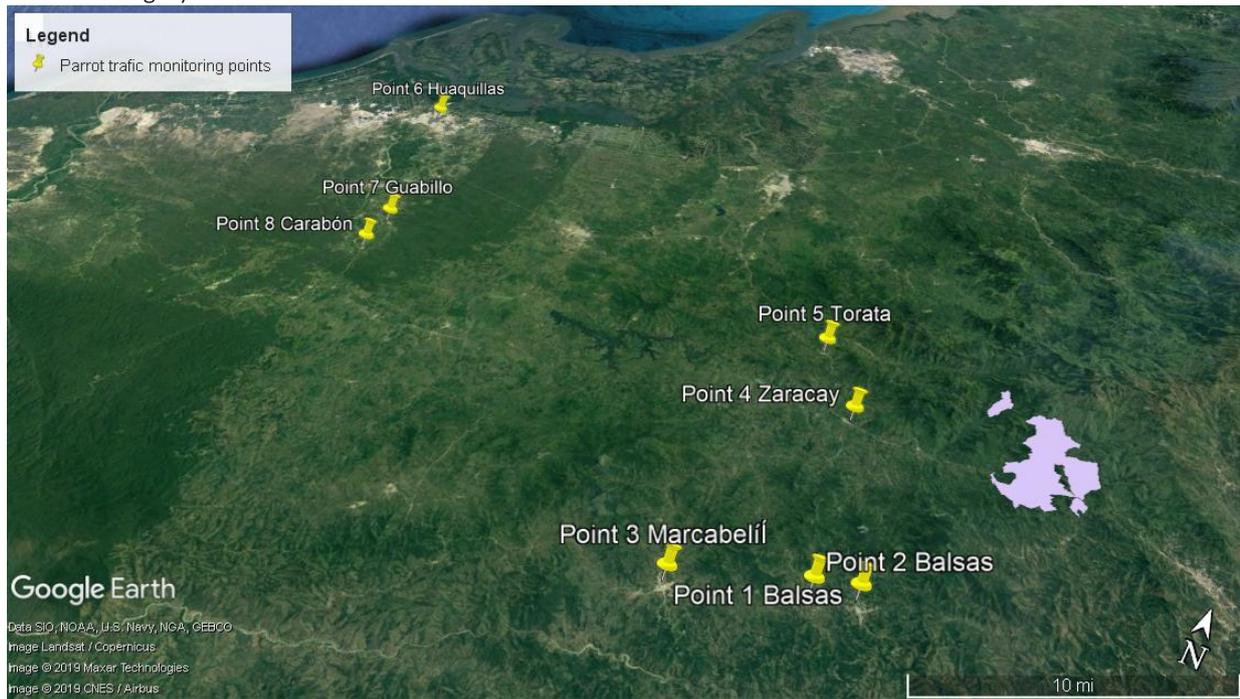


Figure 2. Piñas town map showing the number of parakeets and the places where they are held as pets or tourist attractions. The Red-masked Parakeet (RMP) and the Grey-cheeked Parakeet (GCP) are the most commonly trafficked.

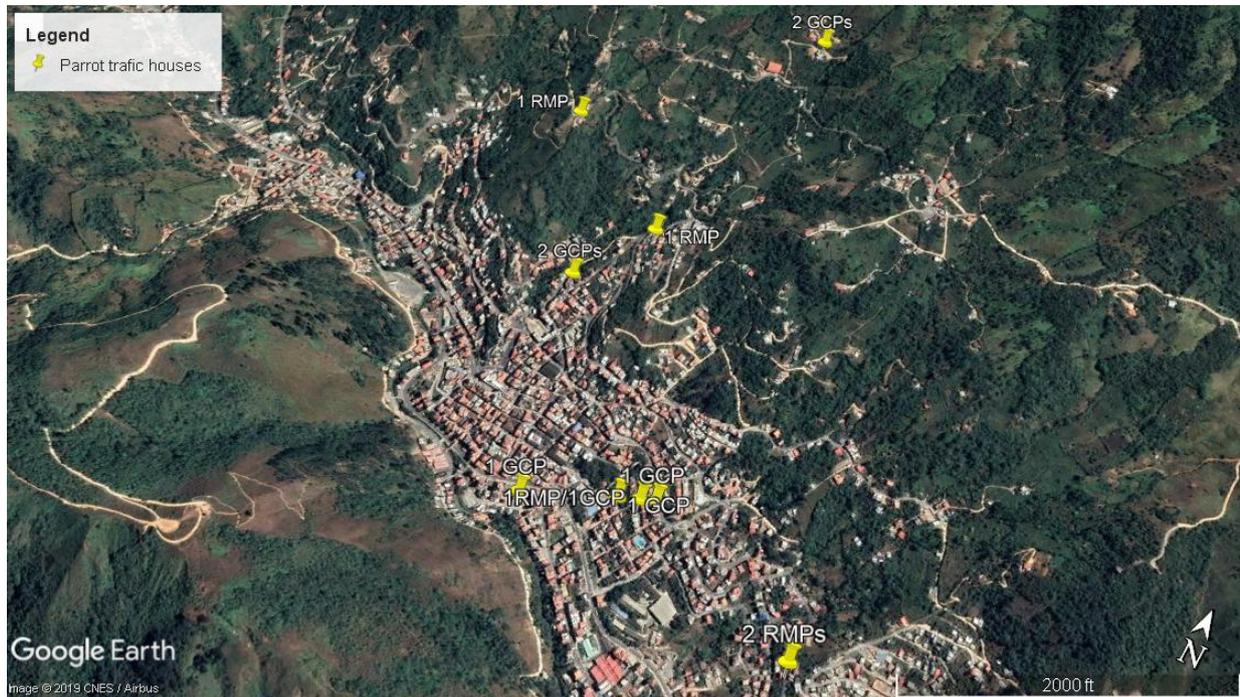


Figure 3. Workshop held in Abdon Calderón elementary school as part of our environmental education campaign.



Figure 4. Workshops held in Juan José Loaiza high school as part of our environmental education campaign.



Figure 5. Concept map made by a student of Juan José Loaiza high school. It details the main characteristics, threats and conservation actions regarding El Oro Parakeet.

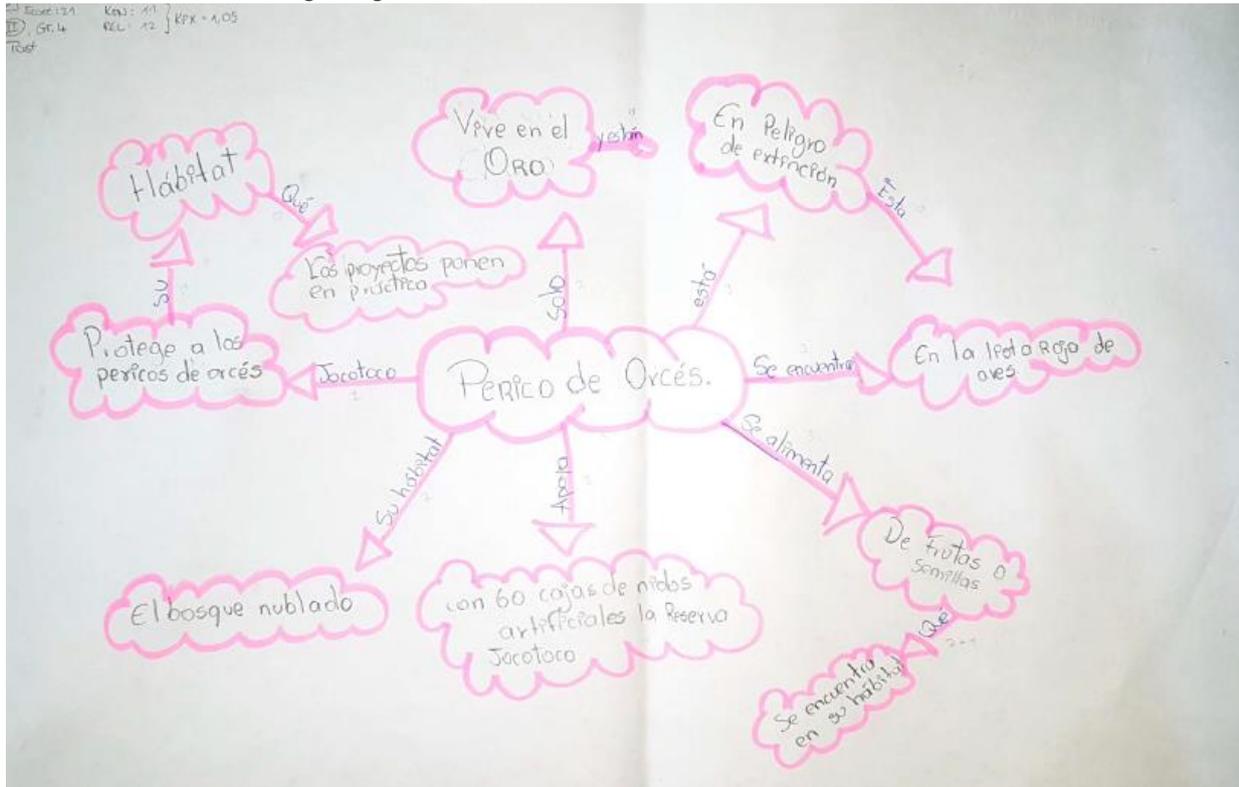


Figure 6. School children visited the Red-masked Parakeets' pre-release cage at Buenaventura reserve as part of this year environmental education campaign.



2. Promote and socialize the declaration of the Ecological Corridor.

On December 19th, we were part of the official launch of the “El Oro Ecological Corridor” book (Fig. 7). This book included two pages about the Buenaventura Reserve and the project that Loro Parque supports to assure the survival of El Oro Parakeet. Members of Fundación Jocotoco, World Wildlife Fund, INABIO, Naturaleza y Cultura Internacional and El Oro prefecture were all part of this important event (Fig. 8). In addition, Jocotoco signed a conservation agreement with Clemente Bravo, the Prefect of El Oro and the Municipality of Piñas to continue our conservation and reforestation activities in the Buenaventura Reserve. The declaration is in second review and will be signed by the Prefect Clemente Bravo for the official declaration in February-March 2020.

During the reintroduction of the Red-masked Parakeets in Buenaventura reserve, where key stakeholders of the El Oro Ecological Corridor plan were present, our Research Coordinator, José León organized a workshop (Fig. 9) focused on the declaration of the Ecological Corridor. José presented our projects and results to the the El Oro Prefect, members of the Ministry of Environment and members of the Municipality of Piñas.

The declaration of the El Oro Ecological Corridor is almost a reality. The official document was unanimously approved by the councilors board and we are just waiting on El Oro Prefect to sign it, for the declaration of the El Oro Ecological Corridor to be a reality this year. Once El Oro Ecological Corridor is officially declared we will organize workshops within strategic points of the corridor, where we will distribute the book to key participants.

Figure 7. “El Oro Ecological Corridor” book that was officially presented on December 19th. Photo credit: INABIO

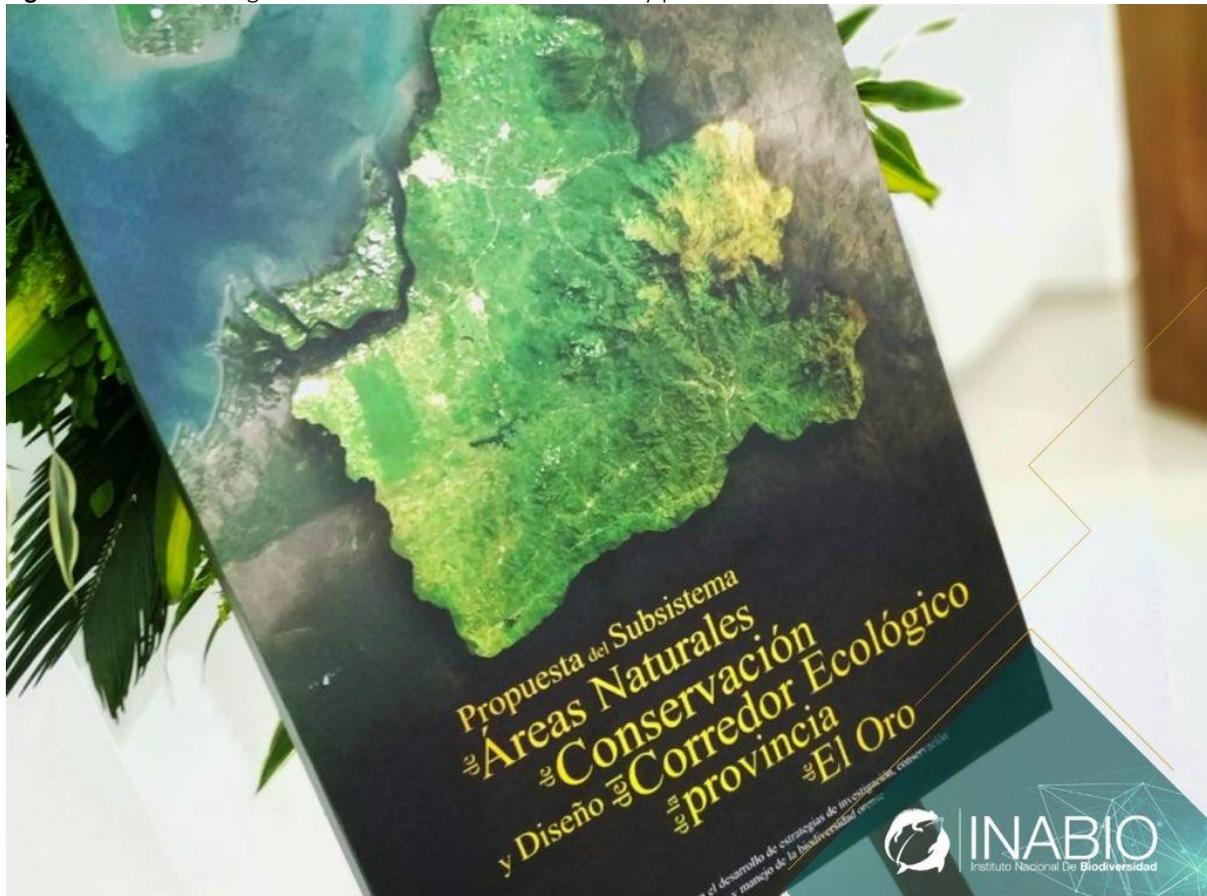


Figure 8. Our Conservation Director, Michael Moens with member of World Wildlife Fund, INABIO, Naturaleza y Cultura Internacional and El Oro prefecture during the official launch of the “Oro Ecological Corridor” book.



Figure 9. Our Research Coordinator, José León with members of El Oro prefecture, Ministry of Environment and the Municipality of Piñas during a workshop held in Buenaventura reserve the day of the Red-masked Parakeets reintroduction.



3. Build a quarantine area in Arenillas Zoo and transfer confiscated Parakeets to Buenaventura, to release them back in the wild.

We constructed two quarantine cages in Arenillas Zoo (Fig. 10). These cages are 5x2x2 m and possess a safe entrance door and a laminated protection against potential predators such as rats and snakes. The first quarantine cage receives birds that arrive to the Arenillas Zoo and are separated from the rest of the animals during the first three months, where they are checked for diseases and parasites and put under observation. When the birds have spent three months in the first cage, they pass to the second cage for the next three months when they become ready to be transfer to the pre-release cage in Buenaventura reserve.

On November 29th, we successfully transferred 20 Red-masked parakeets from the quarantine are in Arenillas Zoo to the pre-release cage in Buenaventura reserve (Fig. 11). We have performed blood tests and other medical check-ups to make sure they are free of viral diseases. Unfortunately, one of the parakeets died three days after the release and we don't know yet the reason. We froze the individual and sent it to Arenillas Zoo were Dr. Julio Baquerizo will perform a necropsy to find out the cause of death.

On February 4th, we successfully released the remaining 19 red-masked Parakeets back in the wild in the Buenaventura reserve (Fig. 12). We equipped the Red-masked Parakeets with a microchip and a leg ring (Fig. 13) to track them in case they get caught again for illegal pet trade and to follow up their adaptation in the wild. As in the previous project, we performed a soft release of the confiscated birds. We will provide food on top of the cage during the next three weeks after the release. The individuals from last year release keep returning to the cage and the feeding stations around the Umbrellabird Lodge and so far, it has been the same with this new group. The release was a complete success and members of the El Oro prefecture, Ministry of Environment, Arenillas Zoo, Piñas Municipality and local and international media were all part of the event (Fig. 14).

Figure 10. The two new quarantine cages which were built in February 2019 in Arenillas Zoo.



Figure 11. A group of Red-masked Parakeets being transferred from the quarantine cage in Arenillas Zoo to the pre-release cage in Buenaventura reserve.



Figure 12. A Red-masked Parakeet flying free again during the release at Buenaventura reserve.

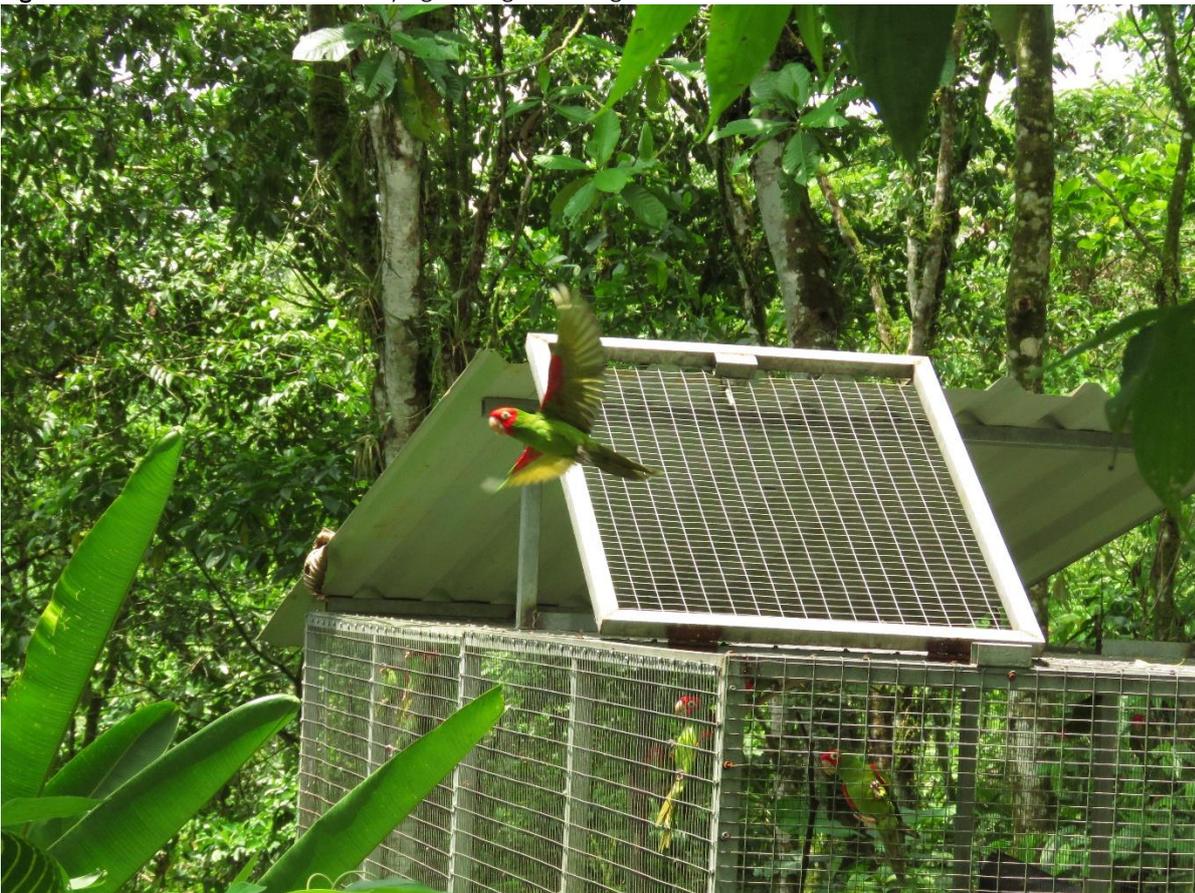


Figure 13. Dr. Julio Baquerizo putting a leg ring a one of the Red-masked Parakeets to be released on May 4th.



Figure 14. Our Research Coordinator, José León with El Oro Prefect, members of the Ministry of Environment, and members of the Arenillas Zoo during the Red-masked Parakeets release in Buenaventura Reserve on May 4th.



4. Start a rescue and breeding program for El Oro Parakeets in Arenillas Zoo

To take the necessary conservation measures against the extinction of the endangered El Oro Parakeet, we started an ex-situ breeding program for this species in Arenillas Zoo. We built a new cage (Fig. 15) in February 2019 made exclusively for the rescued El Oro Parakeet (Fig. 16) that was already at Arenillas Zoo. The cage has the same model as the quarantine cages (5x2x2 m cage, with safe entrance door and laminate protection against potential predators). Unfortunately, we have not been able to find another El Oro Parakeet yet. However, Julio Baquerizo is in constant contact with other local zoos and our monitoring campaign throughout the province will hopefully help us find more individuals during the upcoming months. Due to the high degree of difficulty that exists in finding illegal trafficked El Oro Parakeets, we have continued gathering information from possible places that are not at the designated monitoring places with the sole purpose of covering more monitoring areas and increase the chances of finding El Oro Parakeets. These individuals will be used as a founder population of a captive population. If successful, we will be able to transfer individuals to Loro Parque Fundación, Tenerife.

Figure 15. New breeding cage for the El Oro Parakeet built in Arenillas Zoo.



Figure 16. El Oro Parakeet enjoying his new and spacious cage in Arenillas Zoo.



5. Monitor endangered parrot species in surrounding properties of Buenaventura reserve along an elevation gradient and monitor the Loro Parque properties in the Cotopaxi province, to find Yellow-eared parrot populations.

Since the beginning of the year, our park guards have continued with the monthly monitoring of the 32 previously established observation points along the Buenaventura elevation gradient (Fig. 17). In September 20th, we found three groups of five, eight and five El Oro Parakeets in Reinerio (property we want to acquire to create an altitudinal corridor with our existing Buenaventura Reserve) between 1500 and 1800 masl. This record plus the five individuals recorded on July 22nd 2019 in the same property are indicators of this species upslope distribution shift over the past 30 years. We have also continued with our monitoring of El Oro Parakeet nesting boxes. The breeding season of 2019, has been the most successful year for our nest box program since the beginning of our program, with a total of 83 chicks fledged. A comparison of the number of chicks fledged from 2009 to 2019 can be found in Figure 18. We have already started with the 2020 monitoring of El Oro Parakeet nesting boxes and hope to have as a successful year as the previous one. Since the beginning of our programme, a total of 427 El Oro Parakeets have fledged from our nest boxes, which is a real conservation success!

Finally, members of Loro Parque Fundación and Fundación Jocotoco visited the Loro Parque properties in Sigchos in July 2019 to verify the condition of the properties which were purchased in 1998 to protect the last population of Yellow-eared Parrots (Fig. 19). This visit revealed that small invasions exist in both properties (Fig. 20). A monitoring campaign started in June 2019 to assess the possible presence of the Yellow-eared Parrot in the two Loro Parque properties in Sigchos (Fig. 21 & Fig. 22). We hired Juan Carlos Figueroa to do the monitoring with help of Vicente Pazmiño, the person who helped Loro Parque Fundación buying the properties in 1998.

Juan Carlos is a parrot expert who knows both the appearance and the vocalization of the Yellow-eared Parrot very well. The monitoring has been done four days per month from 6:00 am to 10:00 am and 4:00 pm to 6:30 in three fixed observation points that allow us to have a complete view of the two properties. This monitoring is really important to try finding this locally extinct species and in case we found it, developing conservation strategies that will reduce the threats like invasions and livestock expansion inside the Loro Parque properties and assure the conservation of the species. In addition to the Yellow-eared monitoring, Juan Carlos has also been monitoring all the other parakeet and parrot species found in the Loro Parque properties. So far, we have records of two Bronze-winged Parrots (*Pionus chalcopterus*), two Barred Parakeets (*Bolborhynchus lineola*) and 113 Red-billed Parrots (*Pionus sordidus*) which is the most common species in the area (Fig. 23). We were not able to continue the monitoring for the months of November and December, since the Sigchos local community did not allow our ornithologist Juan Carlos to enter the Loro Parque properties. They want compensation for to the road maintenance towards the properties. We are already in conversations with the community lawyer and hope to reach an agreement soon that will allow us to continue with the monitoring and conservation activities of 2020.

Figure 17. Project area for El Oro Parakeet monitoring and possible reserve expansion, showing the current extent of the Buenaventura reserve (green), the recently purchased Bolivar Tituana property (gray) and the high altitude Reiner property (blue). The red dots indicate our current monitoring points.

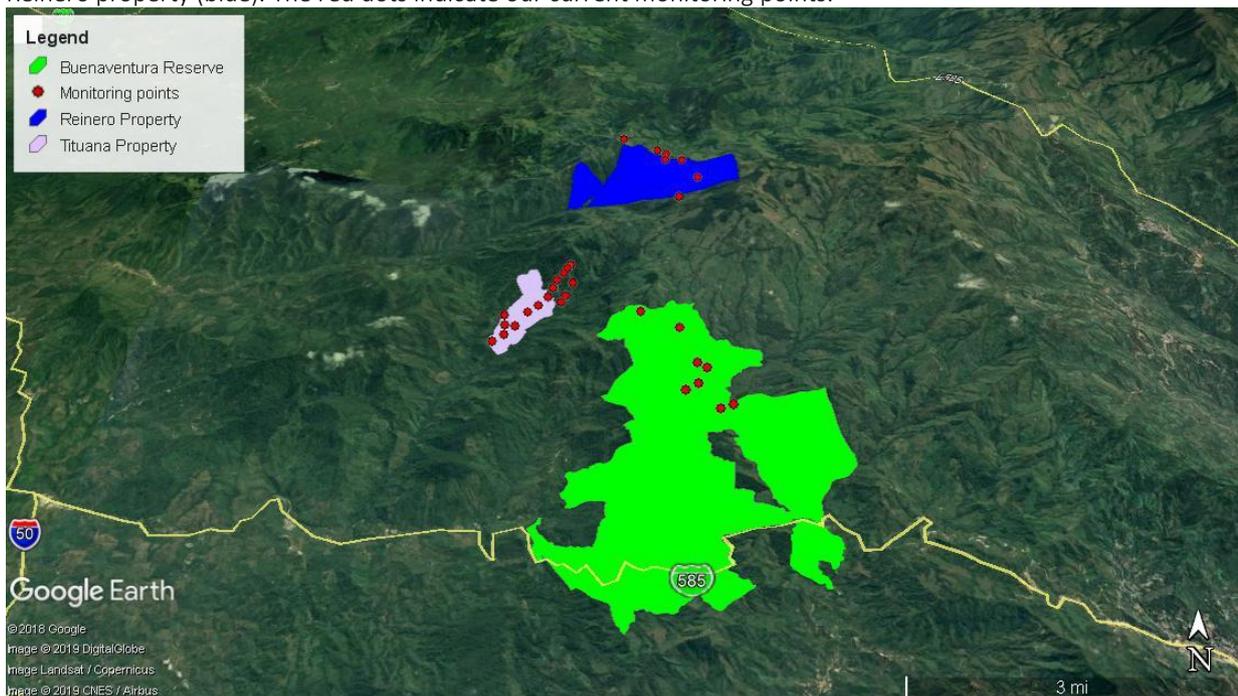


Figure 18. El Oro Parakeet' chicks fledged from our nest boxes in Buenaventura reserve from 2009 to 2019 (data of 2016 not complete and hence not shown), totaling 427 El Oro Parakeets fledged. A strong increase of fledglings occurred in the breeding season of 2018-2019, with a maximum of 83 chicks fledged from our nest box program.

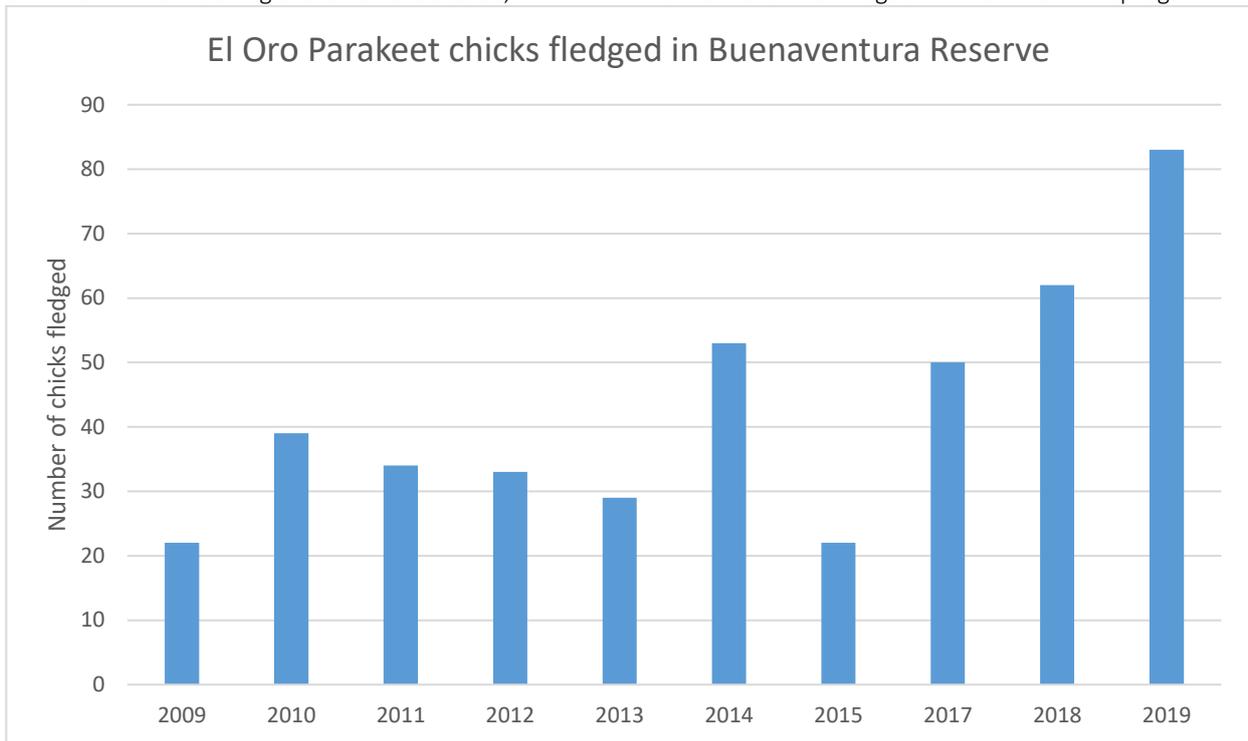


Figure 19. Loro Parque Fundación visit to the Sigchos properties in July 2019.



Figure 20. Signs of the invasion on one of the properties that belong to Loro Parque Fundación. The neighbours built fences within the property to enclose their cattle.



Figure 21. An overview of the 82-hectare Loro Parque Fundación property in Sigchos.

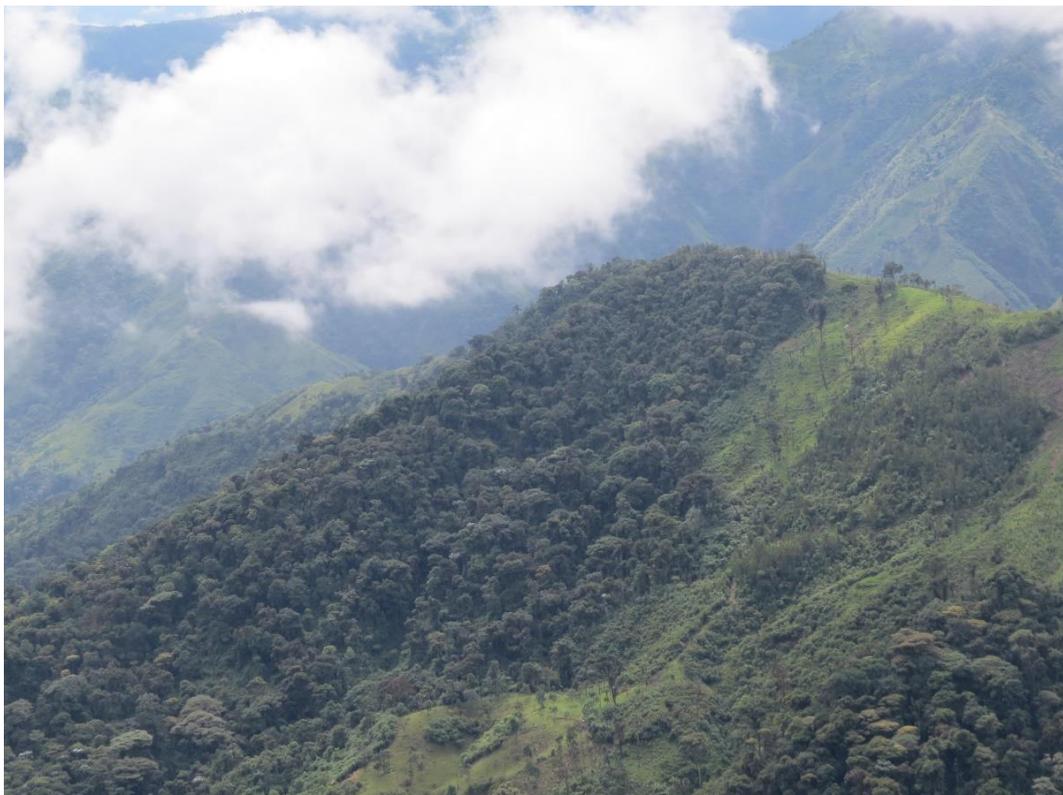


Figure 22. An overview of the 40-hectare Loro Parque property in Sigchos.



Figure 23. A Red-billed Parrot part of a group of six individuals recorded in one of the Loro Parque properties.

