

Final Evaluation Report

Your Details	
Full Name	Zaira Lizbeth Esparza Rodríguez
Project Title	Current Diagnosis of Primates Trade in Mexico: A Contemporary Problem That Remains
Application ID	31572-1
Date of this Report	16-04-23

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
<p>Obtain information on the seizures of primates in Mexico in a period from 2010 to 2020, which species, number of individuals, characteristics of the monkeys, place of confiscation, date and place of final protection.</p>				<p>The delivery periods by the institutions took a little longer than they indicated, since, due to the pandemic, they did not have enough personnel to go and explore the files that were needed to obtain the requested information. However, it was possible to obtain data on the seizures of all the fauna in Mexico and thus be able to make a comparison with the primate data. Regarding primates, the spider monkey (<i>Ateles geoffroyi</i>) was the most illegally traded species and Mexico City and Veracruz were the cities in Mexico with the highest seizures.</p>
<p>Investigate through the CITES database the international trade in primates related to imports and exports to other countries in a period from 2000 to 2019 and create traffic route maps at an international level.</p>				<p>We evaluated the role of Mexico in the imports and exports of primate species in the selected period; likewise, these movements were evaluated for primate species that share distribution with Mexico and it was fascinating to know the purpose of these transactions since they were mostly for biomedical research, but these specimens were of wild origin since the discussion of these data turned out to be extremely interesting.</p>
<p>With the information obtained on seizures, maps will be created that show us the routes of this traffic in a national plane from the origin, place of temporary and final shelter after being confiscated.</p>				<p>It was possible to create maps that showed national seizures outside and inside the primate distribution sites, but establishing national routes requires much greater efforts that will be considered in future investigations. At the national level, the routes could be visualised, and they were represented dynamically.</p>
<p>Develop a census of the presence of primates in zoos or final shelter sites,</p>				<p>Even though due to the pandemic in many places there were restrictions to receive us, we managed to obtain (in</p>

<p>explore management plans upon arrival, as well as rehabilitation procedures and possible release through site visits, evaluation and interviews.</p>			<p>a longer period than expected) more and extremely valuable information from the account, which led us to conclude interesting questions about the reception of confiscated primates and the situation in which Mexico finds itself and how rehabilitation and conservation depend on the public budget.</p>
<p>Obtain a broad vision of the actors that participate in traffic dynamics, through their opinions and perceptions. Visits to primate distribution sites to conduct interviews with institutions, hunters, communities and pet owners in order to learn about perceptions and motivations.</p>			<p>Visiting and knowing the opinion of key actors in the application of the law, the actors in charge of receiving primates in zoos was a key piece to know the context of illegal trade in primates; unfortunately the search for pet keepers and hunters turned out to be a difficult task because people feared that there would be reprisals or complaints, especially in a country like Mexico where the development of this investigation was in a pandemic and the levels of insecurity increased. The risk of obtaining opinions and perceptions was very high, adding the existing gender violence that exists and being a woman who led the project, it was decided to omit these opinions in this phase of the investigation with plans to resume and reconsider it in a future investigation in where conditions may be better. Fortunately, this "lost" information was compensated with valuable information that will be extremely useful in combating traffic (see PROJECT UPDATES "Extra Research").</p>
<p>Statistical analyses, graphs, tables and accumulation curves, correlation analysis to discuss the results obtained. Master's thesis and a scientific article.</p>			<p>In addition to obtaining a master's degree, this research inspired him to continue studying for a doctorate and continue with the study of wildlife trafficking, identifying an existing information gap and an area of opportunity for scientists in this area. An article is being written and another one to date is under review in the journal "Folia primatologica".</p>
<p>Documentary</p>			<p>The documentary was made satisfactorily.</p>

2. Describe the three most important outcomes of your project.

a). The information on primate seizures was known, having a total of 508 Mexican primates that PROFEPA recorded during from 2010-2019. The species with the highest number of precautionary seizures was *Ateles geoffroyi* (n= 474 specimens, 93.4%), followed by *Alouatta palliata* (n=20, 3.9%) and *Alouatta pigra* (n=14, 2, 7%). The main reason for these seizures was that the owners of the specimens did not prove their legal origin. In Mexico, most of the primates that are extracted are for the pet market and for international trade are for biomedical research. The CITES database reports imports and exports and, regarding the latter, they include 6,257 specimens of different species and may include live individuals, trophies, derivatives, nails, hair, etc., but the quantities are not always indicated. The six main countries to which Mexico exports primates are the United States, UK, Spain, Germany and Japan. The origin of the exported specimens has been mostly "taken from the wild" (96%). Imports included 54,830 specimens of different species reported as "scientific specimens", followed by live individuals. The country that exports the most primates to Mexico was the United States, followed by Guyana and Mauritius. The origin of the imported specimens was mainly "bred in captivity" (66.74%), followed by "born in captivity" (18.38%) and from the wild (13.58%). The destination of most imports (75.87%) was for biomedical research, followed by commercial purposes.

b). We obtained a census of the presence of primates in zoos, especially those that come from confiscations and the management plans at the time of their arrival, as well as the rehabilitation procedures and possible release through visits to the sites, evaluation and interviews. We conducted a total of 20 zoo interviews. 100% of the primates that are born in captivity and that are exchanged with other zoos are in good condition and all that come from confiscations almost always arrive in bad condition. According to the response from zoos, of these seized primates, 60% have a high mortality rate, 20% low, and 20% of zoos report zero, with different causes of death. *Ateles geoffroyi* is the most recorded native species in zoos and *Lemur catta* is the most recorded exotic species. The reasons why individuals of primates will remain in zoos are mostly due to births and the purchase and trafficking of these specimens. The interesting thing is that most of the primates that periodically enter these zoos are under the category of traffic, followed by donations. These visits to the zoo gave us data that confiscations did not, and we saw that exotic species confiscated only 0.66% of the total species from trafficking, while of the total native species they represent 39.02%. In addition to figures, we obtained opinions from these actors where we averaged their responses and obtained that most zoo staff refuse to receive primates, conditioning their decision on whether they have space and/or resources, however, some zoos can only function as temporary shelters. We saw that the issue of resources is very important since the survival of the seized individuals depends on them and whether they are rehabilitated or not. Unfortunately, in Mexico we have very strong budget cuts where the final destination of these individuals is compromised and thanks to this, the authorities make drastic decisions such as not making the confiscation and leaving it in the houses where they are kept as pets or in its most extreme case, euthanasia is carried out. These results are being worked on so that they can be used to make better decisions for the well-being of confiscated individuals in Mexico.

c). In the urgency of not failing with the investigation and seeing the difficulty at risk in obtaining opinion and perception data, we wanted to carry out some other objective that was aligned with conservation and the fight against trafficking and that its results were equally valuable. Therefore, the results in this section showed us the impact of the wildlife trade on the abundance of species through an equation that estimates the number of individuals seized, killed in each phase of the trade and not detected. Based on the detection rate we determined (8.84%; Table 1), we estimate that, for every 508 primates detected, 5,238 went undetected between 2010 and 2019, 4,888 *A. geoffroyi*, 144 *A. pigra*, and 206 *A. palliata*. Our assessment indicates a 70% mortality rate for spider monkeys. Thus, for every spider monkey that is confiscated, another 2.3 die. For the two species of howler monkeys, their mortality rate is 89%, so for each one that survives, another 9.3 die. According to the equation, a total of 1,424 died before seizure between 2010 and 2019. Combining the estimates of detected, undetected, and dead individuals indicates that in this period 7,170 individuals of the three primate species were removed from their natural habitats. Annually, primate trafficking has an impact on the reduction of populations, which was higher for *A. geoffroyi* with 1.682 %, followed by *A. pigra* with 1.026 % and for *A. palliata* with 0.0295 %.

The mortality rate showed that primates die in some phase of their capture trade, and especially in the extraction phase where it is necessary to kill other members of the group to obtain an infant. Our data suggest a 12.97% reduction in populations over 10 years: 16.8% for *Ateles geoffroyi*, 10.3% for *Alouatta pigra* and 2.95% for *Alouatta palliata*.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

I received the Rufford grant in November 2020, a time when the world was in total uncertainty and their projects and objectives had to adapt to the dynamics of confinement. There were restrictions and then they were removed, and these depended on how the situation and its statistics improved, something that delayed the response time of the institutions with whom I had contact to receive information or a response on the dates on which I would have to visit them for the data collection. Recommendations regarding the COVID-19 pandemic were reported on Rufford's website, specifically there was an important topic that mentioned: "Grantees should contact the Foundation if there are delays in the implementation of their projects due to the COVID-19 pandemic" and so they kindly agreed that there was no problem with the delay as they understood the situation. Once the data collection started, everything seemed to be going well but being able to access dates and get according to the staff that provide the required information, it was difficult, since the staff of many of these institutions were confined to their homes without being able to go to the offices where the data were kept. In the case of zoos, despite their restrictions regarding their visits, since they had to be in the zoo facilities to care for the animals, they were more open to receive us to provide us with the required information. However, despite the long time and with a lot of patience, extremely valuable data was obtained.

Another obstacle, which was the biggest of all, was that the methodology sought to know the supply and demand side through the opinion of various factors such as pet keepers and hunters, unfortunately the search for pet keepers and hunters It turned out to be a difficult task due to the pandemic and the lack of openness that the communities had for outsiders to arrive. In addition, in some visits we realised that people feared that there would be reprisals or complaints against them. Some visits were made, but they were unsuccessful, so that objective was set aside, trying to replace it with some other objective whose results would have an impact and that would have implications for conservation and combating trafficking, as well as for the understanding of trafficking, specifically of primates in Mexico. In Mexico, due to the pandemic, levels of insecurity increased.

<https://elpais.com/mexico/2021-09-22/la-percepcion-de-inseguridad-en-los-estados-mexicanos-cae-al-menor-nivel-desde-2018.html>

Therefore, the risk of obtaining opinions and perceptions was very high, adding the gender violence that exists and being a woman who led the project, it was decided to omit these opinions in this phase of the investigation with plans to resume and reconsider it in an investigation future where conditions may be favourable. Fortunately, this "lost" information was compensated with valuable information that will be extremely useful in combating traffic (see PROJECT UPDATES "Extra Research"). The visit to the key actors in the application of the law was successful and was a key piece to know the context of illegal trade in primates, specifically how the extraction impacts the reduction of primate populations and how many individuals of primates are extracted annually from the jungles of Mexico. Likewise, the interviews with the expert participants of the documentary, gave us a super broad panorama of supply and demand.

4. Describe the involvement of local communities and how they have benefited from the project.

Although the pandemic has affected some scheduled activities, we are looking for alternatives to interact with the local community while respecting health protocols. Virtuality in those moments of pandemic was the only resource available to continue working: We participated in live and radio programmes (for example, Radio&co, zero waste and ecolatras), articles for newspapers, presentations and we participated in the Petfilm festival where we disseminated important information about wildlife trafficking. Unfortunately, we were going through a pandemic and fortunately for us and our work, traffic issues were under debate thanks to the origin of the pandemic, so we noticed a greater interest in people, so one of the benefits and/or participation of people It was that there were sites and opportunities to talk about traffic, clear up doubts, give feedback and share experiences. Murals were made by artists and participatory community murals where people had a fun week of talking, painting and being interested in the illegal trade in animals and its implications. Throughout the dissemination of information, we emphasised that the participation of the population was very important for the maintenance of species in their natural habitat and for not continuing to perpetuate the demand. In the Tuxtla Veracruz jungle, activities were carried out specifically on the region's monkeys and

a section was made to talk about their illegal trade, we played games and sang about the topic. Posters on traffic and didactic material were distributed.

5. Are there any plans to continue this work?

Yes, especially now that the COVID 19 restrictions are no longer in place, we also still have material that we are looking for a way to continue distributing in schools and communities where primates are distributed. In some media, we were invited to participate in person in the future. In addition, I am currently a PhD student in conservation (Instituto de Ecología, A.C.) and my study programme runs until August 2025, so I will continue to address traffic aspects, but now with a legal focus, a community focus and environmental history. Likewise, it is intended to expand the study not only to primates but to other threatened species in Mexico.

6. How do you plan to share the results of your work with others?

We have already begun to disseminate our results through a publication that is still under review in *Folia primatologica*, likewise, as mentioned above, the results were shared in forums, radio, newspaper, schools, and conferences.

We hope to publish another scientific article, we also have plans to bring the results obtained to congresses and political forums to put more pressure on the authorities for which the issue becomes more important in terms of law enforcement.

The results have acquired different formats, in addition to a master's thesis and peer-reviewed articles and popular articles, the results have been artistically expressed in murals, dynamic maps, posters, podcast, fanzines and concise messages that discourage the purchase of fauna such as stickers.

The documentary was the way in which the results were presented audio visually, so we feel very happy and proud to carry out an investigation and that it had many ways of presenting itself to different audiences.

Regarding the documentary, it will be released in May 2023 (date still to be decided). It will be an event at the institution (Instituto de Ecología, A.C.), the place where I study and where dissemination material will also be given away and the world premiere of the documentary will be held. We will also talk about the subject with other colleagues and other students about the work process, challenges and opportunities.

7. Looking ahead, what do you feel are the important next steps?

The next important step, once the final report is delivered, has to do with the premiere of the documentary itself, which will be complete and available in May 2023. Scan the following code:



After that, it remains to distribute the remaining material.

The plan is to continue interacting with the communities since this was very limited due to the pandemic.

We are writing the second article stemming from this where he will talk about the national and international trade in primates.

In September 2023, we will take the documentary, material and workshops to the festival "Changos y monos" in Akumal, Quintana Roo. We will put the documentary in various film festivals so that it reaches more people.

We will continue with the traffic study, integrating the theme of green criminology and environmental history of the sites where fauna is most extracted, and we will continue with the task of promoting campaigns that discourage the purchase of fauna. We hope that the campaign carried out in this project will reach the Mexico City subway, where more than 1,647 million passengers are transported.

Likewise, we are evaluating the type of didactic material or the most correct way to disseminate material or create campaigns and thus create material according to the type of public, age, message and purpose of what is intended to be achieved.

8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

Yes, I did, I even asked permission to use it in the documentary. The Rufford Foundation logo has been used in all my past activities and on slides where I have delivered face-to-face and online presentations, seminar updates for my institute, and national and international research conferences. It was mentioned in the scientific article and used in dissemination materials (Fanzines and posters). Thanks to this, colleagues asked me about Rufford, how it worked and decided to apply for their research.

9. Provide a full list of all the members of your team and their role in the project.

Juan Carlos Serio Silva – Researcher at the Institute of Ecology, A.C. He participated in the supervision and review of the project, theses, articles and was the one who guided the planning of many activities such as field trips.

Jorge Ramos Luna – Research technician at the Institute of Ecology, A.C. He participated together with me in the direction and production of the documentary. He worked editing and advising dissemination materials such as posters and fanzines.

There were other people whose participation was a key element for the development of the project, and it is necessary to mention in gratitude and visibility of his work:

Alicia Torres, Tania Fonseca and Maria Fernanda Álvarez – Colleagues of the “Group of Transdisciplinary Studies of Primatology in Mexico” – who helped a lot in monitoring outings and supporting brainstorming.

Colin A. Chapman, Adrián Reuter, Sonia Gallina-Tessaró, Wesley Dattilo, Juan Carlos

Serio-Silva – Researchers who helped write and review the article.

Review of my master's thesis work: **Dr. Eva López Tello Mera, Dra. Sonia Antonieta**

Gallina Tessaro, Dr. Inés Arroyo Quiroz, M. en C. Sergio Albino Miranda, Adriana Sandoval and Dr. Sam Shanee.

*Thanks for providing relevant information: **Paty Oropeza, Fabián Carvallo, Paola Mosig and Juan Carlos Olmos** for all the contributions to my project. To the **AZCARM** zoos for collaborating, especially **Tere Moreno and Ernesto Zazueta.**

Participation in the documentary: AKUMAL monkey sanctuary, **Rosa de la Rosa, Inés Arroyo Quiroz, Alex Olivera, Adrián Reuter.**

Sergio Gaeta- Musician, who helped to score the documentary.

10. Any other comments?

I am very grateful to The Rufford Foundation for financing this research project, it means a lot to me that this project, in addition to fulfilling a dream, supports initiatives for the conservation of species and helped enormously to contribute a bit to the study of illegal trafficking of species in Mexico, since it is a subject little studied. In addition, it allowed us to transform the results for many audiences and thus, everything will undoubtedly help to combat this phenomenon, which is very important to maintain the balance of ecosystems, to inform us about pet ownership, about the prevention of new pandemics. and on demand and thus discourage the purchase of wildlife as pets. Without this funding, this work would be unfeasible, especially in these difficult times due to the COVID-19 pandemic. Our results have been frequently featured in the local media. The work does not end here, on the contrary, it continues and with this increases the hope of reaching governments and interested parties and advancing actions to conserve biodiversity and combat environmental crimes such as illegal trade. On behalf of everyone involved, we thank you infinitely.







