

Final Evaluation Report

Your Details	
Full Name	Ana Cecilia Ochoa
Project Title	Implementing Long term Biodiversity Monitoring through RAPELD methodology in Central Argentina. First step: Monitoring small mammal's assemblages.
Application ID	24194-1
Grant Amount	£5000
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Date of this Report	September 2020

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
Implement RAPELD methodology and PPBio program's logics in Central Argentina				This objective was fully achieved, the project allowed for PPBio to establish and implement RAPELD methodology (four modules), in coordination with other institutions, from different parts of central Argentina, including National Parks Administration (La Rioja) and Santiago del Estero National University. We were also able to interact with community organisations in San Francisco, San Luis and in Santiago del Estero, with UPPSAN (rural peasants communities association).
Generate a database of sites coordinates and metadata				We digitised data and metadata of all parcels currently installed in the four sites of this project. Georeferenced and metadata were standardised into morpho software format and will soon be available in Data One international data base, through PPBio net.
Generate knowledge about the Diversity of Central Argentina small mammal assemblages				<p>We were able to obtain complete data of two sites, and preliminary data of the other two sites.</p> <p>In both national parks (Sierra de las Quijadas and Talampaya) we have been able to gather information on small mammal communities and their habitats, as planned.</p> <p>In San Francisco, we were able to do a preliminary sampling of small mammals, and we also elaborated a list of native fauna and flora through ethnoecological methods, with the collaboration of local people.</p> <p>In Santiago del Estero, we were not able to do the sampling planned for 2020 but we focussed on producing didactic material (as will be explained further on).</p>

<p>Basic description of sites and habitat of the PPBio sites.</p>			<p>We were able to complete the description of two of the four modules, in terms of vegetation basic measures (PPBio protocol for understory adapted). This data will be available for any researcher that wants to carry out studies in Talampaya and/or Sierra de las Quijadas National Park. Constituting a great advance for the RAPELD modules of Argentina.</p>
<p>Publish results in scientific Journal</p>			<p>We have prepared five different manuscripts through this time of funding and support given by Rufford. Some of the productions have a broader scope than only small mammal diversity, showing the results of participative monitoring and collaborative research.</p> <p>1-One of them was recently accepted for publication in Neotropical Biology and Conservation Journal. "Wildlife associated to burrows of <i>Dolichotis patagonum</i> in central west Argentina"</p> <p>2- A short communication: "New records of small mammals for Sierra de las Quijadas National Park, San Luis, Argentina", was recently sent to Notas sobre mamíferos sudamericanos Journal, and we are waiting for their response.</p> <p>3- A paper on temporal and spatial changes in small mammal diversity of Sierra de las Quijadas National Park is in preparation and will be sent at the end of 2020.</p> <p>4-5- Two more manuscripts are in preparation (soon to be sent to Checklist Journal: a note on a new report of <i>Parachoerus wagneri</i> in Campo Grande, Santiago del Estero and a list of the mammals in San Luis (greatly funded in the data of campaigns, the group's database of occasional observations and registers and a revision of San Luis National University Mammal collection data).</p>
<p>Publish results in didactic- general public formats</p>			<p>We were able to publish the digital version of the book: "Marsupials and rodents of San Luis"- this was a collaborative effort along with colleagues and students. The synthesis of a lot of work and goal achieved.</p> <p>We also elaborated two very advanced drafts of other books: the guide for the identification of small mammals through their hairs and a story for young readers illustrated</p>

			by the Illustration group, which was funded by this project.
Share results in Scientific events			We presented five posters and one conference at the Jornadas Argentinas de Mastozoología, annual meeting developed in Puerto Madryn in 2019, organised by SAREM (Argentinian Society for the Study of Mammals). Sharing and discussing with colleagues from all over the country, and even other countries.
Generate audio-visual and graphic material that will allow to reach general public and disseminate native biodiversity importance			<p>a) Graphic material generated for public activities, workshops and "Biodiversity fair" - Posters and leaflets for educational activities with San Francisco Community.</p> <p>-Digital material, on Santiago del Estero Fauna.</p> <p>b) Audio-visual material -Short videos of Argentina's PPBio's different sites and activities on biodiversity monitoring. - disseminated through Biodiversidad desde el Sur YouTube site and Instagram. (Two short 1-minute video and one 5-minute video) -Trailer of documentary "Biodiversidad en territorios campesinos" showing a little part of UPPSAN campesinos organisation struggle and participative biodiversity monitoring implementation in Santiago del Estero, through PPBio.</p>
Share results in general public events and communication means			<p>The different activities developed during this project have generated several repercussions in local media that helped disseminate and install native biodiversity in public agenda.</p> <p>a) News and journal interviews: http://www.noticias.unsl.edu.ar/24/09/2019/investigacion-a-los-pequenos-mamiferos-del-chaco-arido/ https://www.eldiariodelarepublica.com/nota/2020-5-26-18-49-0-marsupiales-y-roedores-de-san-luis-reunidos-en-un-catalogo-de-la-unsl?fbclid=IwAR1qHK3Jdx7u79AtU-LIcEDT-Lg_w5goMI4yVCgaVIXpOjJUyjqB9RVmopw</p> <p>b) Radio interviews: https://www.youtube.com/watch?v=bS0sJRZMA8w</p>

		<p>c) International repercussions https://ppbio.inpa.gov.br/PPBio-Argentina/livro-2020-Marsupiales</p> <p>d) Dissemination conferences (about Biodiversity, Conservation and PPBio Program-developed in virtual formats):</p> <ul style="list-style-type: none"> - In coordination with "Jovenes por el Clima San Luis" (Youth for Climate- San Luis) https://www.youtube.com/watch?v=NdcpTEfk4CM&t=1073s&ab_channel=jovenesporclimasanluis - In coordination with Talampaya National Park Administration: https://www.facebook.com/848117945240079/videos/2625285950904174
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled.

We had many unforeseen difficulties. The first big one I would like to mention, was, that because the funds were received through university account, they were immediately converted to Argentinian pesos. This was in July 2019. During the last months of 2019, Argentinian currency (pesos) suffered a strong devaluation, with the consequent inflation and rise of general costs and prices. This made all the budget calculated inaccurate from the beginning of the project and demanded reassessment of funds and re-evaluation of objectives from the beginning and on several occasions through the year.

Also, imported equipment was suddenly impossible to acquire (imports and exports were frozen and highly taxed), which made everything more complicated.

Luckily, we were able to acquire the basic equipment needed, partially through donations, partially through university funds, and many needs have been solved by group members and team effort and personal investments. The economic crisis taught us that with collaboration and a strong group we can face many adversities.

The second huge obstacle was, of course, due to current sanitary situation. We were forced to suspend small mammal sampling field trips to San Francisco (San Luis) and Campo Grande (Santiago del Estero) that were planned for May and August 2020. Unable to go to the field, we then centred our attention this semester in generating didactic material aimed to be used in workshops, schools and community activities. And also, in ordering and analysing data, writing process and publishing in scientific journals and public data base (PPBio, Data One).

3. Briefly describe the three most important outcomes of your project.

1- The work allowed the group to grow and establish the basis for a cooperative biodiversity monitoring programme. This first step implementing PPBio logics and RAPELD in Argentina, has proven the immense power of collaborative and

community-based research and biodiversity monitoring. Interactions and collaborations have multiplied. A tangible outcome of this objective is the generation of a common and public data base on the four RAPELD sites (with their metadata) that will soon be available through Data One platform.

- 2- The project has generated quality scientific material in the context of this project, two manuscripts have been sent and there are three in process. This allows to disseminate local work and contributes to improving the knowledge of central Argentina's native fauna, that has still, a lot to show us.
- 3- Through the development of the project the team has synthesised a lot of material and information, creating dissemination material in several different formats. This has allowed us to encounter and interact with different members of the society (colleagues, children, indigenous community, peasants, students, volunteers, etc) building common languages, and ideas, leading to actions of more consciousness, dialogue and conservation. Tangible results include one book of dissemination of Marsupials and Rodents of San Luis, and two books in process (as mentioned before). Also, audio-visual and graphic material on Mammal biodiversity and PPBio.

4. Briefly describe the involvement of local communities and how they have benefitted from the project.

In Santiago del Estero, even if we could not develop the field trip planned this year, this project provided means and the frame that facilitated and oriented the gathering and ordering of substantial audio-visual material, that has developed into the project of a documentary, by guidance of Facundo Lazarte, member of the team. We have for now, produced the trailer, but the process has only begun. The documentary tells the story of UPPSAN organisation and their resistance in a hostile world. It also witnesses the co-habiting of peasant communities and biodiversity in Santiago del Estero and presents the installation of a RAPELD Module of participative monitoring. The module responds to the territories. We hope that this product is a tool for the organisation and empowerment of UPPSAN communities.

In San Francisco, the module responds to local resistance to the development and installation of a mining enterprise in an area of great conservation value. We were able to present the idea of PPBio, honoured by the presence and participation of Helena Bergallo, coordinator of PPBio Mata Atlantica, Brazil. The activity, organised as a round table, was held in the Municipal Cultural Center of San Francisco (Casa Cultural de la Municipalidad de San Francisco). In this meeting (November 2019) we discussed, along members of the community, about the importance of conserving biodiversity and the risks of big scale lithium extraction. We also presented the proposal of PPBio and RAPELD parcels monitoring programme and we developed a capacitation course with university students and community members. We also interacted with touristic guides and active members of the community.

In December 2019, we organised an open-air activity in the local square, focussing on ludic and artistic activities for children from 3 to 12, complemented with stands with some information and games for adults. We shared the results of the preliminary

sampling done in November 2019 and in the ethnoecology course carried out in August 2019.

These activities opened many new interactions and ideas that have gestated new projects and possible actions in interaction with the community and several institutions and community influencers.

The educational material designed (banners, posters, books) will continue to be used in further activities in San Francisco and the digital book has been shared with teachers and members of San Francisco community. After pandemic restrictions pass, the material will be distributed in schools and we will develop at least one open air activity to present the results (we have already coordinated to do it in two local squares and are hoping to visit the school too).

For the national parks, where we worked, RAPELD methodology is a mean to integrate scientists work and a tool to develop a monitoring system with low cost and high comparative power (due to standard method and protocols). National parks are one of native flora and fauna's refugees in these moments when natural environments are scarce. The central west part of Argentina is home for many endemic, strange creatures prepared to live through rough environments, and with special adaptations to tolerate water scarcity and big temperature variations. PPBio programme proposes integrated analysis that give information on different aspects and organisms that compose an ecosystem's biodiversity, from trees and vertebrates to soil microorganisms. In our case we studied the assemblages of small mammals and their habitat (related to vegetation and soil type). But this infrastructure is available for park administration use and/or for the linking of the work of any scientist from now on, if desired.

Each module now "belongs" to the territory and in that sense, all support and contributions to maintenance, installation and data gathering is a donation made to the "common benefit", enabling community empowerment and collaborative work.

5. Are there any plans to continue this work?

Yes. The project is aiming to fully implement PPBio in Argentina, developing an integrated approach of biodiversity monitoring. This involves engaging with local communities, as so to contribute with a tool for the empowerment and gaining of knowledge of their environment. The idea is to provide training opportunities in data collection and database organisation, also in biodiversity monitoring skills that will help monitor environmental conditions and generate a community early alert system. This system of monitoring could be sustained by students, of different ages and institutions and also by eco touristic ventures and/or local interested people in general.

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

I like to think of communication in several levels. The first level is the first contact, face-to-face, that is what I share when I teach, when I work with students and co-workers, when I talk to teachers, colleagues and friends. Experiences and learning

are shared in so many ways and transversal experience-sharing is a powerful transformation tool.

Another approach of sharing result is the scientific publication of our data, that has been one of our major focusses the last few months. We are still working in three manuscripts soon to be sent.

Also, as I expressed (earlier in this evaluation), we published an online total free access book, which is one of the ways we have chosen to show our results and share them with anyone who is interested and can find it of use. We also have two books in "draft stage" that will be finished in the next 2-3 months, and fully available on digital versions.

We have generated several audio-visual materials and will continue to do so. In particular, we are now looking for funds to develop these activities and finish the editing process of the books and documentary.

Finally, we have planned to develop Fauna dissemination activities in public places in coordination with San Francisco and Campo Grande Communities. These will be done after sanitary crisis passes and with aid of university students of San Luis and Santiago del Estero Universities.

7. Timescale: Over what period was the grant used? How does this compare to the anticipated or actual length of the project?

The grant was used for 13 months (considering that the funds where only available in August 2019 due to administrative times), and the anticipated length of the project was 12 months. We had to make several re-arrangements in time schedule because of sampling period (some samplings should be done in the first half of the year) and late sanitary dispositions.

8. Budget: Provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Sherman traps x150 live	2600	2190	-410	We were able to buy the traps to a local manufacturer and so, we reduced the cost and reassessed budget to other needs.
Camera lens 70-300mm	220		-220	Due to inflation and Argentinian economic instability, these items were not achieved. We re-assessed the

Dataloggers x4	300		-300	budget focussing on basic needs that would assure the goals, especially campaign costs.
Compass Suunto	75		75	We were donated one compass and two clinometers by colleagues from PPBio Brasil. And one GPS was obtained by university projects funds. Equipment was highly unavailable after Argentinian currency (peso) devaluation in the second half of 2019. Luckily, we managed to get all the basic equipment to ensure field trips (in agrestic conditions) and RAPELD infrastructure installation.
Clinometer Suunto x 3	315		315	
GPS Garmin x2	125		125	
2-person tent	100		100	We were only able to get one tent for four people (two person tents were out of budget, so we reassessed this "extra" to food and supplies)
4-person camping tent x2	150	150		
Food and field supplies	300	700	+400	The cost of food and fuel in Argentinian pesos changed substantially during the year, and so, costs were higher than had been calculated. For this, we had to increase resources available for food and fuel (this was informed to the Rufford grant's manager, Simon Mickleburgh and the Trust administrator, Jane Raymond at the time).
Fuel for transportation	150	625	+475	
Local people and field assistant allowances	665	900	+235	We were able to generate a series of scholarships for students that were formalized by the University. This allowed us to pay small allowances for students to develop a series of activities
Graphic material, posters, banners		211	+211	We reassessed some of the budget to printing material and communication activities. This included didactic material like posters, banners, leaflets, photos, pictures, etc.
Field supplies and safety equipment		264	+264	Some funds were re-oriented to field and safety equipment (gloves, camping supplies, batteries, small tools).
TOTAL	5000	5040	+40	

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

The activities done (and in process) lead us to think of many future actions and coordination to assess some crucial issues detected during this work. Some ideas and evaluations are:

- a. From activities with local population, we could perceive that there is a strong bond between local people and biodiversity, especially in rural areas. Dissemination material about mammal diversity is needed, to provide support for educational interchanges and activities with local communities.
- b. Participative Monitoring has a very big potential for biodiversity assessment and early alert systems. In the ethnoecology courses and activities done, particularly in San Francisco, San Luis, we could detect many members of the community that were eager to participate and develop local monitoring systems. We had the opportunity to interact with indigenous people, local tourism associations, and government agencies representatives (INTA). Not only did they demonstrate full commitment but also much knowledge of their fauna and flora and the will to establish interactions and local monitoring systems.
- c. We found a great success in the activities developed in public places. We suggest future approaches should include activities in schools, fairs in community squares and parks and the designing of adapted games (card games, board games, construction and puzzles, coloring books, etc.) and ludic activities to develop biodiversity concepts through didactic tools. This would enable "hands-on" learning through informal activities and its consequential sensitisation, with the generation of empathy and respect towards environment and biodiversity conservation.
- d. We also detected a need for the designing eco-tourism activities involving local guides and community members. This could represent a way to generate local incomes through biodiversity conservation. We think workshops and seminars to develop basic tools and information for guides and park rangers would allow for a common space of profitable interchanges and capacity building.
- e. We evaluate that in a next step, we could address, at least partially the development of sustainable productive activities, as apiculture and native flora harvesting (aromatic herbs, fruits and seeds mostly). For this we could articulate with local indigenous communities and cooperate generating workshops and helping in community activities of harvest (called "mingas").
- f. In the second step of Implementing Long term Biodiversity Monitoring through RAPELD methodology in Central Argentina, we plan to address a community approach, focusing, on the one hand, on diversity of medium and large sized mammals. This aims to generate participative monitoring tools, focusing on "special value" taxa, that are easily recognised, and have strong bonds with populations (relations can go from symbolic and spiritual to direct use or even conflict, as occurs sometimes with *Puma concolor*). In this sense we think that monitoring medium and large sized mammals in RAPELD modules and using PPBio's logics (of collaborative, free access community data) could represent a great tool to engage youth and general public in the conservation of San Francisco's ecosystems and specifically in biodiversity monitoring.

On the other hand, and continuing with the work in small mammal diversity, we propose to address the social aspects related to small mammal ecology,

particularly disease ecology and host's ecological trends. In this sense we plan to focus our sampling in two RAPELD sites of San Luis with higher probabilities of encountering *Oligoryzomys flavescens* and /or *Oligoryzomys occidentalis*, which are species that can host Hanta virus. Sites chosen are: La Florida and San Francisco. Activities will involve sampling of small mammals and dissemination activities in health centers and the local school.

10. 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 used it in all communication material generated, as is shown in the attached files and links presented in the table above.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Dra. Ailin Gatica- She specializes in mammal ecology. We have worked side by side in the coordination and development of the project. We shared general coordination, data gathering, field trips, planning, analysing, reading and discussing. She is also fully responsible of standardizing the data base and of introducing the team to international data-base logics and the software Morpho.

Dr. Antonio Mangione- Director of the project, he coordinated all administrative and legal effects. Also revised and guided every work. His opening of spaces and doors have generated many productions and given air for expansion. His key contributions through communication initiatives made it possible to share our work through social nets and expand to broader public.

Dra. Laura Jofré: She has participated in field trips, logistics, data gathering and entering. Also, in courses and participative biodiversity monitoring activities. She has revised many of the materials and has been a part of the founding of many initiatives. She also contributed with her genius photography's to several materials.

Lucía Martinez Retta: Student, member of the project. She has worked side by side, contributing to the planning and execution of each field trip. Also, in a big part of data entering and in general, in the creation, organization and building of ideas. She participated and collaborated in samplings, parcel installation, courses and also commanded two of the posters that we presented in SAREM congress.

Lic. Danila M. Puegher: Recently graduated from San Luis University, member of our project, she has contributed with photographs and revisions of educational material and scientific publications.

Lic. M. Celina Carrizo: Recently graduated from San Luis University, she is author of our book of Marsupials and Rodents of San Luis. She has participated in Parcels installation, data entering, data gathering, analysis and discussion, and in the writing of several communications.

Maximiliano Pardo: He is a student, member of the project. He has helped in data gathering and particularly in material conditioning. He is currently developing technical labour in the maintenance of the University mammal collection. He helped develop educational material and participated with photographs and illustrations. He also helped in the coordination of several courses, parcel installation and data entering.

Georgina Lemanich: Student, member of the project. She has coordinated the illustration group, conformed by different illustrators, interested in scientific or naturalistic illustration who have engaged in creating visual material for the many dissemination books and leaflets created during this project. She participated in the published book of Marsupials and rodents and in the two drafts. She has also participated in field trips and parcel installation.

Franco Aguiar Sormani: Student, member of the project. He Coordinated, designed and put together the guide for the identification of small mammals through their hairs (attached I present sample pages of the draft). His enthusiasm was partly responsible for the conformation of the illustration group and his participation has enabled transdisciplinary spaces of learning and growing for the team.

Facundo Paiva: He created and designed the short audio-visual material about PPBio. His artistic updated view was substantial to accomplish communication tools in this pandemic times. He also helped organize and put value into the project's material.

Facundo Lazarte: He created and designed audio-visual testimony of Santiago del Estero RAPELD installation and developed a trailer and a soon to come documentary. His abilities, commitment and generosity generated a magnificent piece that will be shared with a wide audience and represents a tool for UPPSAN communities.

Dra. Carla Rueda, Ing. Marta Rueda, Lic. Andrea Neme: Colleagues from Santiago del Estero province. In this last year we have worked in data analysis and ordering and in the publication of a new record in a PPBio site, from UPPSAN communities. We dedicated these last months to the creation of dissemination material, a series of educational posters on some selected mammals of Santiago del Estero, that we intend to print and use for workshops and to share with the local school in Santiago del Estero. This is a seed for a future book on the mammals of Santiago del Estero. They were also involved in the creation and development of the documentary and trailer reported before and have engaged in making PPBio alive in Santiago Province.

Lic. Luciana Castillo Sanchez: She has aided in logistic coordination in Talampaya National Park and has contributed to data ordering, analysing and discussion. She has helped contrast results from different sites and her insights have helped broadening our thinking. She has revised some of the manuscripts and helped in the discussions of the team.

12. Any other comments?

As a small group from a peripheral locality, the support given by the Rufford Foundation was a meaningful and substantial help to develop and render value to our work. I think this has been proven by the exemplar teamwork and many contributions done in this last year. The hard present situation makes us value even more our natural environments and biodiversity, and maybe, gives us a chance of action in this strange sensitive moment. We will continue to work and struggle towards this conservation through collaborative work horizon.

Find attached, details of the process and results of this project. I am sending the following attached documents, in order to share and put under your consideration our results and learnings:

- Details of budget spent and activities- See Tables I to V.
- Detailed List of products and didactic educational material resulting from the activities done during the project.
- A drive folder with material and products generated and photos of activities – Any of which could be shared through Rufford page, if you choose to.

Annexes below:

Annex 1 – Activities of the project (Tables)

Annex 2 - Detailed List of products and didactic educational material resulting from the project's activities

Annex 1

Activities of the project

Table I- Activities of the project "Implementing Long term Biodiversity Monitoring through RAPELD methodology in Central Argentina. First step: Monitoring small mammal's assemblages developed in July to October 2019

July	August	September	October
Order, digitalization and Analysis of PNSQ and Talampaya Data of Small mammals (small mammals of – Talampaya sampled in May 2020)	Submission of 6 works (5 posters and one oral presentation) to SAREM annual Congress	Order and digitalization of PNSQ, San Francisco and Talampaya Data of Parcels	Order and digitalization of PNSQ and Talampaya Data of Small mammals
Presentation of administrative requirements for the grant's management and spending in UNSL.	Illustration and writing of catalogue of Marsupials and Rodents of San Luis	Illustrations for Catalogue	Edition and compilation of Information for the Catalogue
	Participation in the Annual Meeting of <i>Biodiversidad desde el Sur</i> -UNSL.	Illustration and writing for Small mammal identification guide through their hairs	Illustration and writing for Small mammal identification guide through their hairs
	Acquisition of non-perishable food	Clinometers, compass and GPS acquired by donation	Traps acquisition through funds-
			Paper 1 preparation- Sierra de las Quijadas Small mammals' assemblages

Table II- Activities of the project “Implementing Long term Biodiversity Monitoring through RAPELD methodology in Central Argentina. First step: Monitoring small mammal’s assemblages developed in November 2019- to March 2020

November	December	January	February	March
Presentation of 6 works related to Biodiversity, particularly small mammals’ ecology, in SAREM annual Congress	Biodiversity Activities with San Francisco community-	Data and Metadata order and management.	Field work for Habitat measures- Parque Nacional Sierra de las Quijadas, San Luis	Field work for Habitat measures- Parque Nacional Talampaya, La Rioja
Design and final edition of Educational Catalogue	Writing of the Story for young readers: “Relatos del Tuyum”	Illustrations for Relatos del Tuyum story for young readers	Illustrations for Relatos del Tuyum story for young readers	Illustrations for Relatos del Tuyum story for young readers
Tent acquisition -	Design and graphics of Educational Catalogue	Design and illustration of Educational Catalogue	Design and edition of Educational Catalogue	Design and final edition of Educational Catalogue
Paper 1 preparation	Paper 1 preparation-	Paper 1 draft-	Paper 1- final edition	Paper 1- Submission
Installation of RAPELD parcels and monitoring Biodiversity (course) in San Francisco- didactic experiences			Preparation of Paper 2: Revised list of San Luis Mammals	Preparation of Paper 2: Revised list of San Luis Mammals

Table III- Activities of the project “Implementing Long term Biodiversity Monitoring through RAPELD methodology in Central Argentina. First step: Monitoring small mammal’s assemblages developed from April to June 2020

April	May	June
Paper 1- Re-structuring and revision	Publication of the Educational catalogue: San Luis Marsupials and Rodents Catalogue	Digitalization of metadata and data of RAPELD parcels (including geo-localization) preparation for in Data One international platform
Paper 3: Short communication new register of Chacoan Pecari – preparation	Paper 3: Short communication new register of Chacoan Pecari - preparation	Paper 3: Short communication new register of Chacoan Pecari – translation and editions
Paper 4 Revised list of San Luis Mammals- prep	Paper 4 draft preparation - data gathering (collaborative work with UNSL colleagues)	Paper 4 preparation – data order and homogenization
Guide for the identification of small mammals through their hairs- Edition, illustration and production	Guide for the identification of small mammals through their hairs - Edition, illustration, design and production	Guide for the identification of small mammals through their hairs - Edition, illustration, design and production
Relatos del Tuyum Short story for Young readers illustration production	Illustration and edition of Relatos del Tuyum, short story for Young readers	Illustration and revision of digital version of Relatos del Tuyum short story for young readers
Audiovisual material preparation Short videos for biodiversity dissemination	Audiovisual material preparation Video of the catalogue of marsupials and rodents of San Luis	Audiovisual material edition and publication 1 min video PNT and 1 min video PNSQ
		Paper 5 Prep: Wildlife associated to maras burrows in Chaco Monte ecotone.

Table VI- Activities of the project “Implementing Long term Biodiversity Monitoring through RAPELD methodology in Central Argentina. First step: Monitoring small mammal’s assemblages developed during July to September 2020 justification of schedule and objectives change:

Due to the recent restrictions in movement and activities attending the situation of COVID virus and national sanitary dispositions we have been forced to suspend field activities that had been programed for May-June and August. So, some of the objectives were not able to be met and activities were re-scheduled and re-oriented, focusing on the generation of dissemination and educational material.

July	August	September
Paper 1 revision and restructuring	Paper 1- Short communication preparation- to be sent to Notas sobre Mamiferos sudamericanos Journal-	Paper 1 Short communication- New registers in Sierra de las Quijadas National Park- submission to Notas sobre mamiferos Sudamericanos Journal
Paper 2: Diversity of small mammal assemblages in Central Argentina Monte-Chaco ecotone- revision and restructuring	Paper 2: Diversity of small mammal assemblages in Central Argentina Monte-Chaco ecotone- to be sent to Neotropical Biology	Draft of Paper 2: Diversity of small mammal assemblages in Central Argentina Monte-Chaco ecotone. draft in Spanish- to be sent to Neotropical Biology
Paper 3: Short communication new register of Chacoan Pecari – final edition	Paper 3: Short communication final editing- preparing to submit to Checklist Journal	Paper 3: Draft- Short communication on the new register of <i>Parachoerus wagneri</i> in Santiago del Estero
Paper 4 Prep: Wildlife associated to maras burrows in Chaco Monte ecotone- sent to Neotropical Biology and Conservation.	Paper 4: Wildlife associated to maras burrows in Chaco Monte ecotone- revision and re-submission.	Audiovisual material edition and publication in youtube 5 min video- PPBio in Argentina
Paper 5 preparation- Writing, data organizing and paper prep.	Paper 5 preparation – draft and translation process	Final report of the project designing and submission
Guide for the identification of small mammals through their hairs- Final edition, and design of the	Draft of the digital format of the Guide for the identification of small mammals through their hairs.	

Illustration and edition of Digital draft version of Relatos del Tuyum short story for young readers	Edition and Digital Draft of Relatos del Tuyum	
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Annex 2

Detailed List of products and didactic educational material resulting from the project's activities

In this moment in history, when biodiversity proves, more than ever maybe, to be essential for the world's health, we managed to redirect our goals and dedicate full time to generate dissemination material and scientific communications, as follows:
 Products and educational material (see drive folders attached):

a) Scientific manuscripts sent or in process (I attach pdfs of- abstract of all publications sent and in preparation):

- 1- Paper: Wildlife associated to maras burrows in Chaco Monte ecotone- accepted to be published in Neotropical Biology and Conservation-.
- 2- Short communication: New records of small mammal endemic species in Sierra de las Quijadas National Park, San Luis. Sent to Notas sobre mamíferos Sudamericanos- Journal.
- 3- Paper: Space and time effects on small mammal assemblages in Central Argentina Monte-Chaco ecotone. Manuscript sent in March and currently in re-structuring process- to be sent to Neotropical Biology Journal.
- 4- Short communication: New register of Chacoan Pecarí in Campo Grande farmers community (UPPSAN), Santiago del Estero- sent to Checklist journal.
- 5- Paper: San Luis Up to date list of Mammals- in preparation- to be sent to Checklist journal.

b) Communication- general public oriented publications (I attach the book and sample pages of the drafts and synopsis in English for the three materials)

- Educational material: San Luis catalogue of Rodents and Marsupials (digital version)
- Draft of Relatos del Tuyum Short story for Young readers (digital version)-
- Draft of the Guide for the identification of small mammals of San Luis through their hairs (digital version)

c) Public data base:

Data and Meta data information (of RAPELD parcels and PPBio Argentina sites) made available through Data One international platform and PPBio administration (through PPBio Amazonia Occidental administration). Soon available at: <https://ppbiodata.inpa.gov.br/metacatui/view/PPBioAmOc.594.2>

d) Congress presentations- Posters Presented in SAREM Congress: XXXII Jornadas Argentinas de Mamíferos (JAM)- In Puerto Madryn, Argentina (I attach copy of the material)

Posters

- Ensamble de pequeños mamíferos consumido por *Bubo virginianus* en el Parque Sierra de las Quijadas
- Conformación de un equipo de Ilustradoras/es Científicos en el proyecto Biodiversidad desde el Sur, UNSL
- Atributos poblacionales de dos especies simpátricas del género *Eligmodontia* del Parque Nacional Talampaya

- Inventario participativo de fauna de vertebrados en Campo Grande, UPPSAN, Santiago del Estero en el marco del PPBio Argentina
- Comparación de ensambles de pequeños mamíferos entre los Parques Nacionales Quijadas (PNSQ) y Talampaya (PNT)
- Conference
- Programa de Pesquisas en Biodiversidad Argentina: una propuesta para la articulación de investigaciones (I attach a full description of activities done in SAREM Congress, Nov 2019).

e) Graphic material generated for public activities and “Biodiversity fair” (attached you will find the material)

- Posters and leaflets for educational activities with San Francisco Community-
- Digital material, on Santiago el Estero Mammals.

f) Audiovisual material (attached you will find the material or youtube links)

- Short videos of Argentina’s PPBio’s different sites and activities on biodiversity monitoring. – disseminated through Biodiversidad desde el Sur youtube site and instagram. (Two short one-minute video and one 5-min video)
- Trailer of documentary “Biodiversidad en territorios campesinos” showing a little part of UPPSAN campesinos organization struggle and participative biodiversity monitoring implementation in Santiago del Estero, through PPBio.

g) General public dissemination material

The different activities developed during this project have generated several repercussions in local media that helped disseminate and install native biodiversity in public agenda.

a) News and journal interviews:

<http://www.noticias.unsl.edu.ar/24/09/2019/investigacion-a-los-pequenos-mamiferos-del-chaco-arido/>

https://www.eldiariodelarepublica.com/nota/2020-5-26-18-49-0-marsupiales-y-roedores-de-san-luis-reunidos-en-un-catalogo-de-la-unsl?fbclid=IwAR1qHK3Jdx7u79AtU-LIcEDT-Lg_w5goMI4yVCgaVIXpOjJUyjqB9RVmopw

b) Radio interviews:

<https://www.youtube.com/watch?v=bS0sJRZMA8w>

c) International repercussions

<https://ppbio.inpa.gov.br/PPBio-Argentina/livro-2020-Marsupiales>

d) Dissemination conferences (about Biodiversity, Conservation and PPBio Program- developed in virtual formats):

In coordination with “Jovenes por el Clima San Luis” (Youth for Climate- San Luis)

https://www.youtube.com/watch?v=NdcpTEfk4CM&t=1073s&ab_channel=jovenesporelclimasanluis

In coordination with Talampaya National Park Administration:

<https://www.facebook.com/848117945240079/videos/2625285950904174>