



2021 REPORT



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Message from Our Director

Did you know that a frog can live up to 11 years in the wild; that in 4 hours, frogs can be in a new home more than 155 miles away; and, that a frog without a front leg can survive at least 3 years to become an adult?. These are things that we did not know and in 2021 we discovered them thanks to you. We continue to be surprised by the work we have been doing, and we feel special that you continue to support us.

This year we sadly say goodbye to a dear friend and founder; Salvador "Chava" González, a great person and bird lover who leaves a great void in us. He showed us that you could support a good cause not only financially but with time and dedication.

We thank you again for your support, your time, and your dedication. On behalf of the Fauno team, we will continue our hard work during the following year, to gradually meet our goals.

Sincerely



Dra. Ánny Peralta García
Executive Director



OUR TEAM

Anny Peralta García
Director

Jorge H. Valdez Villavicencio
Research Coordinator

Andrea Navarro Tiznado
Restoration and Conservation
Coordinator

Salvador González Guzmán †
Environmental Education Coordinator

Norma Selene González Gutiérrez
Project Coordinator

Cinthia Haro
Administrator



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The Wildlife Project

Bradford Hollingsworth
San Diego Natural History Museum

Sula Vanderplank
Suva Research

Richard Erickson
LSA Associates, Inc.

Oscar A. Flores Villela
Universidad Nacional Autónoma de México

Elia Benítez
El Nido Taller

Denis Navarro Tiznado
Cracia Comunicaciones

Our Mission

To promote the proper management of natural resources through scientific research, restoration, education, and collaboration. To seek solutions to preserve the flora and fauna in northwestern Mexico through the development of scientific information and community engagement.

What Do We Do?

At Fauna del Noroeste we are concerned about the current state of our natural diversity, and seek to reduce threats that have led to the extinction of species. For this, we have developed three working lines:



In search of the Burrowing Owl in Ensenada Bay

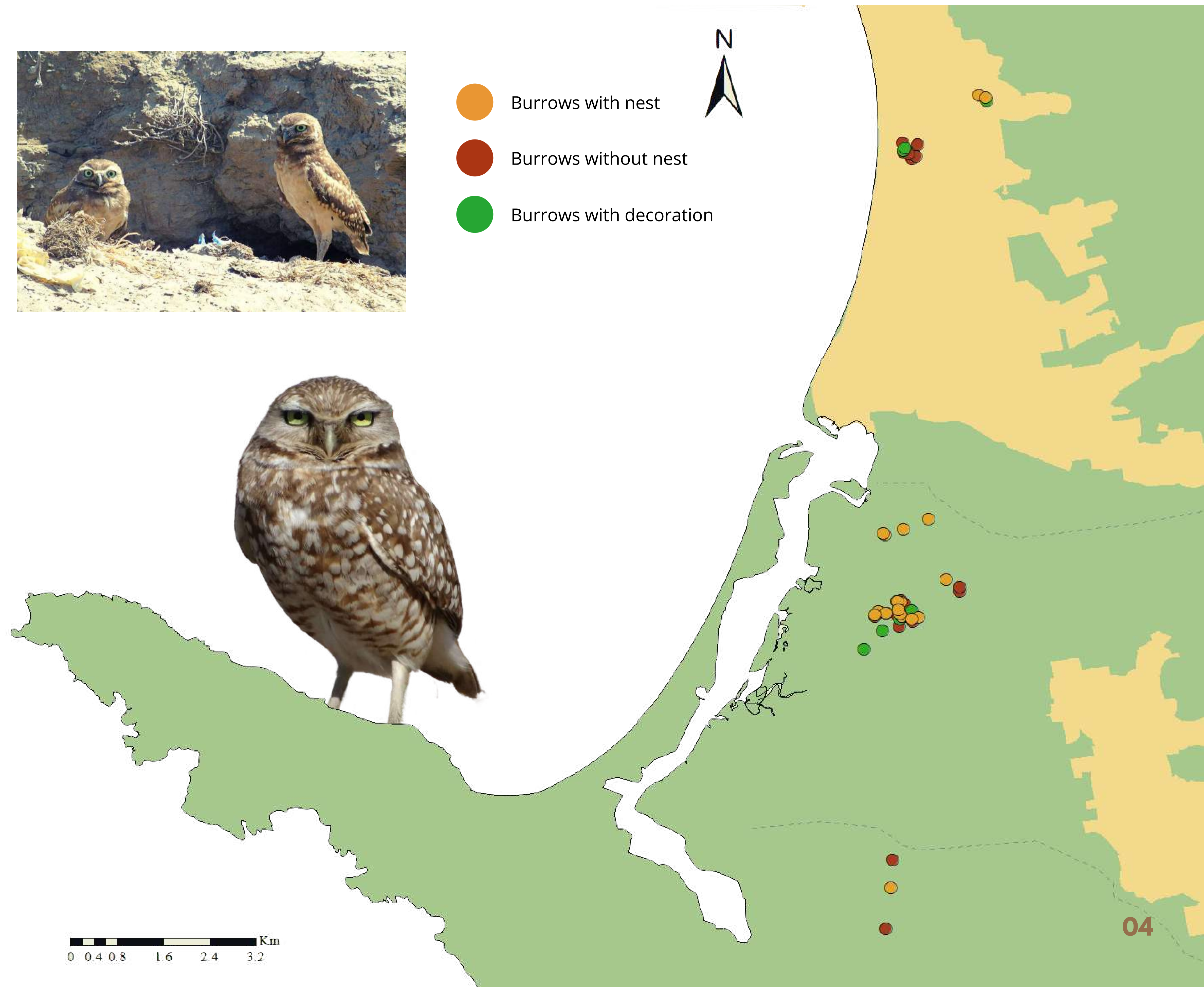
The Burrowing Owl (*Athene cunicularia hypogaea*) is a nocturnal bird of prey that uses burrows made by squirrels or rabbits. Yes, just as you read, this species is different from other birds of prey.

The objective of this project was to know the reproductive behavior of the species in urban and suburban areas of Ensenada. And now we can say with certainty that we have 50 potential sites with this Tecolote, which nests in urban and suburban areas, and they are having reproductive success. How do we know? We were able to observe 20 nests with nestlings. With this project, we were able to map the nesting sites and determine how we could follow up on the nesting of this bird. Unfortunately, we also learned that this species, like other species in Baja California, has problems with habitat reduction due to the exponential growth of the city and its main threats are the presence of pets (dogs and cats). This information will also be essential to raise awareness of the importance of this Owl and to communicate to the inhabitants of the suburban areas of Ensenada how they can help conserve it.

This project was made possible thanks to the work of our volunteers David Ceseña, Karina Hernández, Alfonso Macias, Alejandra Alfaro, and Daniel Rodríguez, who fell in love with the project and dedicated entire days to visit each place with the possibility of being inhabited by this species, as well as giving talks to inform the public about the importance of this species. Thanks to their efforts, we can now have a better picture of what is happening with this species.



- Burrows with nest
- Burrows without nest
- Burrows with decoration



0 0.4 0.8 1.6 2.4 3.2 Km

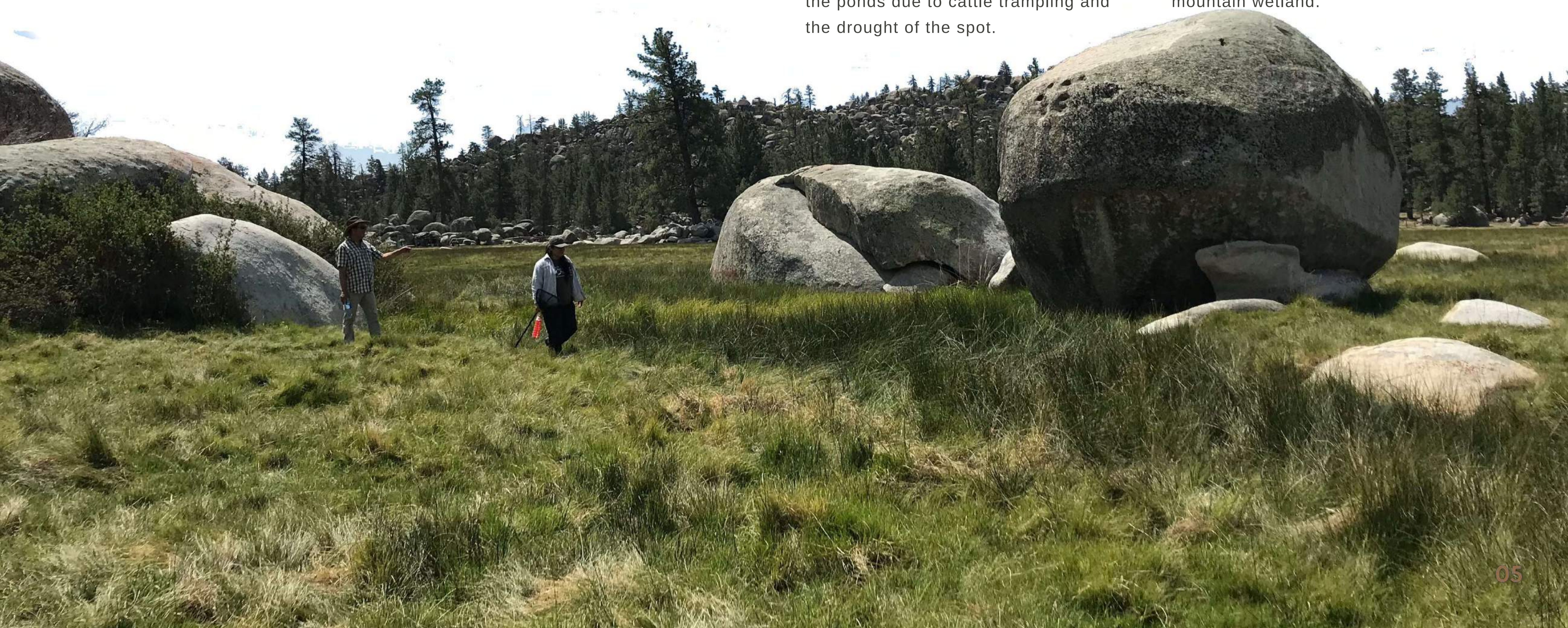
A visit to the sky island

Thanks to donations from 2020, we visited two essential mountain wetlands within the Sierra San Pedro Martir National Park. The purpose of this trip was to monitor red-legged frogs in La Grulla's valley and visit the valley of La Encantada where this frog used to live to evaluate the opportunity to reintroduce it so that it can return to its former home.

During fieldwork, a total of 47 frogs were captured, some of them marked since 2013, which reveals information about their life. Twenty-two new individuals were recorded and tagged to continue obtaining information on their population.

During the visit to La Encantada valley, we could make a quick assessment of the habitat. This site previously had the presence of the red-legged frog, but it is currently extirpated from this valley. This habitat is located within a natural wet pasture that has been used for cattle grazing; however, despite the decrease in livestock in recent years, we observed a reduction in the size of the ponds due to cattle trampling and the drought of the spot.

Even so, the ponds present have adequate characteristics to contain a population of the red-legged frog, so it could be possible to introduce it to this site. If reintroduction is carried out at this place, it would be necessary to improve the ponds present and make adequate management so that they persist and red-legged frogs can become established again in this mountain wetland.



Discovering the biodiversity of the Sierra La Asamblea, Baja California

In April 2021, we were invited by the San Diego Natural History Museum to support exploration and research activities in the remote and little-explored Sierra La Asamblea. This sierra is located in the Central Desert of Baja California, about 65 km northwest of Bahía de Los Angeles. It is considered a mountain island since it has a forest of piñon pine and other plant species typical of the Mediterranean climate in the higher elevations but is surrounded by desert in the lower elevations.

From April 18 to 26, six researchers from the Museum, the Faculty of Sciences of the UABC, and Fauno participated and went to the upper part of the Sierra La Asamblea to prepare an inventory of birds and mammals of this mountain island. In summary, 59 birds, ten terrestrial mammals, and nine species of reptiles were recorded. This information will help to understand better the richness of this site and better support the activities carried out in this place and its conservation.



Completing the inventory of amphibians and reptiles of San Basilio Bay, Baja California Sur

In 2019 we participated in a multidisciplinary expedition to document the biodiversity of San Basilio Bay, a little-known corner in the Gulf of California with abundant natural resources and phenomenal biodiversity. More than 80 people registered both terrestrial and marine diversity on that occasion.

In 2021, two Fauna del Noroeste members and project leader Sula Vanderplank traveled again to this beautiful and pristine place to complete the inventory of amphibian and reptile species. We visited this beautiful place from June 22-26 and focused on searching for those species with a potential presence that had not been detected during the 2019 expedition. During the hot days and nights that we were exploring the site, we found four species (1 amphibian and three reptiles), among others previously reported, which helped us increase the list to 34 species. This will help us better understand the long-term conservation challenges of this site.

Searching for rock horned lizard in Sonora

From September 27 to October 2, Fauno staff participated in an expedition in Sonora, collaborating with more than 20 researchers, students, and landowners in search of the Rock Chameleon (*Phrynosoma ditmarsii*), a lizard unique to the mountains of Sonora and about which very little is known about its natural history. At the same time, we also documented the diversity of amphibians and reptiles to understand the place's biodiversity.

A total of 36 amphibians and reptiles were recorded in the area. As for the target species, the rock chameleon, 19 individuals were recorded, and data was collected to help better understand this species. Subsequently, some of the colleagues from The Madrean Discovery Expeditions who lead this project have made more visits to the place, which has helped to increase knowledge about this enigmatic lizard species unique to Sonora.



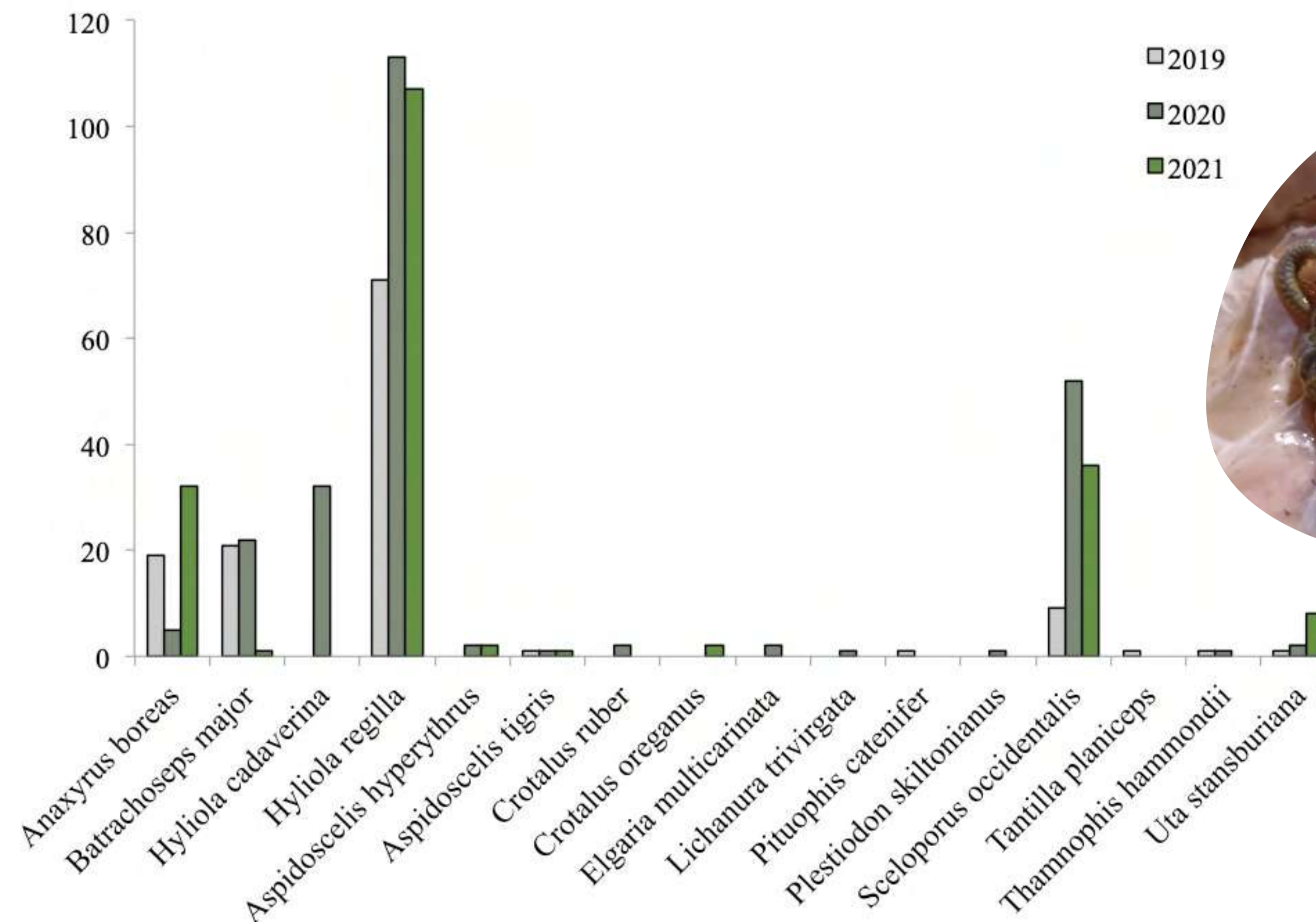
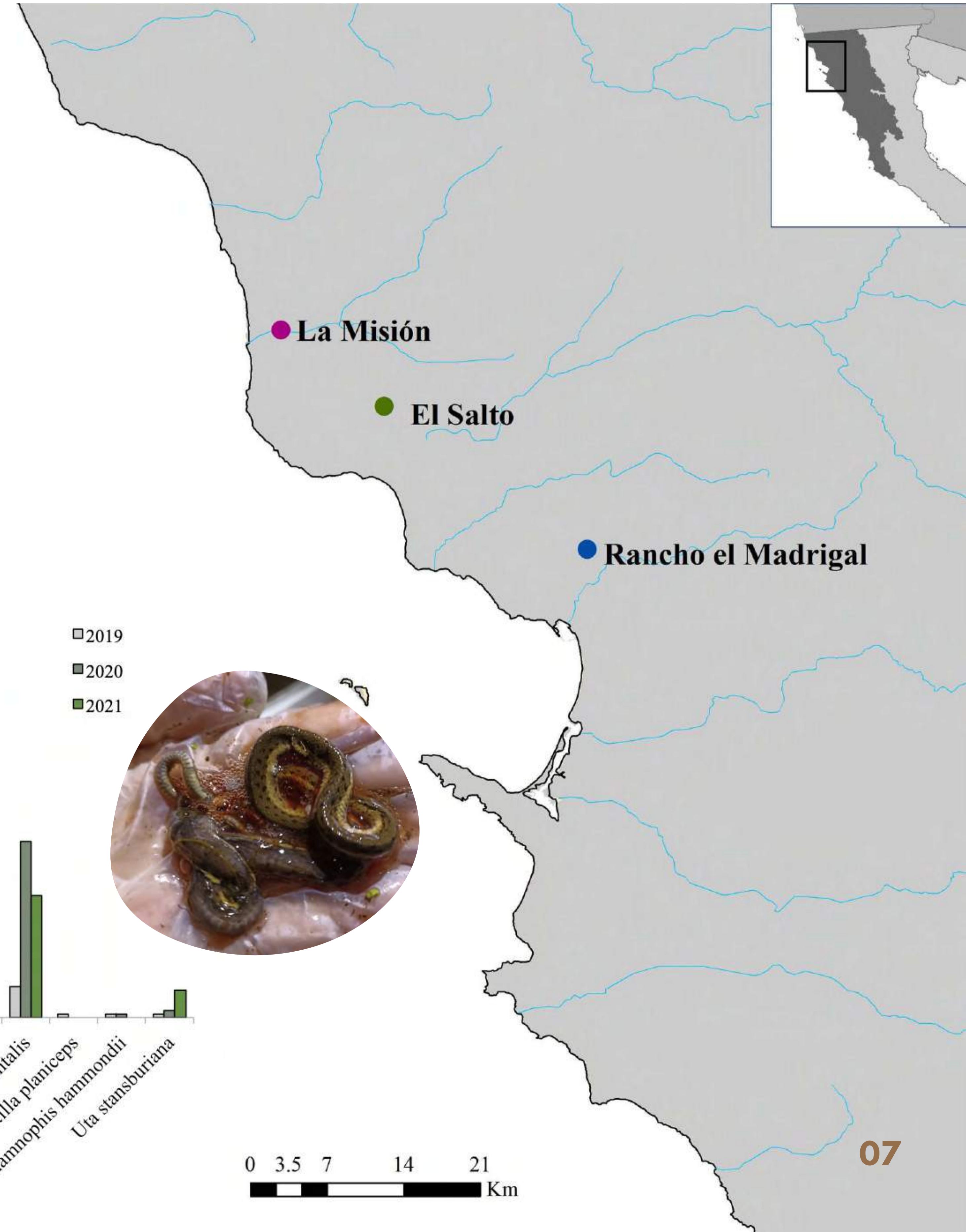
Bullfrog control

2021 was a year of significant changes for our bullfrog project, which allowed us to close cycles and begin new ones. And you may wonder why? In 2021 we finished with the activities at our pilot site, and the project was a success. We now have the first site without bullfrogs, and the difference is remarkable as we have observed an increase in the number of native species.

In 2021 we received support from The Rufford Foundation to begin bullfrog eradication activities in La Misión and El Salto in Baja, California. The project started in June 2021; the journey has not been easy. In this case, it involves being in communication and agreements with the different owners of the properties where the ponds with bullfrogs are located. So far, we have removed 89 frogs from five ponds with permanent water in La Misión and 32 frogs from El Salto.

We extracted more than 121 bullfrogs from two locations in Baja California

There is still much to do, and we will continue with these activities in 2022, but we are sure that any action taken will bring us closer and closer to our goal. We are confident that we will achieve positive changes in these two spots and that it will benefit the local wildlife.



Return of red-legged frogs to Southern California

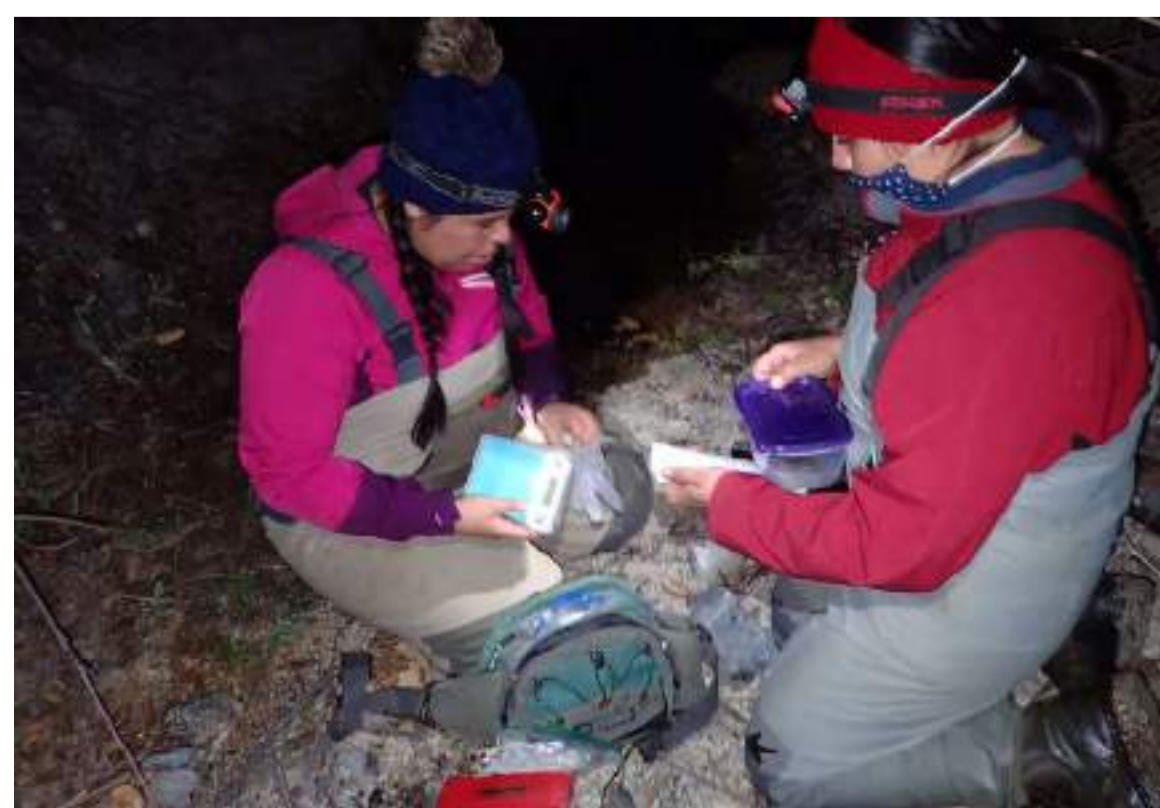
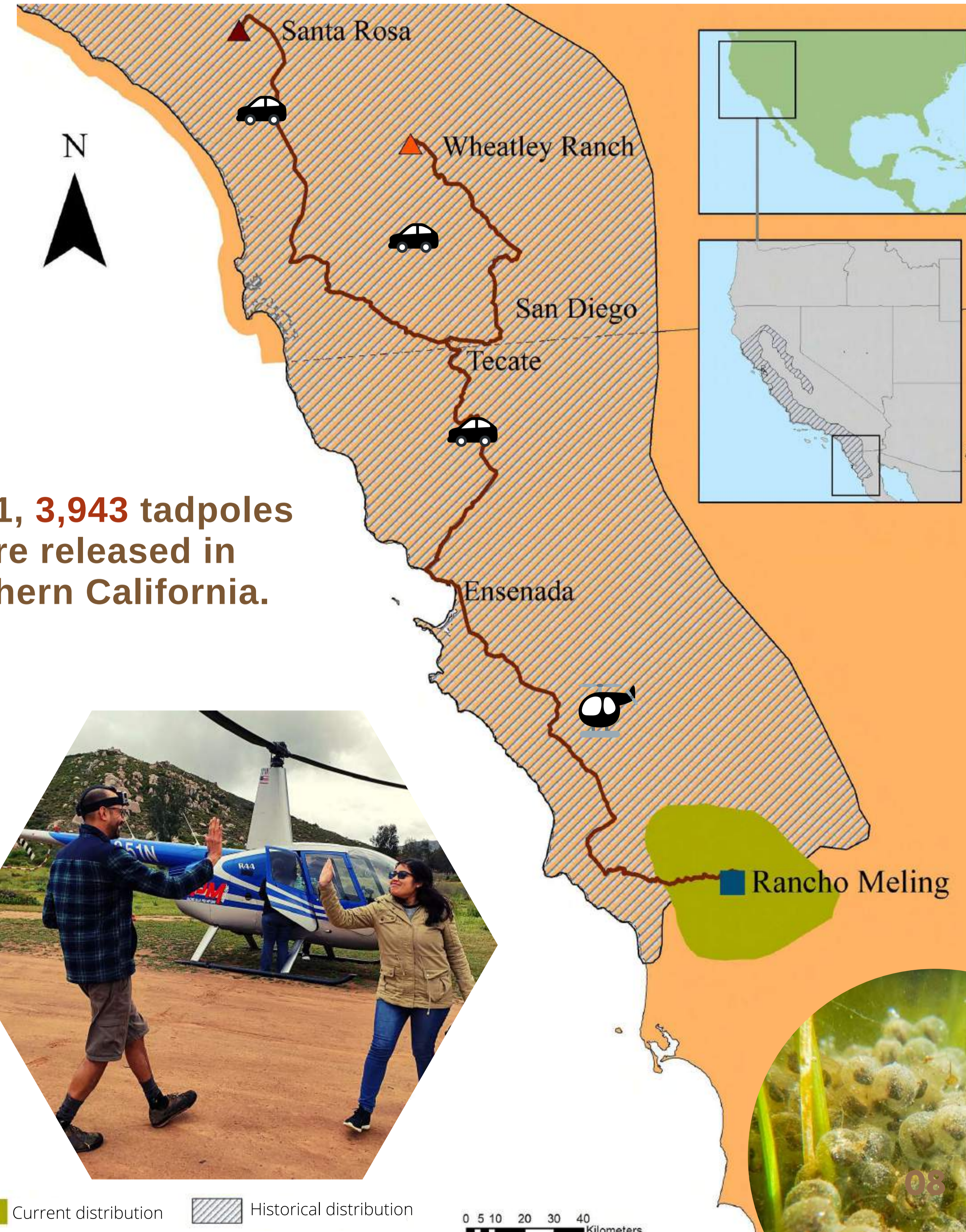
Since 2018, we have worked to recover the red-legged frog and its habitat in northern Baja California, building five ponds to increase its reproductive success and prevent its extinction. Fauno's team has been monitoring adults and egg masses from winter to summer to obtain information on the populations and continue maintaining the ponds to prevent them from drying out. The results have been favorable, and we are happy to confirm that we are succeeding; this year alone, we have seen a population increase in our main recovery site. However, over time the ponds become covered with excess aquatic vegetation. We must remove it to prevent the ponds from becoming saturated and eventually unable to use the frogs for breeding. Each year we need to remove 80% of the aquatic vegetation. These activities are carried out from September to November, as this is the only time of the year when there is no risk of affecting eggs or tadpoles. In 2021, 18 volunteers helped us to remove excess cattails and other aquatic plants. Thanks to them and our collaborators, we left the ponds ready for the frogs to have new offspring this winter. We appreciate the enthusiasm and hard work of all those who supported us; some cattails were up to 4 meters long, and removing them was not an easy task. We will continue with these activities next year and hope we can see our volunteers again.

In March 2021, with the help of landowners, we built the first red-legged frog pond in Arroyo San Rafael, the closest population to towns in the region. Maintaining this pond represents a significant challenge since this area is commonly used to pump water to irrigate crops. Still, we will continue to work with landholders to protect this vulnerable population.



Our work does not stop there, and this year we decided to go further. Faced with the loss of a red-legged frog population north of the border (very similar genetically to the one in Mexico), we began collaborating with the San Diego Natural History Museum, The Nature Conservancy, and the US Fish and Wildlife Service to translocate frog egg masses to populate a couple of recently restored ponds in the United States. The translocation of egg masses ensures that individuals remain in the release area because, if adults are transported, they tend to want to return to their original home. The work began in January 2021 with the monitoring of egg masses at three sites, where 45 egg masses were located. Of the total number of egg masses, six half masses were successfully reintroduced at two sites in California, releasing 3,943 tadpoles. We hope to see these frogs grow as they recolonize their habitat in California.

In 2021, 3,943 tadpoles were released in Southern California.



Lest-tern surveys in Ensenada Bay



White, black, and yellow are the colors that distinguish the California least tern, a beautiful Baja California bird, which every year returns to the bay of Ensenada to nest. In this place, it was born one day. This year we continued joining efforts with our friends from Pro Esteros to continue with the work of protecting and conserving California's least tern.

Some of the activities carried out included cleaning the nesting area, placing a perimeter fence and signs to protect the nesting area, predator control, and continuous monitoring of the nests. This year we saw chicks hatch and disappear. Unfortunately, extraordinary tides and increased predators, "coyotes and feral cats," made this a challenging year.

Only a few chicks that reached fledging age survived. However, we will continue fighting so that this bird can recover its population. Soon, we will be able to see all the chicks that hatched on our beaches fly and continue to see the arrival of least terns to the bay Ensenada every year.



Wetland design for species conservation

California red-legged frogs (*Rana draytonii*) have lost more than 70% of their range in Baja California. It is confined to only ten sites with low numbers of frogs, except where conservation actions are being taken. The extreme isolation of the remaining populations of Red-legged frogs in Baja California, coupled with current threats, highlights the need for rapid conservation action.

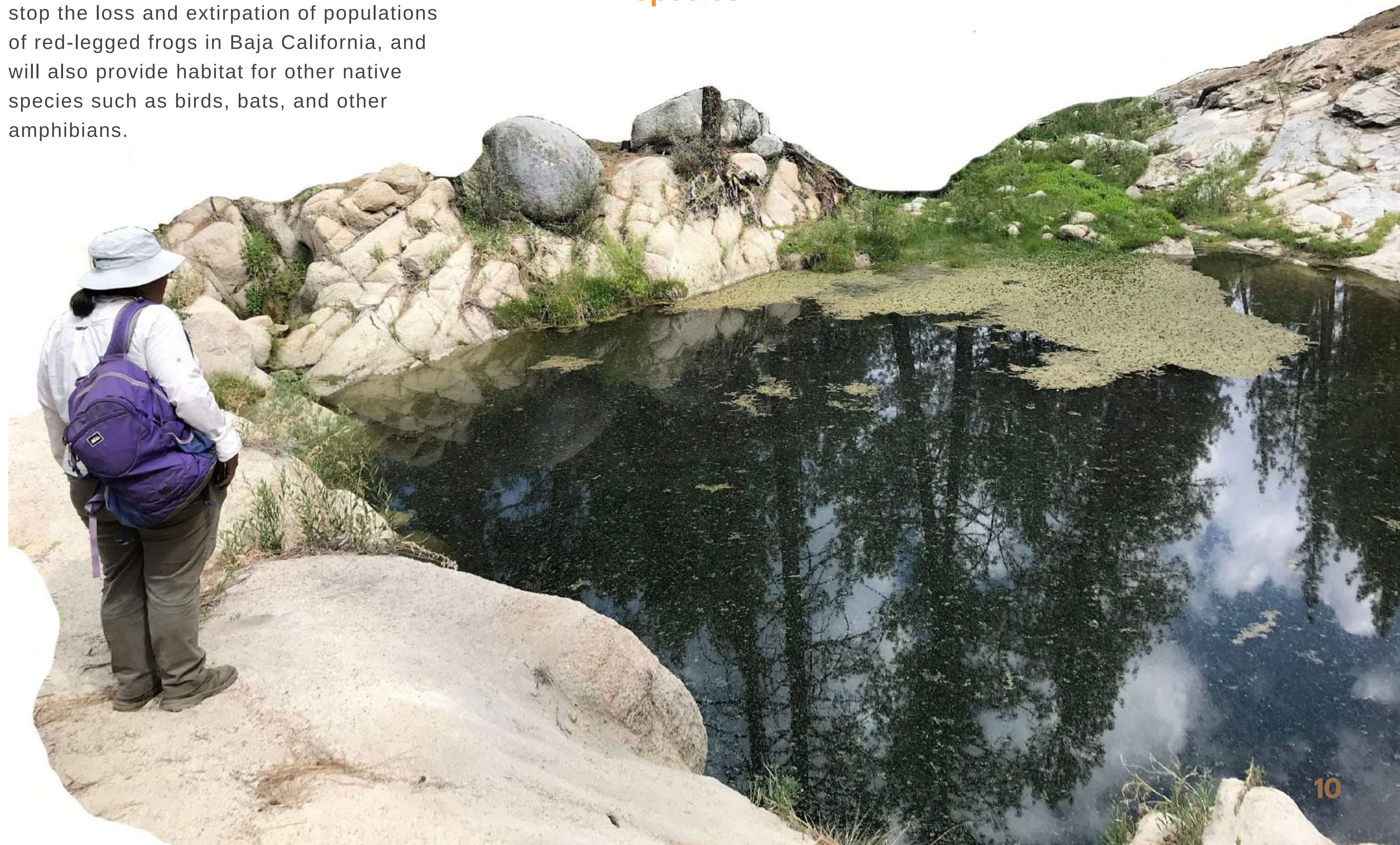
With the strong commitment of collaborators and supporters, we have created a recovery plan to help augment existing frog populations and long-term recovery plans to reconnect their historic range. As a first step, we plan to stabilize populations by increasing the number of wetlands around existing populations and increasing connectivity to encourage genetic movement and population growth.

This project aimed to design and construct wetlands within the range of this species and historical sites for future reintroduction. Before field visits, we identified each site by reviewing satellite imagery of six ranches and then contacted each landowner to discuss where wetlands could be constructed. At each site visited, we chose and designed wetlands by walking on the ground to identify signs of historic wetlands.

From December 5 to 9, we visited six locations to design 11 wetlands of different sizes. Once agreements are reached with ranch owners, the next step will be to secure funding for wetland construction and prepare historic sites for reintroduction into Baja California. These actions will help stop the loss and extirpation of populations of red-legged frogs in Baja California, and will also provide habitat for other native species such as birds, bats, and other amphibians.

We seek to design and build wetlands that provide habitat for the red-legged frog and other native species

This project collaborates with Save the Frogs, Bat Conservation International, and wetland construction expert Tom Biebighauser, who has developed low-cost techniques for constructing and restoring wetlands that have helped different species recover.





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- Manriquez-Gomez, F.J., N.S. González-Gutiérrez, L. Ortiz-Serrato, H.R. Moreno-Higareda y J.H. Valdez-Villavicencio. 2021. Anfibios y reptiles del Estero de Punta Banda, Baja California, México. *Revista Latinoamericana de Herpetología*, 4(2):74-84.
- Pérez-Delgadillo, A.G., R.A. Lara-Resendiz, J.H. Valdez-Villavicencio, D. Arenas-Moreno, S.F. Domínguez-Guerrero, P. Galina-Tessaro, and F.R. Méndez-de la Cruz. 2021. Thermal ecology of a thermophilic lizard *Callisaurus draconoides* through a latitudinal gradient. *Journal of Arid Environments*, 195(2021):1-10.
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- Valdez-Villavicencio, J.H., C.R. Mahrtdt, and D. Castro-Gutiérrez. 2021. *Hemidactylus turcicus* (Squamata: Gekkonidae) in Baja California Sur, México. *Revista Latinoamericana de Herpetología*, 4(1):235-236.

HUMAN RESOURCES

Tesistas:

Judith T. Pampa Ramirez
Gloria Francisca Zayas Mirana

PROFESSIONAL PRACTICES

Aimée Itzel del Rio Trujillo

VOLUNTEERS

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Ana Karina Hernández Alvares
Ana Paula Rubio Sánchez
Brenda Berenice Salas Escudero
Daniel Enrique Rodríguez Gómez
David Ceseña Gallegos
Edgar Orozco Leal
Esteban Andrés Esquivias Flores
Francisco Rafael Monge Herrera
Ismael Plascencia Torres
Alonso Hernández Landa
Jonathan León León
José Alfredo Ceseña

Liliana Ortiz Serrato
Marco Antonio Martínez Damián
María Gpe. Domínguez Pérez
Martha Alejandra Alfaro Germán
Mayra Lorena Flores Cota
Nicodemo González Morales
Roberto Eduardo Searcy Meza
Sahamara Andrea Ruiz Ornelas
Sally House
Sebastián Rodríguez Govea
Tonatiuh Gaona Melo
Víctor Ulises López Martínez

Collaborators

Dan Taylor, Héctor G. Duarte Guzmán, Francisco Arenas Velasco, Hollie Bollen, Humberto García Velazco, Irma Cruz, José Luis Zendejas, Karen Liera. La Churrería, Laura Martínez, Liliana Ortiz, Norberto González, Jorge Díaz, Ramón Lara, Rancho Chavalito, Rancho Bonanza, Rancho Esperanza, Rancho Madrigal, Rancho Puntas Largas, Ramiro Duran, Roberto Hernández, Sabetty Hernández, Soporte Oceanográfico de Ensenada. Tom Biebigouser, Uri García, Grupo 3 GEO S.C.

Foundations

JiJi Foundation
International Community Foundation
The Rufford Foundation
The Nature Conservancy
San Francisco Zoo
San Diego Natural History Museum
Save the Frogs

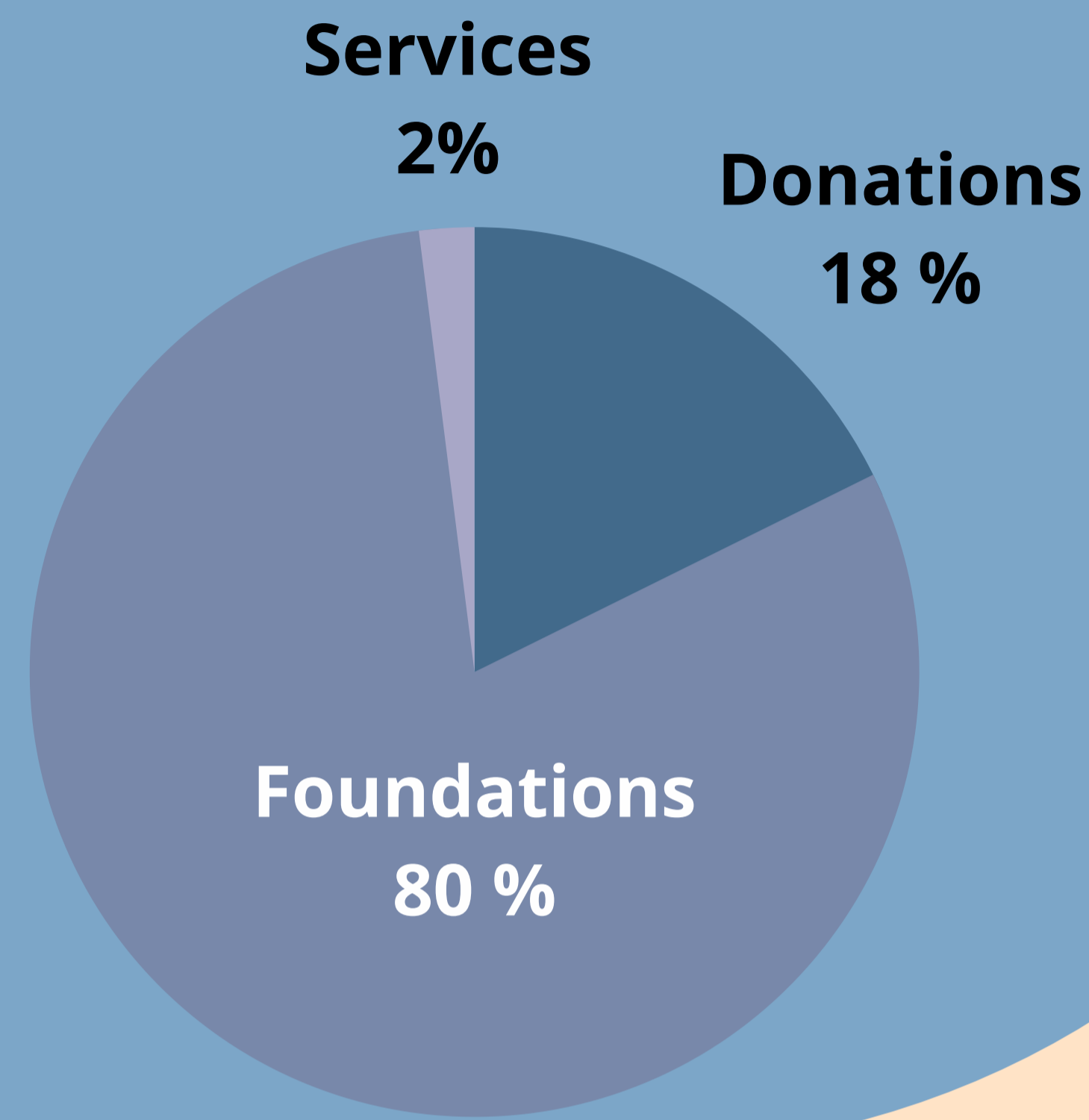
Alan Harper
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Robert Fisher
Shea Millan
Steph Lapine
Sula Vanderplank

Financial report

Incomes



Expenses

Salaries

\$44,888.99 (43 %)

Operational expenses

\$19,555.70 (19 %)

Project expenses

\$40,907.98 (38 %)

Balance 2020

\$26,575

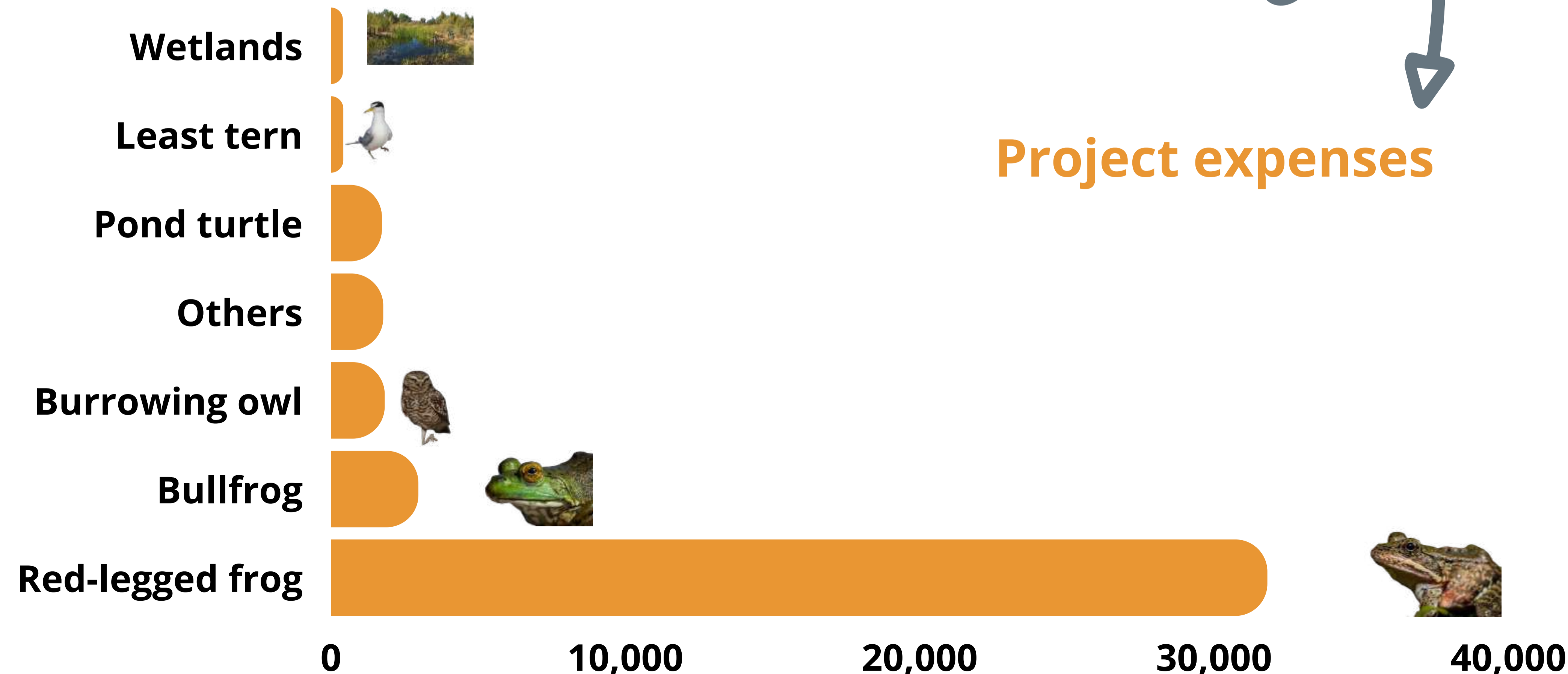
Incomes: \$108,512.07

Expenses: \$105,352.68

Balance 2021

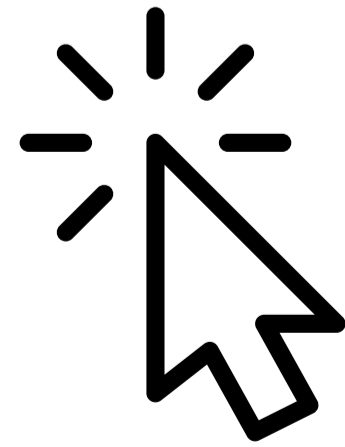
\$29,734.39

Project expenses



*From January to December 2021
Values in US dollars. Exchange rate of 20.27 pesos per dollar

Videos





Fauna del Noroeste

*Get to know us and discover how you can contribute
to the conservation of regional biodiversity*

www.faunadelnoroeste.org



In memory of
Salvador "Chava" González



May 1955 - October 2021