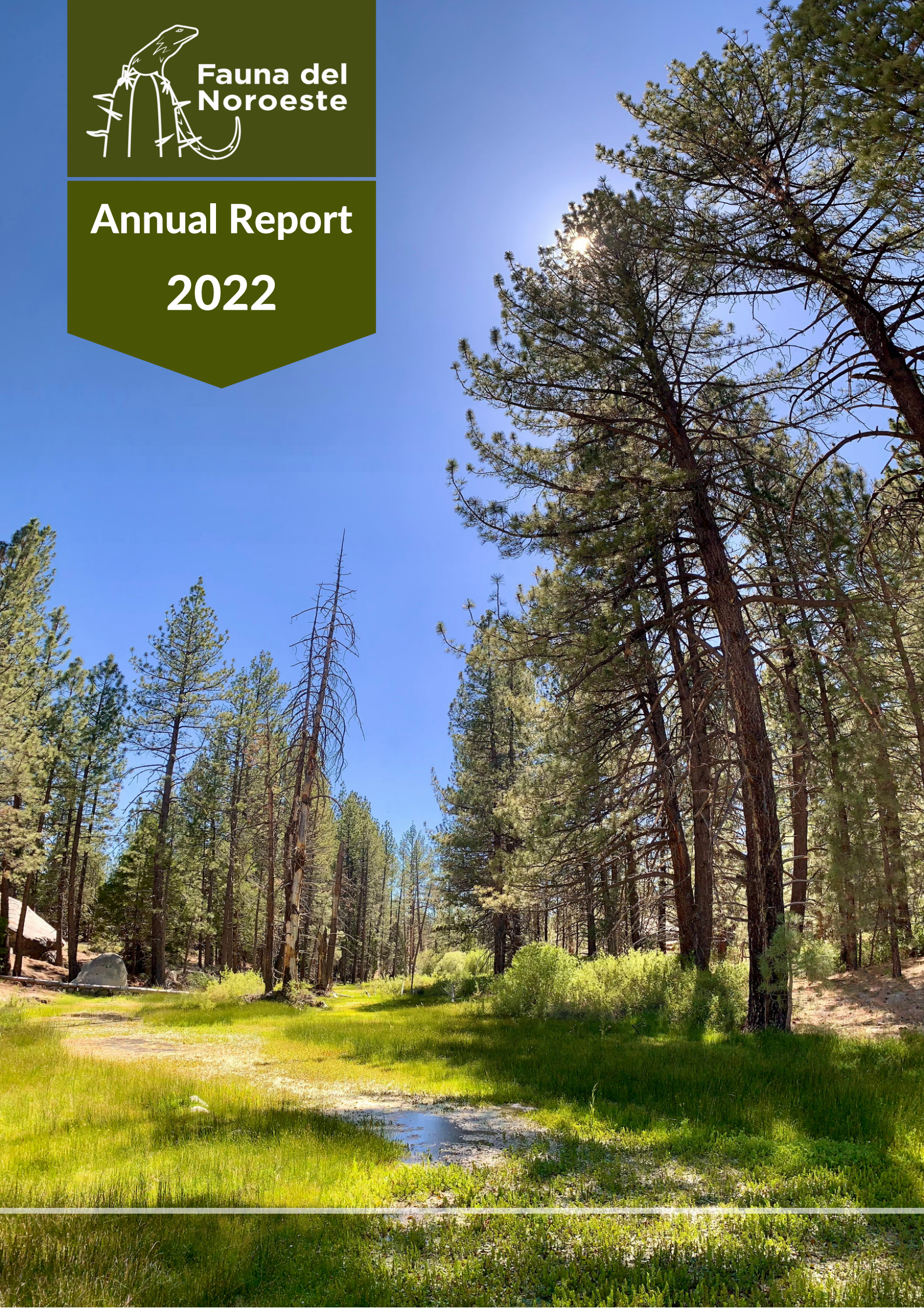




**Fauna del  
Noroeste**

**Annual Report**

**2022**



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## Message from our director

During 2022, our team was presented with new scenarios that led us to strengthen our objectives and define our mission with the species we work with and the community in which we work.

This year we can officially say it, we are achieving it, the hard work of building ponds is benefiting the amphibian populations of the region and this gives us strength to continue with what we do and pushes us to move forward.

I am deeply grateful for the support of volunteers, organizations, donors, and friends who inspire us to continue giving our all in each of our projects.

Thank you for continuing to protect our natural heritage.



**ANNY PERALTA**  
Executive Director



# Our Work

At Fauna del Noroeste we are concerned about the current situation of biodiversity and seek to diminish the threats that have led to the decline of species, focusing on those that are less charismatic and little known, but are of great value to ecosystems.

We focus on promoting the care of natural resources through scientific research, restoration, education, and collaboration. Likewise, we seek solutions to preserve the flora and fauna in northwestern Mexico through the development of scientific information and community engagement.

For this we have developed three lines of work on which we focus:



# Staff



**PhD Anny Peralta García**  
Executive Director



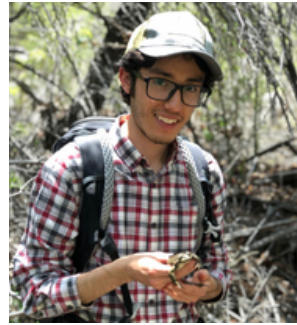
**MSc Jorge H. Valdez Villavicencio**  
Conservation Coordinator



**PhD Rafael A. Lara Resendiz**  
Research Coordinator



**Biol. Norma S. González Gutiérrez**  
Project Coordinator



**Biol. Marco E. Solís Sotelo**  
Wildlife Biologist



**Cinthia Y. Haro**  
Administrator



**Jeff Alvarez**  
The Wildlife Project



**Bradford Hollingsworth**  
San Diego Natural History  
Museum



**Richard Erickson**  
LSA Associates, Inc.



**Oscar A. Flores Villela**  
Universidad Nacional Autónoma  
de México



**Sula Vanderplank**  
Suva Research



**Elia Benítez**  
El Nido Workshop



# Executive Board

# Baja California Wetlands

About 80% of the freshwater wetlands in Baja California have been lost. Of those that still exist, most contain exotic species.

These habitats are home to countless species, particularly amphibians, which need these places to reproduce and lay their eggs.

In 2018, we started the restoration and creation of these habitats. Our main objective is to avoid the extirpation of species at risk (e.g., *Rana draytonii*) by creating and restoring ponds, and providing breeding habitats for this frog and native wildlife. To date, we have constructed eight pools that serve as habitat for different water-dependent species.



**Cuatro Milpas**



**Arroyo San Rafael**



Once the pools are built, the only thing left to do is to wait for nature to take its course. Insects are the first to arrive, mosquitoes, dragonflies, butterflies and bees are seen nearby indicating ecological succession. Soon after, algae and cyanobacteria nourish the water giving way for aquatic plants to develop on the banks. Within a year, riparian vegetation finds its way in and makes the pond a site where wildlife benefits.



Visitors to our pools captured on camera traps

★ Sierra Juárez



★★ Rancho Meling



Rancho El Potrero



We point out their importance

We encourage users to support

### Refugio de anfibios

Esta poza provee hábitat para la puesta de huevos y el desarrollo de los renacuajos. También provee zonas de refugio y alimentación en sus primeras etapas de crecimiento, hasta que puedan migrar al arroyo y a otros hábitats cercanos.

HÁBITAT	ALIMENTACIÓN	REPRODUCCIÓN
Las pozas brindan áreas de alimento y descanso a innumerables especies.	Los insectos proveen alimento a los anfibios y aves nativas. Además ayudan a mejorar la calidad del agua.	Los anfibios utilizan la vegetación o ramitas en zonas poco profundas para poner sus huevos.

A lo largo del año la poza tiene niveles de agua cambiantes, lo que permite la visita de diversas especies para su alimentación, reproducción y descanso.

¿CÓMO AYUDAR?

**naturalista**

REGISTRA LAS ESPECIES QUE OBSERVES

- NO ARRANCAR PLANTAS, PIEDRAS O MUESTRAS
- NO USAR NIABOS, NIABOS, NIABOS NIABOS

Considera apoyar la conservación de esta poza de anfibios y recuerda que cada día tomamos decisiones que impactan a la naturaleza, por favor decide sabiamente.

## Informative signs

We indicate the species present

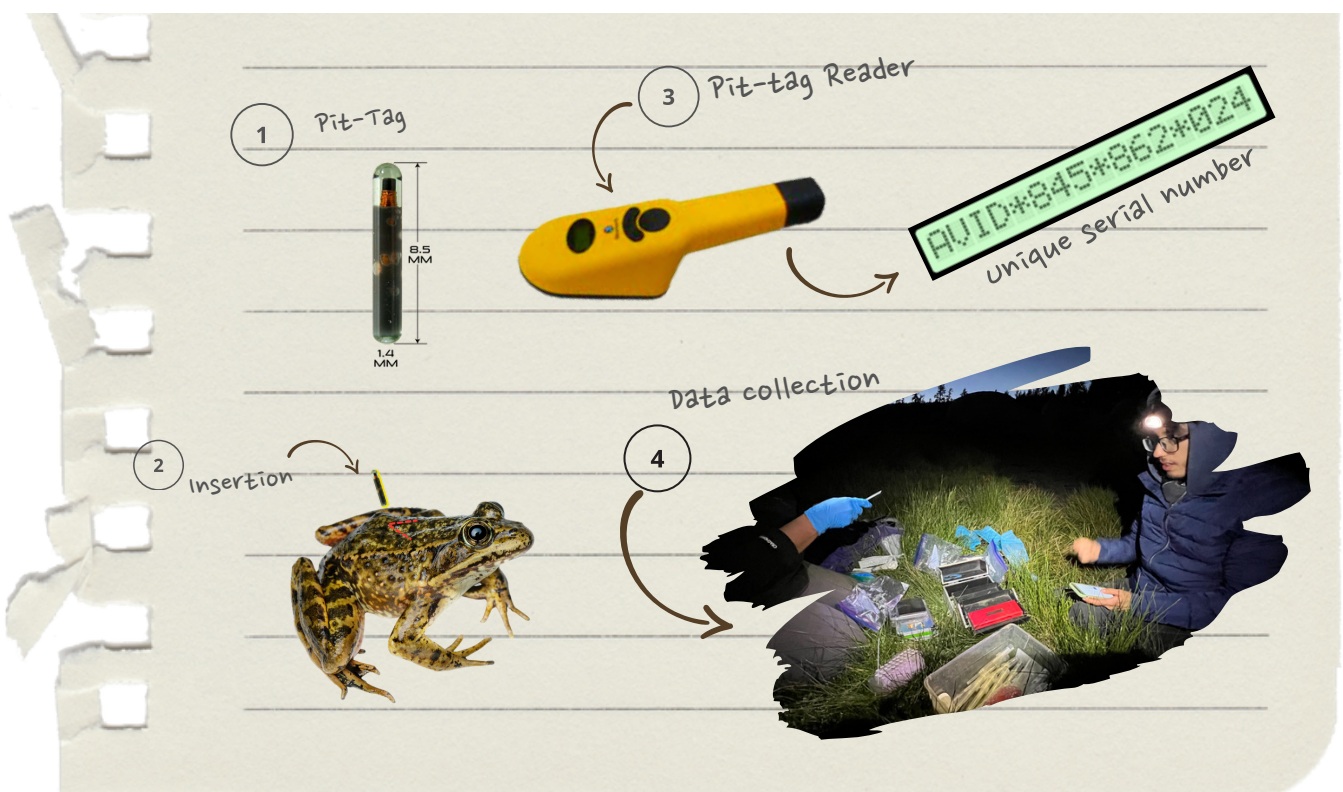
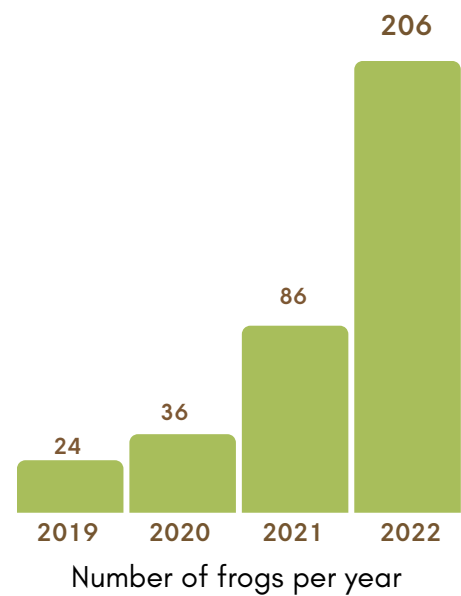


# Preserving the California Red-legged Frog



We are currently monitoring California red-legged frog populations at four sites: Arroyo San Rafael, Rancho Meling, Rancho El Potrero, and La Grulla. We use pit-tags, which are microchips with a unique code that allow us to locate a particular individual in the population and collect information on its growth.

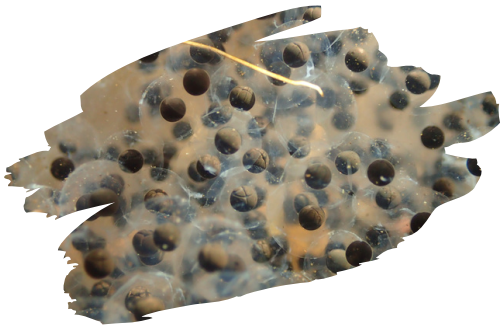
As a result, once monitoring begins from April to June, we are able to count individuals and perform analyses that estimate population size through the capture-recapture method. Over the years, a considerable increase in the population of red-legged frogs at Rancho Meling has been observed, from 24 frogs in 2019 to 206 in 2022.



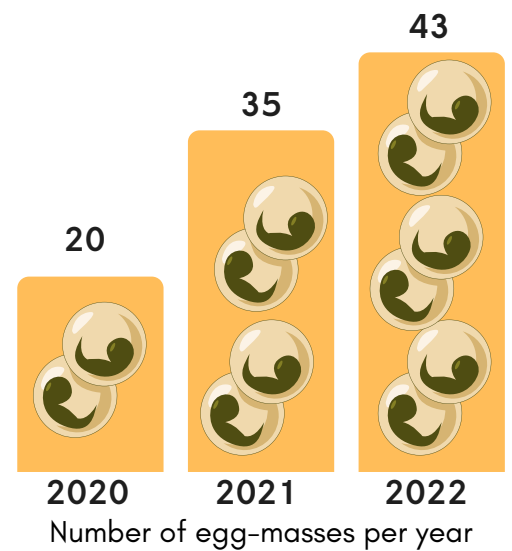




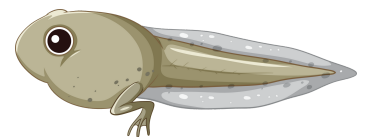
Another activity we carry out is the maintenance of the ponds where the frogs reproduce. Over time, the cattail grows exponentially, and the ponds become saturated with this plant, which can dry them out. For this reason, removing about 80% of the plants each year is necessary to keep the ponds in better shape and functional for the frogs. This can only be achieved by hard-working and enthusiastic volunteers.



Thanks to this, the ponds are ready to be used by red-legged frogs to lay their eggs. The efforts have paid off, as we have seen the egg masses double since we started these actions.

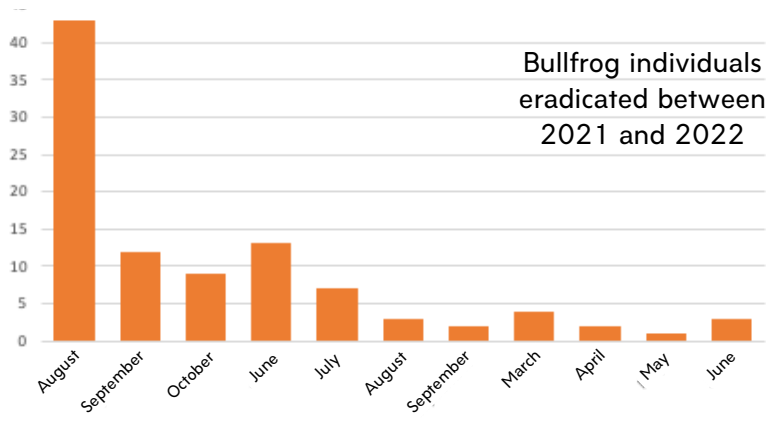


In 2022, nine egg masses were taken from Meling Ranch, brought to California, where they were cared for until 2,464 little tadpoles were released, returning to their home where they used to live 20 years ago.



## Bullfrog Control and Eradication

In 2022 we completed the eradication project in the town of La Misión and Rancho El Salto, where we were able to remove more than 125 individuals. This will allow native species to recover. There are still several sites in Baja California that need eradication actions, so we will be looking for funding to continue with these actions.



## Caring for the Least Tern



We continue to collaborate with Pro Esteros to conserve the least tern (*Sternula antillarum*) in the Punta Banda estuary located in Ensenada, Baja California. This year the activities were based on cleaning the nesting area and monitoring.

Four tons of garbage and exotic vegetation were removed, which allowed the nesting area to be expanded. In 2022, more than 60 nests were counted, 39% of which reached fledging age. We will continue to work collaboratively to reduce threats and increase the nesting area in order to achieve greater reproductive success.



## Western Pond Turtles

Due to the lack of knowledge of the southwestern pond turtle (*Actinemys pallida*) in northwestern Baja California, we undertook the task of conducting population studies and thus prioritizing sites in need of management and conservation. We visited 26 localities and found them present in 20 of these sites.

Although in several sites the populations seem to be stable, they still present several threats such as cattle grazing, excessive water extraction and the presence of invasive species.



## Herpetofauna of San Quintín

One of our projects that emerged from the collaboration was the monitoring of the herpetofauna of San Quintín Bay, Baja California. Together with the San Diego Natural History Museum, Terra Peninsular, and volunteers, the Fauna del Noroeste team visited the Monte Ceniza and Punta Mazo reserves with the purpose of learning about the amphibian and reptile species present in these conservation areas.



A total of **448 individuals** of 17 species were recorded, including the common side-blotched lizard (*Uta stansburiana*), the western patch-nosed snake (*Salvadora hexalepis*), the Baja California whiptail (*Aspidoscelis labialis*) and the western blind snake (*Rena humilis*).

## Salvador "Chava" González Research Grant

On May 20 we launched the first call where we invited students and young researchers from the Baja California and Baja California Sur community to apply for a \$10,000 pesos scholarship. This scholarship is dedicated in honor of Salvador "Chava" González, a researcher, colleague, and friend who dedicated his life to the study of birds in the northwestern region of Mexico.

Daniela Valdez Gámez was the winner of the grant to support her project "Conservation Ecology of *Charadrius wilsonia beldingi* in Northwestern Mexico." Sampling has already started and we hope to have results by November 2023. Follow Daniela on her search for the Wilson's plover



**Daniela Valdez Gámez**  
@phaeton\_mich



## Rancho El Ancón, Baja California Sur



At the end of 2022, together with the San Diego Natural History Museum, we began a study of the richness and diversity of amphibians and reptiles at Rancho El Ancón located east of La Paz, Baja California Sur. To carry out this study, nine pitfall trap systems were installed, which were activate for five days every two months, until the end of the project. In addition to pitfall traps, active searches were conducted during day and night to find more species.

During the first field trip, 21 species of amphibians and reptiles were observed in the different areas of the ranch, ten of them were captured with the traps, while the rest were observed during day and night walks. Some of the species found were the Cape giant whiptail (*Aspidoscelis maximus*), the Cape striped racer (*Masticophis aurigulus*) and the zebra-tailed lizard (*Callisaurus draconoides*), among others.



## Agents of Change

In May, the "5th Camp for Change" was held, where more than 30 high school students attended workshops and activities to take care of our planet and be agents of change in our city. The organization "Agentes del Cambio" invited us to participate and encourage the new generations to carry out actions for the good of our planet.



Within the activities, the different youth teams represented various local associations including Fauna del Noroeste, who competed in different outdoor activities. On this occasion, the winning team was the Pandas who were representing Fauna del Noroeste. The victory of this team that represented us, resulted in a donation of \$5,000 pesos, which were used in conservation projects of our native fauna. Thanks for all the effort, Pandas!

## COCUY and the Western Pond Turtle



On March 18 and 19 we gave a workshop on the western pond turtle in Arroyo San Rafael. During the workshop we talked about its habitat, its importance, and the actions we carry out to protect this unique turtle in the region.

The attendees were 31 elementary students from the COCUY Montessori education school who very excitedly accompanied us to learn about this beautiful turtle. Being able to connect with them about the importance and care of native species is part of our objectives and has been a great privilege.

## Amphibian and Reptile Workshops

This year we held two amphibian and reptile workshops at Rancho Meling, Sierra San Pedro Mártir. A total of 30 attendees attended and made every moment on the field work enjoyable. We were able to observe 31 species during the April workshop and 28 species in the May workshop, including species of importance for conservation such as the arroyo toad (*Anaxyrus californicus*), the western spadefoot (*Spea hammondi*), the Baja California leopard lizard (*Gambelia copeii*), among other species.

We continue to meet people who fill us with energy and are interested in supporting our work. We hope to offer more workshops next year and share with you the fauna of our region. We are infinitely grateful to The Wildlife Project for joining us once again.



## National Geographic Internship



Marco Solis is a biology student from Mexico state, he was selected by National Geographic as one of the first recipients of the National Geographic STEM Field Assistant scholarship. Through which he was able to carry out a 10-week research stay with our director Anny Peralta, which helped him learn about the work we carry out at Fauna del Noroeste and generate communication networks with professionals in the scientific area, as well as understand the challenges faced by civil associations and conservation projects in Mexico.

Marco supported seven projects, among which is the amphibian and reptile workshop, monitoring of the red-legged frog (*R. draytonii*), monitoring of the western pond turtle (*Actinemys pallida*), among others. He met more than 30 species, generated more than 450 records for the projects, and made new friends and colleagues. Get to know more about his stay in [his blog!](#)

## Little Guardians of Islands

In September, the Fauno team gave a workshop on amphibians and reptiles to the "Little Guardians of Islands". These children who live on Isla Guadalupe visit Ensenada in the summer to get to know the nature of the city and its surroundings. We were invited by our colleagues from Conservación de Islas, who coordinate these activities. For this, we took the children to Rancho Las Águilas, south of Ensenada on the Santo Tomás stream. After a brief chat we explored the surroundings in search of reptiles and amphibians. We observe the western pond turtle, the Baja California chorus frog and several species of lizards, among other amazing animals.



## iNaturalist Training Workshops

We continue to collaborate with CONABIO to give workshops about the citizen science platform iNaturalist. This year we gave nine workshops, to a total of 155 people, in which we discussed not only the use of the application but also its importance to the scientific community.

## Talking About Invasive Species

We gave talks about the knowledge of exotic species to young people from the CECyTE high school located in La Misión, Baja California. La Misión is a site that hosts a population of bullfrog, an exotic species categorized as one of the 100 worst invasive alien species according to the IUCN. Our objective is that students can recognize the exotic species that surround them, understand how they affect us and avoid being dispersers of them.



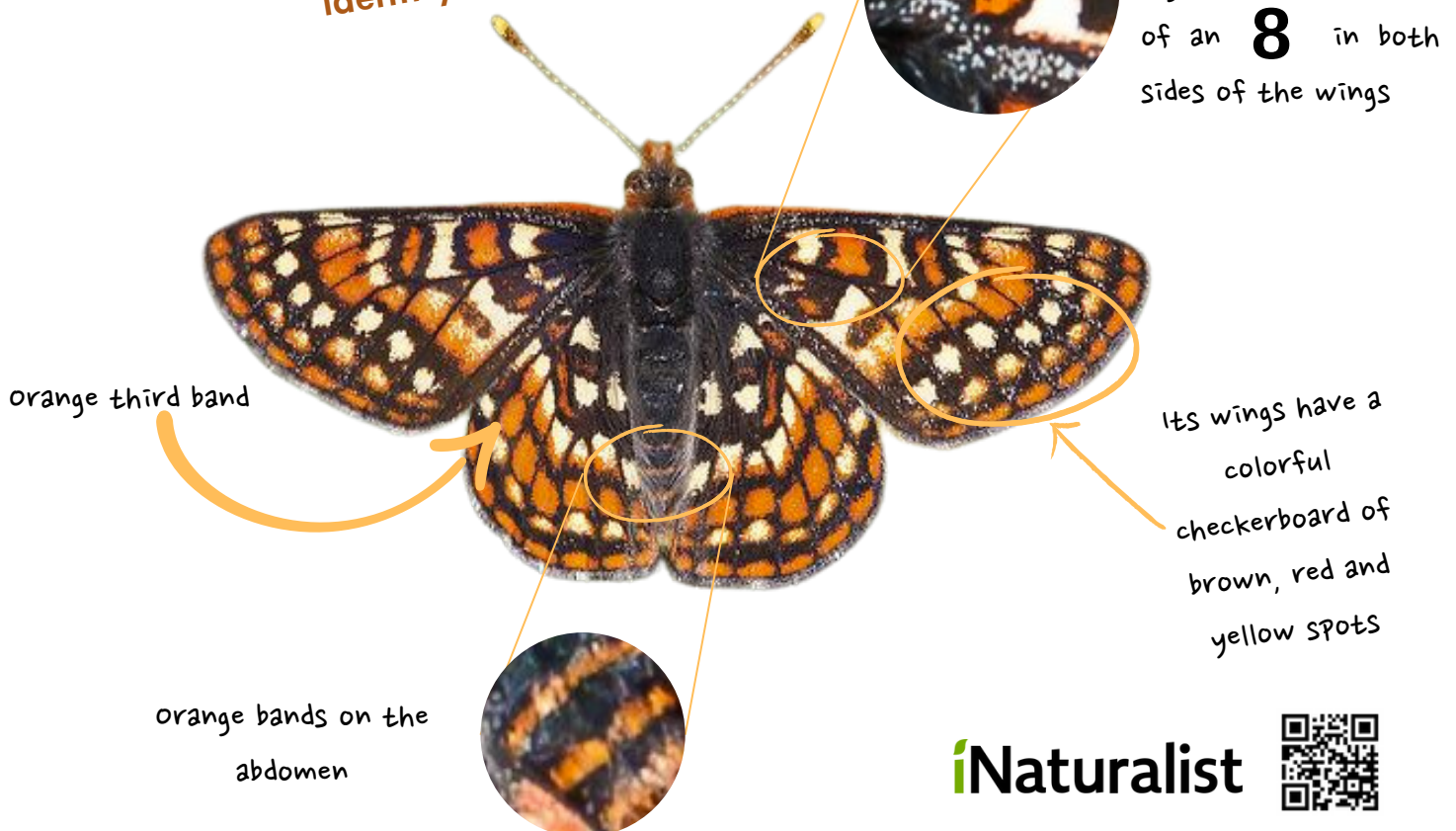
# The Quino Checkerspot, Have You Seen It?

In November the team visited the facilities of the US Fish and Wildlife Service to present an exam where they tested our abilities to identify the Quino Checkerspot (*Euphydryas editha quino*). This species is protected and endangered in the United States, with an unknown distribution in Mexico. To achieve this challenge, we visited the butterfly collection of the San Diego Natural History Museum where we were able to observe the species that share habitat with the Quino Checkerspot and many specimens of the species to learn about their particular characteristics.

It is worth mentioning that for months we studied for this exam where we identified more than 30 species of butterflies. Fortunately, two of our staff passed the exam, which allows us to request funds to work with the species in Mexico. We are looking forward to working with this little-known species.



If you see it, report it, here are some key characteristics to identify it:



REGISTER THE SPECIES YOU OBSERVE



# We Got to the Front Page!



This year we made our first appearance in the local newspaper "El Vigía", the first note talks about the first amphibian refuge in our city thanks to our friends from Fundación Aportemos A. C. The second and last note was dedicated to the tire sculpture of a frog which was placed in the pavilion of the main Boulevard in front of Social, Civic and Cultural Center, Riviera of Ensenada, with the aim of letting people know which are the local species that need our protection and care. We hope to arouse the curiosity of local readers and thus involve them in caring for our local diversity. We thank Jorge Soto for his valuable collaboration as creator of this beautiful sculpture.

- **Instalan primera Poza para proteger anfibios**

By Gerardo Sanchez

- **La rana de patas rojas**

By Norma González

- **Colocaron escultura de "Rana de patas rojas"**

By Karla Padilla



# Scientific Publications

- *Bipes biporus* (Five-toed worm lizard). Catalogue of American Amphibian and Reptiles.
- New highest elevation records of two Mexican endemic spiny lizards: *Sceloporus megalepidurus* and *Sceloporus spinosus* (Squamata: Phrynosomatidae). Revista Latinoamericana de Herpetología.
- First record of leucism on California red-legged frog (*Rana draytonii*). Natural History Note.
- Prolapsed hemipenis in an adult Baja California Coachwip (*Masticophis fuliginosus*) in the Sierra San Pedro Mártir, Baja California, México. Natural History Note.
- *Indotylops braminus* (Typhlopidae) en el noroeste de Baja California, México. Revista Latinoamericana de Herpetología.
- Taking the Leap: A Binational Translocation Effort to Close the 420-Km Gap in the Baja California Lineage of the California Red-Legged Frog (*Rana draytonii*). Frontiers on Conservation Science.
- Exceptional parallelisms characterize the evolutionary transition to live birth in phrynosomatid lizards. Nature Communications.
- Amphibians and reptiles of Rancho Las Playitas area, Sonora, Mexico. Sonoran Herpetologist.
- High fungal pathogen loads and prevalence in Baja California amphibian communities: the importance of species, elevation, and historical context. Global Ecology and Conservation. Global Ecology and Conservation.

# Human Resources

## Internships

Brayan Enrique León Serrano

Elisa Luna Zúñiga

Lizbeth Gutiérrez Vargas

Marco Eduardo Solis Sotelo



# Volunteers

Alan Alexandro Alanis Gómez  
Alvaro San José  
Andrea Gomez Bernal  
Angela Tamayo  
Arturo Yoshizada Morales Zayas  
Brayan Enrique León Serrano  
Brenda Berenice Salas Escudero  
Bryan Tamayo Estrada  
David Lopez González  
Diego Maldonado de la Torre  
Elisa Luna Zuñiga  
Esteban Andrés Esquivias Flores  
Felix Luna Delgado  
Flor Denisse Jordan Rodríguez  
Guimel Muñoz  
Heryen Judiely Collins Paredes  
Ixtlamatie Gómez  
Jesus Alonso Galindo Martínez  
Jesus Javier Gortarez Pelayo



Jimena Lopez Gonzalez  
Jose Alfredo Ceseña  
Jose Rodrigo Enciso  
Karina Hernandez  
Lizbeth Gutiérrez Vargas  
Manuel Alejandro Fernández Moreno  
María Estrada Guerrero  
María Fernanda Ramos Betancourt  
Mayra Lorena Flores Cota  
Miguel de la Mora  
Nicodemo Gonzalez  
Pablo Tena  
Santiago Valdez Peralta  
Sebastian Rodríguez Govea  
Stefanny Villagomez  
Susana Guevara Castillo  
Tamara Abigail Loredo Arce  
Tonatuih Gaona Melo  
Victor Ulises López

# Collaborators

Andrea Adams (UC Santa Barbara)  
Clark Wilchell (U.S. Fish and Wildlife Service)  
CONABIO  
Hans Sin  
Hiram Moreno Higareda  
Michael Jones (American Turtle Observatory)  
Pro Esteros, A. C.  
Pronatura Noroeste, A. C.  
San Diego Natural History Museum  
Save The Frogs  
Terra Peninsular, A.C.  
Jeff A. Alvarez (The Wildlife Project)  
Susan North (The Nature Conservancy)  
Tom Akre (Smithsonian Conservation Ecology Center)  
Tom Biebighauser (Wetland Restoration and Training LLC)  
U.S. Geological Survey

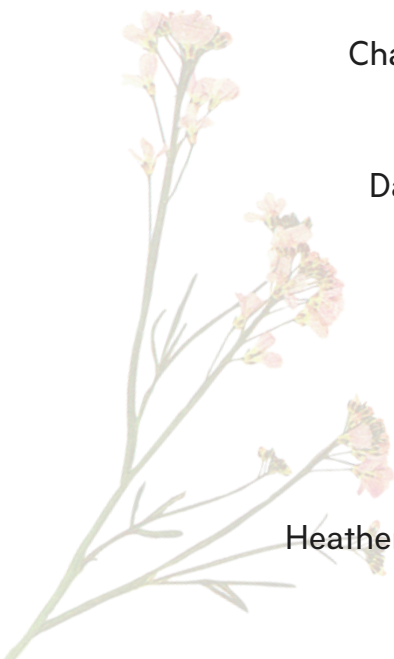


## Donor foundations

The Nature Conservancy  
San Francisco Zoo  
International Community Foundation  
National Geographic Society  
Sonoran Joint Venture

# Donors

Alan Harper  
Alexandra Villegas  
Ana Verschoor  
Andrew Forde  
Bill and Mary Clark  
Bill Levine  
Brad Hollingsworth  
Carlos Alvarado  
Casey Richart  
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Dale Powell  
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Dean Leavitt  
Drew Talley  
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Elizabeth Lopez  
Emilio Saturno  
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Maggie Nunez  
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Mark Macias  
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Michael Scaffidi  
Mira Falicki  
Nicolette Murphey  
Pamela Nelson  
Patricia de Lourdes Frias Alvarez  
Richard Falcon  
Richard Spotts  
Samantha Brown  
Sarah Foster  
Sophie Siegel  
Sula Vanderplank  
Tanner Lichty  
Toma Akre  
Transportes In Ramirez



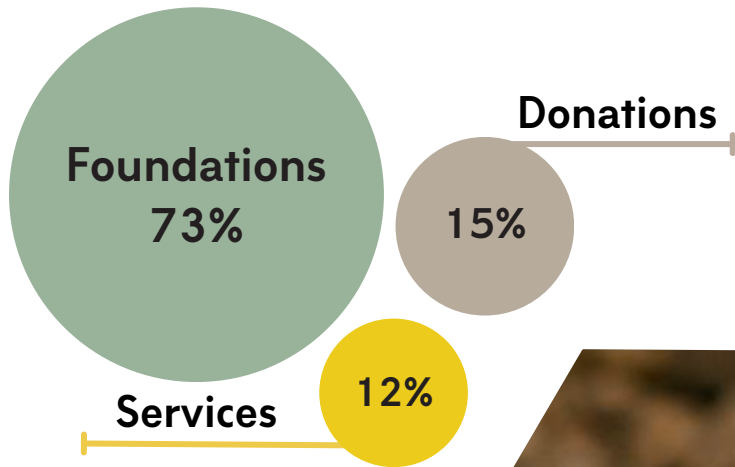
*Thank  
You*

# Financial Report

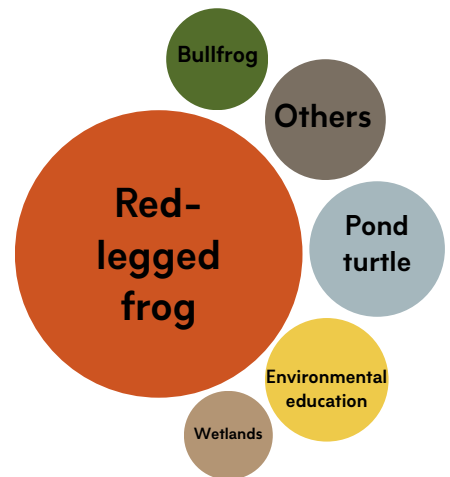
In Mexican pesos

**Balance 2021**  
**\$482,558**

**Income \$2,573,925**



**Expenses**  
**\$2,747,512**



**2022 Balance \$308,972**

# ¿Do you want to support our work?

Get your membership, buy our merchandise or make a donation!

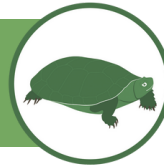
Golden eagle



California vole



Pond turtle



Desert pupfish



Bumblebee



Your contributions will benefit regional wildlife



# Fauna del Noroeste

*Protecting native wildlife, and their habitats*

[www.faunadelnoroeste.org](http://www.faunadelnoroeste.org)

