

# ANNUAL REPORT

## 2018



**Fauna del  
Noroeste**

*"Research for conservation"*



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## MESSAGE FROM OUR EXECUTIVE DIRECTOR

2018 was an extraordinary year for our organization. We started and successfully completed two pilot projects that will allow us to conserve the native fauna of our region. At the same time, we made new friends and colleagues, establishing new collaborations that will allow us to develop better management plans in different regions. We also continue our own education in different areas; attending trainings and workshops that allow us to obtain better results. We learned, we grew, and we generated great plans. This 2019 will be a great challenge in all aspects, but we will continue to work hard and we are sure that with the help of the community that loves and enjoys biodiversity, we will continue to take action in favor of conservation.

Thank you for a great year, and we hope that 2019 will be a year full of challenges, learning and successes for the conservation of our biodiversity.

A handwritten signature in black ink, appearing to read 'A. Peralta García'.

Dr. Anny Peralta García  
Executive director

# Our Team

**M.S. Edith Andrea  
Navarro Tiznado**

**Biologist, wife and Coordinator  
of Restoration and Conservation**

**Biol. Norma Selene  
González Gutiérrez**

**proactive spark and  
Project auxiliar**

**M.S. Jorge H.  
Valdez Villavicencio**  
Father,  
reptile lover and Research  
Coordinator

**Dr. Anny Peralta García**

**Mom, amphibian lover,  
Nat-Geo explorer and  
Executive director**

**M.S. Salvador  
González Guzmán**

**Biologist, birds lover and  
Project auxiliar**

# Board Members



**Jeff  
Alvarez**



**Bradford  
Hollingsworth**



**Sula  
Vanderplank**



**Richard  
Erickson**



**Oscar  
Flores Villela**





## Mission

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

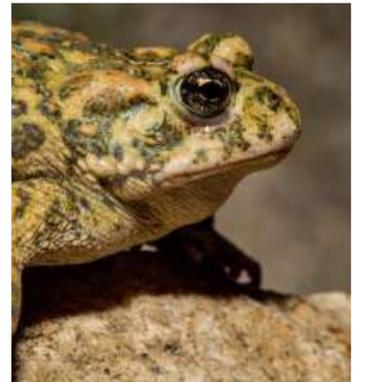
## Strategic programs

We focus our actions on groups of animals that are less charismatic and not well known, such as amphibians, reptiles, small rodents, land birds and arthropods. In light of the scarcity of studies in these taxa, this information is important and necessary to promote conservation actions, and therefore we have created the following strategic lines:

### Research

### Restoration and conservation

### Education



## Conservation status of at-risk species in the San Quintín Valley, Baja California

For this project, we were in charge of surveying two species: The Baja California legless lizard (*Anniella geronimensis*) and the Baja California Whiptail Lizard (*Aspidoscelis labialis*). There are historical records of the presence of these two species of lizards in the San Quintín Valley, but current status is unknown. We conducted surveys between March and September in search of these two species.

We found that both *Anniella geronimensis* and *Aspidoscelis labialis* are still present in some localities, although in low abundance.

Fortunately, two of these locations: Punta Mazo and Valle Tranquilo are natural reserves dedicated to the conservation of the biodiversity, and maintained by Terra Peninsular, which will help to maintain the populations of these endemic lizards



## Monitoring of the herpetofauna in the Colorado River Delta



This project was carried out in collaboration with Pronatura Noroeste to establish a baseline for amphibians and reptiles in the Colorado River Delta, and determine the herpetofauna response to restoration actions in the Delta. Monitoring was carried out in restored and unrestored sites to compare species richness among sites. To date, 18 species of amphibians and reptiles have been recorded. Preliminary results show greater species richness in restored sites.

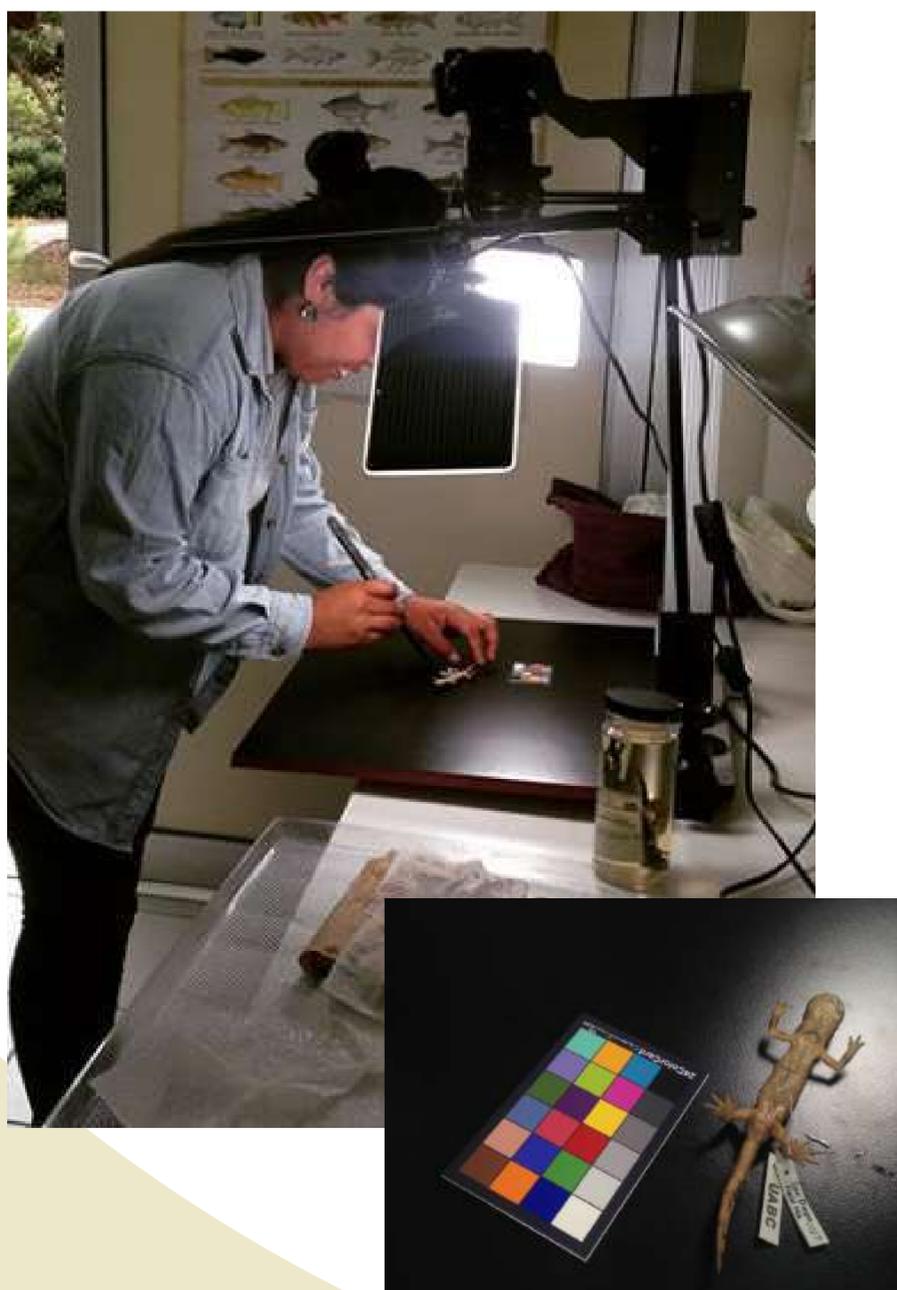
Unfortunately, some species considered at risk and possibly extirpated have not been detected. In the coming year we will carry out the last survey, and with the results obtained we will propose conservation actions and future monitoring to identify the response of this group of animals to the restoration efforts in the area.

## Herpetofauna of Estero de Punta Banda, Ensenada

This project, in collaboration with Pro Esteros and the Herpetology Club from the Universidad Autónoma de Baja California (UABC), was carried out with the purpose of building understanding of the richness of amphibians and reptiles in the Punta Banda Estuary, a Ramsar site of importance for the conservation of biodiversity. By surveying and searching for records in databases, 21 species of amphibians and reptiles were recorder, of which 8 are in at least one category of protection. The results of this project represent the first formal study of the herpetofauna in this locality and included an updated species list. Currently there are plans to continue surveying in 2019 to detect other species not yet recorder.



## Digitization of the UABC herpetological collection



The UABC Herpetological Collection, with more than 2,000 specimens, has served as support for research, thesis projects, and has received several visits from national and foreign herpetologists for the consultation of specimens since 1989. In 2018 Fauna del Noroeste began a collaboration with the San Diego Natural History Museum and Dr. Gorgonio Ruiz Campos to digitize specimens using high-resolution photographs. These photographs, along with their database, will form part of the Atlas of Amphibians and Reptiles of Peninsular California that will allow free access to the scientific community, students and the general public (<http://herpatlas.sdnhm.org>). In total, just over 1,000 specimens have been photographed, which may serve as a reference for consultation along with associated information about their collection.

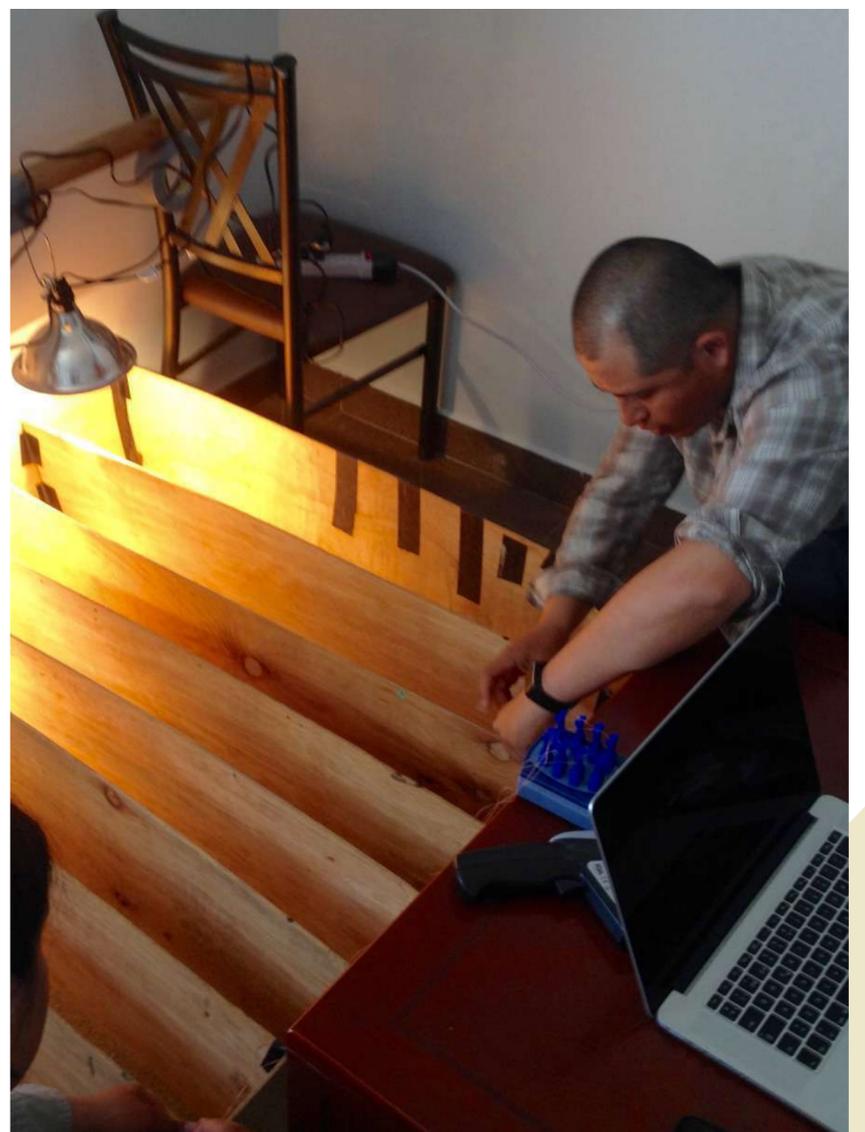
## Current distribution of California Vole in Baja California



This project began at the end of 2016, in joint collaboration with Alan Harper (Terra Peninsular, A.C.), Chris Conroy (UC Berkeley) and Scott Tremor (SDNHM) with the goal of identifying current populations and threats of this little-known rodent in Mexico. In 2018 we concluded field surveys efforts and visited historical sites. Of the 30 sites visited, presence of the California vole was detected in only 23% of the localities possibly due to: habitat alteration; habitat lost; and/or there is a relatively recent lack of water, which is very important for the presence of this species. These survey results will allow us to properly focus conservation actions toward the preservation of this rodent species.

## Effect of climate change on reptiles in northwestern Mexico

This project led by CIBNOR is a collaboration with UNAM, Fauna del Noroeste, and students of different academic degrees. The focus of this project aims to understand aspects of thermal ecology of different species of lizards in various environments of northwestern Mexico; to assess vulnerability to climate change; and seek management strategies to help conserve these species and their habitats. In the first year of this project, different locations were visited in the states of Baja California, Baja California Sur and Sonora. In 2018, the fieldwork was completed and the data analysis process began. In 2019 it will be possible to evaluate which species are the most threatened by climate change and thus propose mitigation and conservation measures.





## American Bullfrog



**W**We are working in favor of biodiversity conservation, starting with the elimination of threats that affect native wildlife. **One of the most important threats are exotic species**, such as the American bullfrog (*Lithobates catesbeianus*), an invasive species catalogued as a priority in Mexico in terms of control or eradication.



"Implementation of restoration actions is necessary to stop biodiversity loss"

## control plan

In 2018 we initiated a bullfrog control program, which seeks long-term restoration of wetlands in the Mediterranean region of Baja California. For the first stage of the project we determined the distribution of bullfrogs in the Mediterranean region of Baja California. Ten field trips were carried out, and included day and night surveys, taking the physical-chemical parameters of the water, characteristics of the site, bullfrog abundance, and presence of other exotic species. A total of 18 sites were sampled, with 13 of those sites having confirmed presence of the species.

After this effort, it is possible to determine the extent of the bullfrog in the Mediterranean region, and to determine the best pilot eradication site, as well as to produce environmental education material to support such actions.



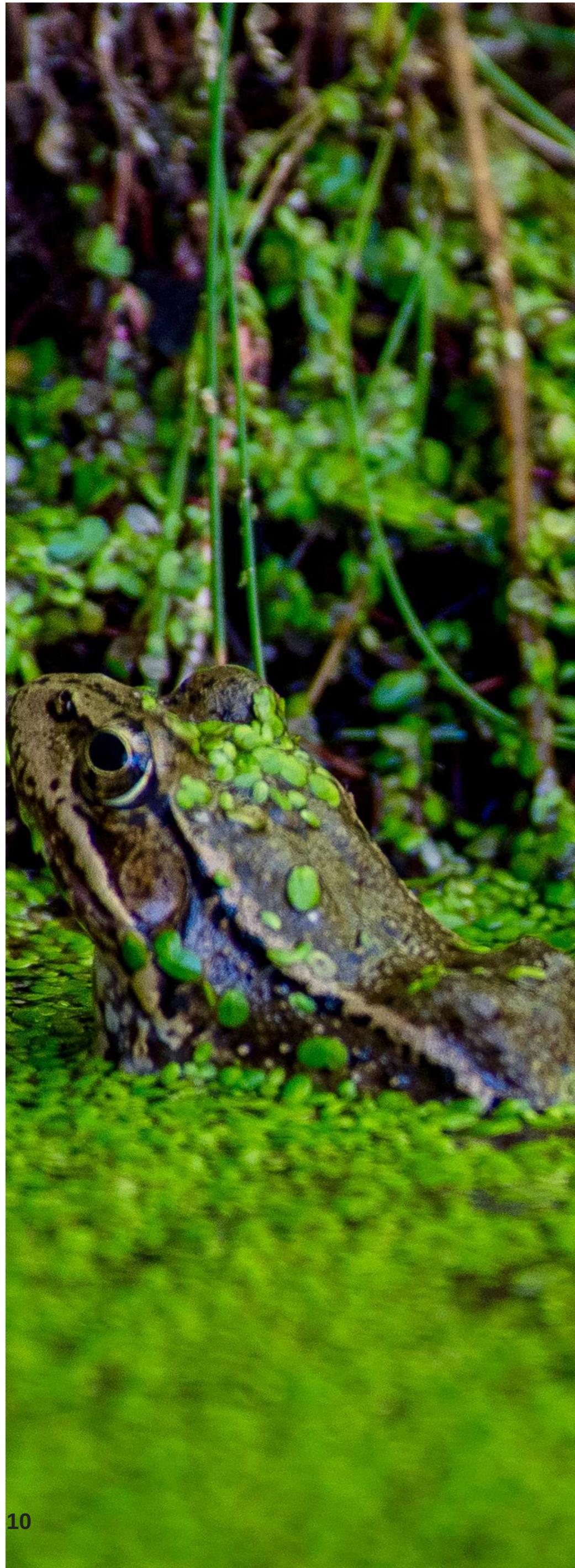
"Bullfrog was registered in **72%** of visited sites"



# California Red-legged Frog



We are currently working on the first stage of the California Red-legged Frog (*Rana draytonii*) Recovery Plan in Baja California. This project aims to recover the species in the long term, by recovering its populations, restoring its habitat, and reintroducing it to sites where it has been extirpated.



# Recovery Plan



The first stage of this plan began with the creation of breeding habitat for this species.

We constructed two ponds at Rancho Meling, Sierra San Pedro Mártir, and two other existing ponds were rehabilitated, one in Rancho El Potrero and another in Rancho Meling itself.



In 2019 monitoring of these sites will be carried out, and we will continue to work with the recovery plan of the species. The next step is to replicate the efforts made in other sites where there are populations of *Rana draytonii* with the same reproductive habitat needs, and where our intervention is important to maintain the populations and prevent their extirpation.



## **1st Amphibian and reptile natural history workshop**

The first amphibian and reptile natural history workshop was held at Rancho Meling, Sierra San Pedro Mártir, from March 6th to 9th, 2018. We were able to take advantage of the diversity of wild fauna and flora in the northwest of Baja California to find and identify amphibians and reptiles in their natural environment.

This workshop was attended by 10 participants, both professionals and nature-observation enthusiasts. As part of the activities, different methods of searching for amphibians and reptiles were put into practice in order to observe as many species as possible. Other locations such as Rancho El Potrero and Rancho El Coyote were also visited. We observed 20 species of amphibians and reptiles including frogs, toads, turtles, lizards, and snakes, all native to the region. We hope to continue each year with this workshop and that we can share experiences in the observation of amphibians and reptiles in this wonderful region of Baja California.



## Border Bioblitz

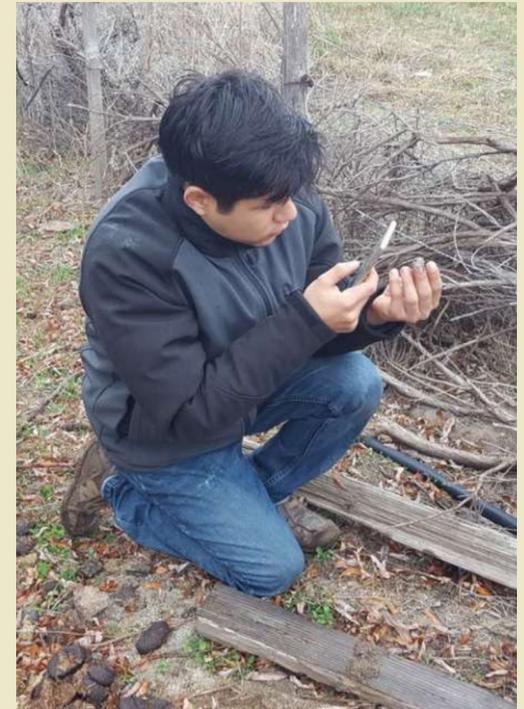
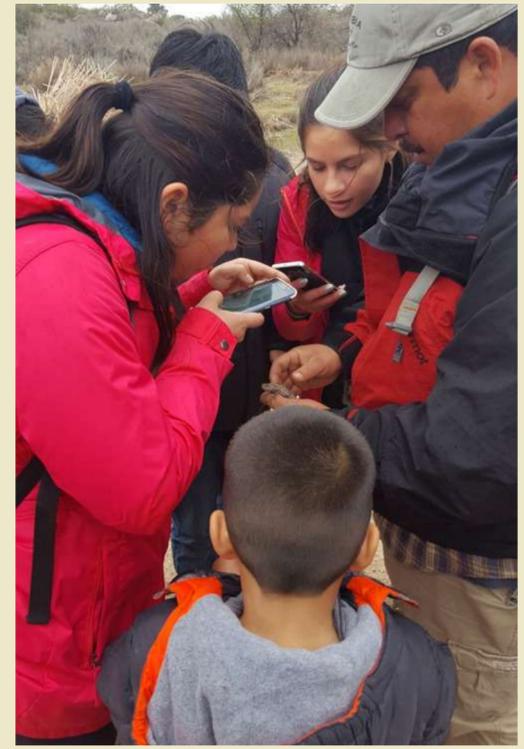
In March 2018 we participated in Border Bioblitz, led by Next Generation of Sonoran Desert Researchers (N-Gen), along with 16 other participating organizations. The project was carried out with the purpose of gathering information to fill the data gaps on biodiversity in the U.S.-Mexico border area to support future research. In our case, together with the UABC Herpetology Club, we focused on the locality of Ciénega Redonda and surroundings, in the municipality of Tecate, where 12 people participated in order to document the biodiversity of the area.

In total, we made 262 observations of plants and animals, which were incorporated into the iNaturalist platform. To date, 2,750 individual observations were made of 876 species. To learn more about this project and the results, visit: [nextgensd.com/border/bioblitz](http://nextgensd.com/border/bioblitz) where you can consult the project report.

## Course-workshop "Lizards as a model of study in the face of climate change".

From April 13th to 15th, 2018, at the Punta Mazo Natural Reserve in the Bay of San Quintín, Baja California, this course-workshop was held with the purpose of updating students and professionals on the causes and effects of climate change on this group of reptiles. This workshop, which is a part of the project "Effect of climate change on reptiles in northwestern Mexico: conservation and mitigation measures", is conducted in collaboration with and is funded by CONACYT.

It was attended by 23 participants: students from different universities in northwestern Mexico, as well as professionals. The workshop was taught by different researchers from UNAM, CIBNOR and FAUNO, where different topics on herpetology, thermal ecology, and natural history of lizards were given. In addition, field work was carried out within the reserve to put the theory into practice. Finally the importance of thermal ecophysiology studies was discussed, where field and laboratory data are required to evaluate the vulnerability of this group of reptiles.



## Theatre play "Anecdotes of a Red-legged Frog".

This project was conceived by biology students with the goal of presenting to the community in a simple and easily assimilated way, the importance of native species and their conservation, utilizing a species native to the region.

The main protagonist is a Red-legged Frog, which is currently experiencing conservation problems. The script explains its importance as a species and the current problems to which it is exposed due to the introduction of exotic species such as the bullfrog.

This work was presented during the Biodiversity Day held at the Museo de Ciencias Caracol in the city of Ensenada, where nearly 120 people of different ages attended, and we are looking for new spaces for its presentation in 2019.



## Workshops on the use of the iNaturalist platform



Citizen Science refers to the voluntary participation of non-scientist in activities that help generate scientific knowledge. Today, society in general has taken a greater interest in citizen science by increasing its participation through different media, and information and communication technologies. Such is the case with the iNaturalist citizen science platform, which is an initiative promoted and coordinated by the National Commission for the Knowledge and Use of Biodiversity (CONABIO).

At the end of 2016 we began collaborating with CONABIO to offer workshops on the use of the iNaturalist platform in the states of Baja California and Baja California Sur. In 2018, we offered seven workshops in three municipalities in the state of Baja California: Mexicali, Tecate, and Ensenada. A total of 101 people attended the workshops and a contribution of 2,381 biodiversity observations were added on this platform. We will continue to give workshops and promote citizen science in the region.

# Environmental education material



At the end of 2018 we develop and set up signs related to Bullfrog effects. The first was placed in Rancho el Madrigal located in the city of Ensenada and the second in Ciénega Redonda, Tecate. The signs help the community to understand the role and significance of this species, its effect on the environment, and recommendations to avoid its dispersion. Additionally, we encourage the community to report observations of the species to FAUNO or report it through iNaturalist. Each sign also points out that the bullfrog is an exotic species that is found in the region and can cause much damage to the environment and our biodiversity. In 2019 we plan to continue placing signs in other towns of Ensenada.

## Earth Day and Biodiversity Day

Within the festivities of Earth Day on April 22 and Biodiversity Day on May 26, in collaboration with the UABC Herpetology Club, we carried out various activities on the importance of amphibians and reptiles in the region. These events took place at the Museo de Ciencias Caracol in Ensenada, where we carried out activities aimed at children and young people, including sack races, amphibian and reptile lottery, exhibition of "Super Frogs", among other activities.



## Oral hygiene products recycling program

This year we collaborated with the UABC Herpetology Club, in which through a recycling campaign in collaboration with terracycle, oral hygiene products were collected in key points of Ensenada. This project was carried out to support the UABC Herpetology Club in obtaining field material to continue with their development.

We obtained a good response from residents and collaborating institutions such as Hollie Böllen-Donuts and Coffee where they offered their facilities as collection points.



# Participation in workshops and congresses

We believe that participation in workshops and congresses is critically important, since in this way we can both learn from others and contribute our knowledge for decision making, and also disseminate the results of our projects and research to the scientific community. In 2018 we participated in various scientific workshops and congresses.

## Workshops:

- Latin American Workshop on Citizen Science for Biodiversity Conservation.
- Bullfrog Control Techniques workshop.



## Scientific congresses:

- State of Biodiversity Symposium.
- XV National Herpetology Congress.
- The Central Coast Chapter of The Wildlife Society symposium.



## Others:

- Press conference: "Confronting Climate Change: Binational Cooperation and cross-border Resources",
- VII Regional Water Forum.
- National Geographic Explorers Festival.



# Publications

This year we contributed to scientific knowledge with two scientific articles, a scientific note, and an article of scientific communication.

Earliest record of *Batrachochytrium dendrobatidis* in amphibian populations of Baja California, Mexico.

Occurrence of *Batrachochytrium dendrobatidis* in anurans of the Mediterranean region of Baja California, Mexico.

Harnessing cross-border resources to confront climate change.

Rattlesnakes: beyond the continent.



# Human resources

We like to get involved in the development of human resources and help in the training of new professionals, so we are participating in undergraduate and master's theses committees. Fauna del Noroeste also receives students who perform professional internships and social service.

## Thesis students



**Christian Valdez Ibarra**

“Thermoregulation of the legless lizard endemic *Anniella geronimensis* in San Quintin, Baja California, Mexico”



**Zhenia Sainz**

“Thermoregulation aspects in *Sceloporus vandenburgianus* of the Sierra San Pedro Mártir, Baja California, Mexico.”



**Melba Álvares Villegas**

"Impact of introduced vegetation in populations of the legeless lizard *Anniella geronimensis* in the Valley of San Quintin"

## Social service and professional practices



Darcy Silva  
Melba Álvarez  
Claudia Lizardo  
Diego Guzmán  
Adrián Garduño

Mayra Flores  
Christian Valdez Ibarra



# Volunteers

*"Thanks to all those who made every moment unforgettable, and that with their support gave us the strength to continue."*



Roberto E. Searcy Meza, Judith Pampa, Alejandro, Romero de la Mora , Ismael Plascencia Torres, Fernanda J. Manriquez Gómez, Zhenia Y. Sainz Beltrán Dolores, Elizabeth García Aviña, Cesar Alfredo Velez, Liliana Ortíz, Melissa Stepek, Dany Coles, Nicodemo González.



## **Institutions that financed our projects**

JiJi Foundation  
National Geographic Society  
Next Generation Sonoran Desert Researchers  
International Community Foundation

## **Collaborating institutions**

The Wildlife Project  
San Diego Natural History Museum: The Nat  
Centro de Investigaciones Biológicas del Noroeste S.C  
Comisión Nacional para el Conocimiento y Uso de la  
Biodiversidad  
Caracol Museo de Ciencias  
Terra Peninsular, A.C.  
Pro Esteros, A.C.  
Pronatura Noroeste, A.C.  
Club de Herpetología de la UABC  
Sonoma Mountain Preservation Foundation  
Rancho Meling  
Yagos las cruces S.P.R. de R.L.  
J.A. Soriano Fotografía

## **Donors**

Froglanders Frozen Yogurt	Nicole Parizeau
Rancho Bonanza	Tim Warfel
Jeff Alvarez	Ana Gatica Colima
Bill y Mary Clark	Cynthia Hitchcock
Jeff Wilcox	Alan Harper
Sula Vanderplank	

If you want to know more, and be part of the research and conservation actions we carry out, follow us on our social networks, visit our website, and discover how you can contribute to the conservation of regional biodiversity.

**Photographic credits:** J.A. Soriano, E. Honaw, A. Harper, J.H. Valdez, E.A. Navarro, N.S. González y A. Peralta

# Financial Report

Income and expenses of the period from January to December 2018.  
Values in US dollars\*.

\*currency rate is 18.50 pesos per dollar

## INCOME

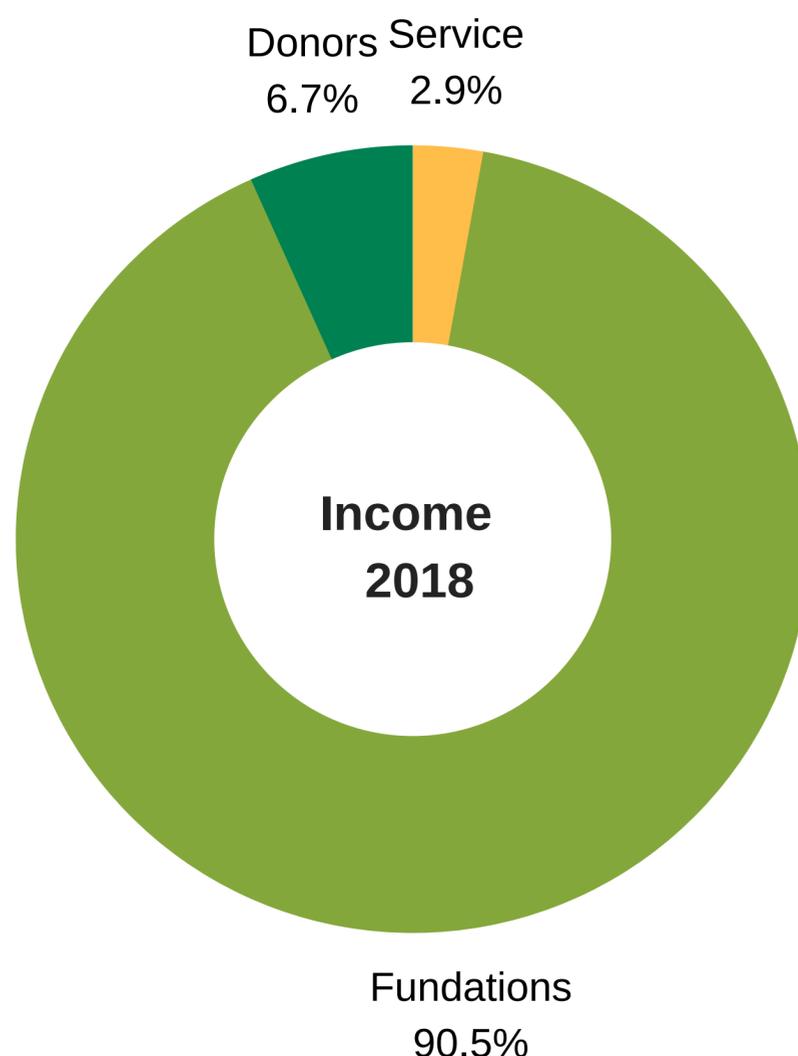
Balance 2017	\$4,036
Fundations	\$77,024
Donors	\$5,694
Services	\$2,432
<b>Total income</b>	<b>\$89,186</b>

## EXPENSES

Salaries	\$25,249
Operational expenses	\$6,118
Accounting	\$909
Training	\$1,081
Projects	\$25,437
<b>Total expenses</b>	<b>\$ 58,829</b>

## BALANCE

**\$ 30,357 dlls**



# A look at 2019...



**W**e have a great year ahead of us in 2019, we know that achieving the restoration of our ecosystems is a very big task, but we believe it is not impossible, together we can achieve great things, join our community in favor of conservation.

Our membership programs is coming this March, with it, you can more easily support and truly feel you are part of the actions to conserve our biodiversity.

We will initiate our bullfrog control plan at our pilot site, and continue building ponds for Red-legged frogs.

You can find us at the Ensenada City Nature Challenge 2019, and Border BioBlitz 2019

**And much more...**





*"Research for conservation"*

Learn more about us and  
discover how you can  
contribute to the  
conservation of regional  
biodiversity.



Visit our website and  
follow us on social media.

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