

GABRIEL ANDRADE-PONCE, PH.D.

Wildlife Postdoctoral Research Associate at Stephen F. Austin State University |
Arthur Temple College of Forestry and Agriculture, Nacogdoches, Texas, US.

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EDUCATION

2023
|
2019

Doctorate in science

Red de Biología y Conservación de Vertebrados

 Instituto de Ecología A.C., Xalapa, Mexico

- Thesis: Evaluating Carnivora mammal's agonistic interactions with co-occurrence patterns and camera traps
- CONAHCYT grant

2019
|
2017

Master of Science

Red de Biología y Conservación de Vertebrados

 Instituto de Ecología A.C., Xalapa, Mexico

- Thesis: Interaction of *Canis latrans* and *Vulpes macrotis* in the Mapimí Biosphere Reserve.
- CONAHCYT grant

2015
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2009

Bsc Biology

Biology Department

 Universidad Nacional de Colombia, Bogota, Colombia

- Thesis: Influence of an Amazonian salt marsh on the fauna richness in the middle Caquetá river basin, Colombia.

ADDITIONAL TRAINING

2024

Modeling distribution, abundance, demography and population dynamics using R, JAGS and NIMBLE

Ciudad Real, Spain

 Instituto de Investigación en Recursos Cinegéticos (CSIC-UCLM-JCCM)

- Instructors: Gurutzeta Guillera-Aroita, María Victoria Jiménez-Franco, José Jiménez, Marc Kéry, José Lahoz-Monfort and Michael Schaub
- 30 hours

Made with the R package
[pagedown](#).

The source code is available on
github.com/hstrayer/cv.

Last updated on 2024-11-27.

2020

The Data Scientists Toolbox

Online course 📍 Johns Hopkins University and offered through Coursera

- Jeff Leek Roger Peng, Brian Caffo

2020

R Programming

Online course 📍 Johns Hopkins University and offered through Coursera

- Jeff Leek Roger Peng, Brian Caffo

2012

Introduction to Mammalogy

Bucaramanga, Colombia 📍 Universidad Industrial de Santander

- Instructors: Hugo Mantilla Meluk
- 9 hours



EXPERIENCE

Current
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2024

Postdoctoral Research Associate

📍 Arthur Temple College of Forestry and Agriculture, Stephen F. Austin State University, Nacogdoches, Texas, USA.

- Assist Forest Wildlife Ecology and Management team
- Assist in the analysis of data from wildlife management faculty research.
- Write, assist, and generate scientific publications for the wildlife management team.
- Supporting undergraduate and graduate wildlife management students.
- Support writing of research grants.

I have experience in project management, field mammal monitoring and ecological data analysis.

2023
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2023

Management and control of invasive species: The European rabbit (*Oryctolagus cuniculus*)

📍 Servicio al mundo y Center for Applied Ecology and Sustainability (CAPES). Santiago de Chile, Chile

- Analysis of the data from European rabbit camera traps on Juan Fernandez Island, Chile.
- Camera trap data processing
- Analysis of hierarchical models of occupancy and abundance of the European rabbit
- Advise and train undergraduate students for the use of species abundance and co-occurrence models

2023
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2023

Monitoring of Jaguar (*Panthera onca*) in the departments of Guaviare and Putumayo, Colombia

📍 World Wide Fund for Nature Colombia - WWF Colombia

- Contract to develop occupancy models for monitoring the use of corridors by Jaguar and other mammals species at Guaviare, Colombia
- Development of species occupancy models
- Selection and organization of environmental variables related to jaguar occupation
- Development of hierarchical community models under a Bayesian approach, for species monitoring
- Graphic and cartographic outputs of the models
- Support for the interpretation of the results obtained

2017
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2016

Biologist

📍 Yoluka NGO, Biodiversity and conservation foundation. Bogota, Colombia

- Project formulation and management

2017
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2017

Biologist

📍 Yoluka NGO, Biodiversity and conservation foundation. Bogota, Colombia

- Formulation of the Environmental Management Plan for the Conservation Strategy “Laguna del Cacique Guatavita and Cuchilla de Peñas Blancas”. Logistical, technical, and scientific support for the project.
- Follow up and consolidate the information generated by the programs and projects associated with the formulation of the Environmental Management Plan.

2016
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2015

Support professional

📍 Yoluka NGO, Biodiversity and conservation foundation. Bogota, Colombia

- Regional protected area declaration process and delimitation of the Mamapacha-Bijagual páramo complex as a land management and conservation measure for endangered species such as the Andean bear, yellow-winged parakeet and Andean duck.
- Support the development of social, economic, and environmental technical studies.
- Consultation of technical studies and information gathering.
- Analyze information to support technical and legal studies, including the land, social, and environmental components of the territory.

2016
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2016

Mammalogist

📍 Yoluka NGO, Biodiversity and conservation foundation. Bogota, Colombia

- Perform the characterization of the Chiroptera community in Poligrow's palm plantations and associated natural cover,
- Evaluation and monitoring of focal groups as biological controllers and indicators of ecological health of Poligrow's palm crops in Mapiripán Meta.
- Present the data in a pre-established format.
- Deliver the reference collection of Chiroptera.
- Carry out the taxonomic determination and processing of biological material.
- Prepare and submit a scientific article derived from the information collected in the contract.

2015
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2015

Encoder

📍 CORPOEDUCACIÓN, Bogota, Colombia

- -Coding of open-ended responses for "Saber pro" 11 Calendar A, Natural Sciences, colombia -Perform the coding process of the assigned responses, objectively and conscientiously applying the criteria established in the Coding Guidelines.

2015
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2015

Field Assistant

📍 Universidad Nacional de Colombia, Bogotá, Colombia

- Ituango Hydroelectric Power Project EPM, Antioquia, colombia
- Mammalogist Field Assistant

2015
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2015

Wildlife Professional

📍 Yoluka NGO, Biodiversity and conservation foundation. Bogota, Colombia

- Regional protected area declaration process and delimitation of the Mamapacha-Bijagual paramo complex as a land management and conservation measure for endangered species such as the Andean bear, yellow-winged parakeet and Andean duck.
- Fauna characterization from validation and adjustment
- Unifying biotic information against lists of fauna (discriminated in taxonomic classes), where levels of diversity, conservation, and protection status are identified.
- Characterization of paramo mammals through photo-trapping in the area of jurisdiction of CORPOCHIVOR.



PUBLICATIONS

When the Wild Things Are: Defining Mammalian Diel Activity and Plasticity

Science Advances

📍 In Review

• Devarajan K., Fidino M., Farris Z.J., Gerber B.D., Andrade-Ponce, G. and other 212 authors

2024

Wilderness areas maintain mammal assemblage in subtropical mountain forests

Biodiversity and Conservation

📍 <https://dx.doi.org/10.1007/s10531-024-02932-8>

• Bardavid S., Andrade-Ponce G., Politi N., Rivera L.

2023

Socioecological Assessment of Mammal Assemblages in Small Oil-Palm Plantations in a Highly Deforested Region in Mexico

Tropical Conservation Science

📍 <https://doi.org/10.1177/19400829231169977>

• Franquesa-Soler M., Ocampo-Saure F., Mora F., Andrade-Ponce G., Andresen, E.

2023

Assessing microhabitat, landscape features and intraguild relationships in the occupancy of the enigmatic and threatened Andean tiger cat (*Leopardus tigrinus pardinoides*) in the cloud forests of northwestern Colombia

PLOS ONE

📍 <https://doi.org/10.1371/journal.pone.0288247>

• Cepeda-Duque J.C., Andrade-Ponce G., Montes-Rojas A., Rendón-Jaramillo, López-Velasco, Arango-Correa, López-Barrera, Mazariegos, Lizcano, Link, de Oliveira

2023

Expanding the frontiers of camera-trapping in Colombia: application of the “Mostela” system to gain knowledge on small non-volant mammals from an Andean cloud forest

Mammalia

📍 <https://doi.org/10.1515/mammalia-2023-0033>

• Cepeda-Duque J. C., Andrade-Ponce G., Arango-Correa E., Mazariegos L., Hofmeester T. R., Ramírez-Chaves H. E.

2023

Neotropical Mammals: Hierarchical analysis of Occupancy and Abundance

Springer Book

📍 <https://doi.org/10.1007/978-3-031-39566-6#toc>

• Mandujano S., Naranjo E., Andrade-Ponce G.

- 2023 **Chapter 15 - Overview of Hierarchical models and future Directions in the Study of Neotropical Mammals**
Chapter at Neotropical Mammals: Hierarchical analysis of Occupancy and Abundance
https://doi.org/10.1007/978-3-031-39566-6_15
• Andrade-Ponce G.
- 2023 **Chapter 14 - Occupancy Modeling reveal that landscape scale drives habitat use by White-tailed deer in the Tehuacán-Cuicatlán Biosphere Reserve, Mexico**
Chapter at Neotropical Mammals: Hierarchical analysis of Occupancy and Abundance
https://doi.org/10.1007/978-3-031-39566-6_14
• Mandujano S., Andrade-Ponce G., Zavaleta A., López-Tellez C.
- 2023 **Chapter 1 - Neotropical Mammals and the Analysis of Occupancy and Abundance**
Chapter at Neotropical Mammals: Hierarchical analysis of Occupancy and Abundance
https://doi.org/10.1007/978-3-031-39566-6_1
• Mandujano S., Naranjo E., Andrade-Ponce G.
- 2022 **A framework to interpret co-occurrence patterns from camera trap data: The case of the gray fox, the bobcat, and the eastern cottontail rabbit in a tropical dry habitat**
Journal of zoology
<https://doi.org/10.1111/jzo.13002>
• Andrade-Ponce G., Mandujano S., Dáttilo W., Farías-González V., Jiménez J., Velásquez-C K., Zavaleta A.
- 2021 **Does patch Quality drive arboreal mammal assemblages in fragmented rain forest?**
Perspectives in Ecology
<https://doi.org/10.1016/j.pecon.2020.12.004>
• Cudney-Valenzuela S., Arroyo-Rodríguez V., Andresen E., Toledo-Aceves T., Mora Ardila F., Andrade-Ponce G., Mandujano S.
- 2021 **Modelos de Ocupación para datos de cámaras trampa: de los conceptos a la interpretación**
Mammalogy Notes
<https://doi.org/10.47603/mano.v7n1.200>
• Andrade-Ponce G., Cepeda-Duque J. C., Mandujano S., Velásquez-C K. L., Lizcano D. J., Gómez-Valencia B.
- 2020 **Coexistencia de Vulpes macrotis y Canis latrans (Carnivora: Canidae) en la Reserva de la Biosfera de Mapimí, México**
Revista Mexicana de biodiversidad
<https://doi.org/10.22201/ib.20078706e.2020.91.2973>
• Andrade-Ponce G., Gallina S., Gómez-Valencia B., Lira-Noriega A.

- 2020 **Interaction between Ground Squirrels with rattlesnakes in arid zones**
Therya Notes  https://doi.org/10.12933/therya_notes-20-4
• Andrade-Ponce G., Montero-Bagatella SM, Duran-Antonio J., González-Romero A., Gallina S.
- 2020 **Registros de mamíferos terrestres en un salado natural y sus inmediaciones en el Resguardo Indígena Nonuya Villazul, departamento del Amazonas-Colombia**
Mammalogy Notes  <https://doi.org/10.47603/manovol6n1.mn0107>
• Andrade-Ponce G.
- 2020 **Uso de bebederos artificiales por pequeños roedores en un bosque tropical seco en Oaxaca, México**
Mammalogy Notes  <https://doi.org/10.47603/mano.v6n2.179>
• Hernández-Gómez C.A., Andrade-Ponce G., Velásquez-C K.L., Mandujano S.
- 2017 **Notable altitudinal range expansion of Lontra longicaudis (Carnivora: Mustelidae) in Colombian Paramos**
Therya  <https://doi.org/10.12933/therya-17-429>
• Andrade-Ponce G.*, Angarita-Sierra T.
- 2016 **Estado del conocimiento y prioridades de investigación sobre las familias Canidae, Mephitidae y Procyonidae (Mammalia: Carnivora) en Colombia**
Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales  <https://doi.org/10.18257/raccefyn.327>
• Andrade-Ponce G., Montaña-Salazar S.M., Riveros-Loaiza L.M., Ramírez-Chaves H.E., Suárez-Castro A.F.
- 2015 **Generalidades del orden Carnívora**
En Los carnívoros terrestres y semiacuáticos continentales de Colombia. Guía de Campo  (PDF) Generalidades del orden Carnívora
• Andrade-Ponce G., Jiménez-Ramírez J.S., Montaña-Salazar S.M., Riveros-Loaiza L.M.



TEACHING EXPERIENCE

I have coordinated and supported several courses and workshops. Most of them focused on the use of R to organize and analyze camera trap data.

2024

Using R for Scientific Research (Fall 2024)

Arthur Temple College of Forestry and Agriculture, Stephen F. Austin State University

📍 Nacogdoches, Texas, USA.

- Guest lecturer
- Introduction to Model Selection Strategies Data visualization laboratory
Feedback on student projects
- 16 hours

2024

Wildlife Field Station (Summer 2024)

Arthur Temple College of Forestry and Agriculture, Stephen F. Austin State University

📍 Nacogdoches, Texas, USA.

- Guest lecturer
- Field station on wildlife monitoring techniques Introduction to the use of camera traps Use of sherman traps for small mammal surveys
- 24 hours

2024

Quantitative Ecological Methods in R (Spring 2024)

Arthur Temple College of Forestry and Agriculture, Stephen F. Austin State University

📍 Nacogdoches, Texas, USA.

- Guest lecturer
- Introduction and laboratory of Occupancy models for ecological data analysis
- 6 hours

2023

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2023

Introduction to statistics

Posgrado, Instituto de Ecología A.C

📍 Instituto de Ecología A.C., Xalapa, Mexico

- Invited Lecturer
- Introduction to the use of R; ggplot for descriptive statistics and support in practical sessions.
- 33 hours

2022

FototrampeoR: Organization and analysis of medium and large mammal data from camera trap data

XV Congreso Nacional de Mastozoología

📍 Chihuahua, Mexico

- Principal Lecturer
- General photo-trapping issues. Photo-trapping data organization. Relative abundance analysis and main alpha diversity indices applied to phototrapping.
- 8 hours

2022

Photo-trapping workshop in R. Occupancy and abundance modeling.

School of Biological Sciences

📍 Benemérita Universidad Autónoma de Puebla, Puebla, Mexico

- Principal Lecturer
- Concepts and modeling of one- and two-species occupancy models. Fitting and application of hierarchical models in R language. Support of doubts in R language.
- 20 hours

2022

Photo-trapping workshop in R. Fauna-habitat analysis in GIS-R

School of Biological Sciences

📍 Benemérita Universidad Autónoma de Puebla, Puebla, Mexico

- Invited Lecturer
- Concepts, evaluation and analysis of spatial independence in camera trap studies. Support to students in the use of R
- 20 hours

2022

Photo-trapping workshop in R. Diversity analysis

School of Biological Sciences

📍 Benemérita Universidad Autónoma de Puebla, Puebla, Mexico

- Invited Lecturer
- Use of multi-species occupancy models to estimate richness, limitations and advantages. Support to students in the use of R
- 20 hours

2022

Photo-trapping workshop in R. Basics: Photo Organization and Analysis

School of Biological Sciences

📍 Benemérita Universidad Autónoma de Puebla, Puebla, Mexico

- Invited Lecturer
- Experiences and suggestions for camera trap sampling design. Support for data organization and R language handling.
- 20 hours

2022

Occupancy models for the study of wildlife distribution and habitat use.

Faculty of Biological Sciences

📍 Universidad Autónoma de Nuevo León, Nuevo Leon, Mexico

- Principal Lecturer
- Course management. General concepts of occupancy models applied to the study of the distribution and use of wildlife habitat. Application of 1- and 2-species models in R language. Fitting and validation of 1-species occupancy models.
- 15 hours

2021	<p>Photo-trapping workshop in R. Basics: Photo Organization and Analysis</p> <p>School of Biological Sciences</p> <p>📍 Benemérita Universidad Autónoma de Puebla, Puebla, Mexico</p> <ul style="list-style-type: none"> • Invited Lecturer • Experiences and suggestions for camera trap sampling design. Support for data organization and R language handling. • 20 hours
2020	<p>Phototrapping in R: Data Organization and Analysis</p> <p>Escuela de Métodos</p> <p>📍 Universidad Nacional Autónoma de México, Morelia, Mexico</p> <ul style="list-style-type: none"> • Invited Lecturer • Support and introduction to camtrapR functions for phototrapping data analysis. • 16 hours
2020	<p>Photo trapping workshop in R</p> <p>School of Biological Sciences</p> <p>📍 Benemérita Universidad Autónoma de Puebla, Puebla, Mexico</p> <ul style="list-style-type: none"> • Invited Lecturer • Experiences and suggestions for the design of camera trap sampling. Support for data organization and R language handling. • 20 hours
2020	<p>Photo trapping workshop in R</p> <p>School of Biological Sciences</p> <p>📍 Benemérita Universidad Autónoma de Puebla, Puebla, Mexico</p> <ul style="list-style-type: none"> • Invited Lecturer • Experiences and suggestions for the design of camera trap sampling. Support for data organization and R language handling. • 20 hours
2019	<p>Techniques and Methods for the Study and Conservation of Wildlife</p> <p>Red de biología y conservación de vertebrados</p> <p>📍 Instituto de Ecología A.C., Xalapa, Mexico</p> <ul style="list-style-type: none"> • Invited Lecturer • Talk about experience in carnivore co-occurrence studies in the Mapimí Biosphere Reserve, Durango, Mexico. • 1 hour



STUDENT MENTORING

Current
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2024

Committee Member - Ph.D. | Taxonomic diversity, population dynamics and functional connectivity for groups of vertebrates in the environmental mosaic of the protection area of the Amaní reservoir (Caldas, Colombia)

Estefania Espitia Martinez, Facultad de Ciencias Exactas y Naturales, Universidad de Caldas

📍 Manizales, Caldas, Colombia

Current
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2024

Committee Member - Ph.D. | Influence Of Invasive Vegetation on Mammalian And Herpetofauna Communities Across A South Texas Landscape

Duston R. Duffie, Texas A&M University-Kingsville

📍 Kingsville, Texas, USA

2024
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2023

Committee Member - Undergraduate | Spatiotemporal segregation and prey availability in two wild canids (*Canis latrans* and *Urocyon cinereargenteus*) in an anthropized landscape of the Mexican highlands.

Mariela Cecilia Fernandez Morales, Universidad Autonoma de Nuevo Leon, Facultad de Ciencias Biologicas

📍 Monterrey, Nuevo Leon, Mexico

2024

Thesis evaluation - M.Sc | Effects of predation and food availability on the spatiotemporal dynamics of three canid species in the Chihuahuan Desert.

Camila Yoeli Diaz Ibarra, Instituto de Ecologia A.C. (INECOL)

📍 Xalapa, Veracruz, Mexico

2023
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2022

Major advisor - Undergraduate | Time independence of records from camera traps: Effect on the estimation of activity and recording frequency

Alan Pastor Suarez Lopez, Escuela Nacional de Estudios Superiores Unidad Morelia, Universidad Nacional Autonoma de Mexico (UNAM)

📍 Morelia, Michoacan, Mexico

2020

Thesis evaluation - Undergraduate | The Home of the Jaguar an analysis of occupancy in the forests and savannahs of the Colombian plains in dry and wet seasons.

María Camila Diaz Corzo, Pontificia Universidad Javeriana

📍 Bogota, Colombia



MEETINGS

- 2024
- Methods to estimate European rabbit use intensity on Robinson Crusoe Island: Royle–Nichols vs. IAR**
I Chilean Congress of Zoology  Talca, Chile
- Valenzuela-M V., Andrade-Ponce G., Riquelme C., Correa-Cuadros J.P., Duclos M., Simone K., Vilches-Villa M.J., Cabello J., Jaksic F.
- 2023
- Distribution and abundance of *Oryctolagus cuniculus* on Robinson Crusoe Island using camera trap data.**
XXIX Annual Meeting of the Ecological Society of Chile  Olmue, Chile
- Valenzuela-M V., Andrade-Ponce G., Riquelme C., Correa-Cuadros J.P., Jaksic F.
- 2023
- From competition to patterns: exploring the relationship between ecological theory and co-occurrence patterns in carnivorous mammals**
XV National Congress of Mammalogy  Chihuahua, Mexico
- Andrade-Ponce G.P., Morales Góngora Y., Hernández C., Suárez-López A., López-Tello E., Ocampo-Saure F., Avendaño-Díaz M., Castelazo-Calva V., Cepeda-Duque J.C., Duran- Antonio J.
- 2023
- Framework for interpreting co-occurrence patterns of camera trap data: the case of the gray fox, the bobcat and the cottontail rabbit in a dry tropical habitat**
XV National Congress of Mammalogy  Chihuahua, Mexico
- Andrade-Ponce G., Mandujano S., Dáttilo W., Farías-González V., Jiménez J., Velásquez-Carrillo K., Zavaleta A.
- 2018
- Co-occurrence of *Vulpes macrotis* and *Canis latrans* in the Mapimí Biosphere Reserve, Mexico**
III Symposium of Small Carnivores, III Colombian congress of Mammalogy and V Colombian Congress of Zoology  Bogota, Colombia
- Andrade-Ponce G., Gallina-Tessaro S., Gómez-Valencia B., Lira-Noriega A.
- 2014
- State of Knowledge and distribution of the Canidae and Procyonidae Families in Colombia**
II Symposium of Small Carnivores, IV Colombian Congress of Zoology  Cartagena, Colombia
- Andrade-Ponce G., Suárez-Castro A.F., Ramirez-Chaves H., Montaña-Salazar S., Riveros Loaiza L.M.



AWARDS & GRANTS

- 2020 **Award for academic excellence Best Master's thesis**
Asociación Mexicana de Mastozoología (AMMAC)
 <https://www.youtube.com/watch?v=m1ibdidFYyM>
• Recognition granted by the Mexican Association of Mammalogy for the best master's thesis in its 2020 edition, first place
- 2019 **Scholarship awarded for Ph.D. studies at the Instituto de Ecología A.C.**
Consejo Nacional de Humanidades, Ciencia y Tecnología (CONAHCyT),
- 2018 **Effect of Grazing and Co-Occurrence Species on the Occupancy of Carnivore Mammals at the Mapimi Biosphere Reserve, Mexico**
The Rufford Foundation
 Jessica Durán Antonio - Effect of Grazing and Co-Occurrence Species on the Occupancy of Carnivore Mammals at the Mapimi Biosphere Reserve, Mexico - The Rufford Foundation
• Acquired with Jessica Duran-Antonio. Total funding of ESP 3,753
- 2018 **Scholarship for academic excellence at the V Colombian Congress of Zoology**
Asociación Colombiana de Zoología
• Scholarship awarded by the Colombian Zoology Association for the work "Co-occurrence of *Vulpes macrotis* and *Canis latrans* in the Mapimí Biosphere Reserve, Mexico"
- 2017 **Pandi's mushroom tongue salamander (*Bolitoglossa pandi*)**
Mohamed bin Zayed Species
 Pandi's mushroom tongue salamander Conservation Case Study
• Acquired with Teddy Angarita. Total funding of USD 12,400
- 2017 **Scholarship awarded for Magister studies at the Instituto de Ecología A.C.**
Consejo Nacional de Humanidades, Ciencia y Tecnología (CONAHCyT),