

GABRIEL P. ANDRADE-PONCE

Colombian biologist graduated from the Universidad Nacional de Colombia and M. SC - PhD. from the Instituto de Ecología A.C. in Xalapa, Mexico. I have focused my work on the use of statistical models and particularly hierarchical models to understand how drivers influence the species abundance, distribution and co-occurrence. I use quantitative tools to respond to monitoring and conservation objectives of species in different parts of Latin America. I enjoy teaching, so I have organized and collaborated in different courses and workshops on statistical modeling and use of R language for ecologists (undergraduate students, graduate students and practitioners).

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CONTACT

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🐦 [@Gatorco_AP](https://twitter.com/Gatorco_AP)

🔗 [gpandradep](#)

🌐 [Web site](#)

📄 [Researchgate](#)



EDUCATION

2023
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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
- CONACYT grant

2019
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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.
- CONACYT 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.

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

The source code is available [on github.com/nstrayer/cv](https://github.com/nstrayer/cv).

Last updated on 2024-01-29.



RESEARCH EXPERIENCE

2023
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2023

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

Servicio al mundo y Centro de Ecología aplicada y sustentabilidad (CAPES)

📍 Santiago de Chile, Chile

- Cooperation for the analysis of 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

Fondo Mundial para la naturaleza Colombia- WWF Colombia

📍 Bogotá, Colombia

- Contract to develop occupancy models for monitoring the use of corridors by Jaguar
- 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



EXPERIENCE

2017
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2016

Biologist

Project management and formulation

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

2017
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2017

Biologist

Formulation of the Environmental Management Plan for the Conservation Strategy "Laguna del Cacique Guatavita and Cuchilla de Peñas Blancas".

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

- Logistical, technical and scientific support for the project, following up and consolidating the information generated by the programs and projects associated with the formulation of the Environmental Management Plan.

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

2016
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2015

Support professional

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.

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

- Support the development of products, 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 component of the territory.

2016
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2016

Mammalogist

Evaluation and monitoring of focal groups as biological controllers and indicators of ecological health of Poligrow's palm crops in Mapiripán Meta.

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

- Perform the characterization of the Chiroptera community in Poligrow's palm plantations and associated natural cover, 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

Coding of open-ended responses for "Saber pro" 11 Calendar A, Natural Sciences

📍 CORPOEDUCACIÓN, Bogota, 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

Ituango Hydroelectric Power Project EPM

📍 Universidad Nacional de Colombia, Bogotá, Colombia

- Field Assistant in the Mammals Area

2015
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2015

Wildlife Professional

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.

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

- Fauna characterization from validation and adjustment, unification of biotic information against lists of fauna (discriminated in taxonomic classes), where levels of diversity and conservation and protection status are identified, characterization of paramo mammals through photo-trapping in the area of jurisdiction of CORPOCHIVOR.



PUBLICATIONS

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>

- Co-authored with Franquesa-Soler, M., Ocampo-Saure, F., Mora, F., and 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>

- Co-authored with Cepeda-Duque JC, Montes-Rojas, 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., 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>

- Editor with Salvador Mandujano and Eduardo Naranjo

- 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
- 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
• Co-authored with Salvador Mandujano, Arturo Zavaleta, Concepción López-Tellez
- 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
• Co-authored with Salvador Mandujano and Eduardo Naranjo
- 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>
• Authored with Mandujano, S., Dáttilo, W., Farías-González, V., Jiménez, J., Velásquez-C, K. and 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>
• Co-authored with Sabine Cudney-Valenzuela, Víctor Arroyo-rodríguez, Ellen Andresen, Tarín Toledo-Aceves, Francisco Mora Ardila, Salvador Mandujano
- 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>
• Authored with Cepeda-Duque, J. C., Mandujano, S., Velásquez-C, K. L., Lizcano, D. J., & Gómez-Valencia, B.
- 2020 Coexistencia de *Vulpes macrotis* y *Canis latrans* (Carnívora: Canidae) en la Reserva de la Biosfera de Mapimí, México
Revista Mexicana de biodiversidad <https://doi.org/10.22201/ib.20078706e.2020.91.2973>
• Authored with con Sonia Gallina, Bibiana Gómez-Valencia y Andrés Lira-Noriega

- 2020 Interaction between Ground Squirrels with rattlesnakes in arid zones
Therya Notes  https://doi.org/10.12933/therya_notes-20-4
- Authored with Sandra H. Montero-Bagatella, Jessica Duran-Antonio, Alberto González-Romero y Sonia Gallina
- 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>
- 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>
- Co-authored with Carlos A Hernández-Gómez, Karen L. Velásquez-Carrillo, Salvador Mandujano
- 2017 Notable altitudinal range expansion of *Lontra longicaudis* (Carnivora:
Mustelidae) in Colombian Paramos
Therya  <https://doi.org/10.12933/therya-17-429>
- Authored with 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>
- Authored with S.M. Montaña-Salazar, L.M. Riveros-Loaiza, H.E. Ramírez-Chaves y 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
- Authored with J.S. Jiménez-Ramírez, S.M. Montaña-Salazar y L.M. Riveros-Loaiza
- 2022 [De carnívoro a carnívoro: interacciones de mamíferos del orden Carnívora](#)
Cronica de Veracruz
- Brief review of carnivorous mammal interactions and their importance.

- 2022 Co-ocurrencia de mamíferos con datos de cámaras trampa:
¿Interacciones o algo más?
Eco- Lógico
📍 (PDF) Co-ocurrencia de mamíferos con datos de cámaras trampa:
¿Interacciones o algo más?
• How we study and interpret the spatial and temporal co-occurrence of
the gray fox, the bobcat and the cottontail rabbit
- 2021 De los cánidos a los roedores
<https://www.youtube.com/watch?v=Ujbd-NxTmnA>
• Video divulgation of studies in Mapimí Biosphere Reserve
- 2019 **Los coyotes y las zorritas no leen en inglés:**
El Portal, Comunicación veracruzana
• The story of two species that coexist in the Mapimí Biosphere Reserve.
- 2016 **Las historias del mambe**
<https://yoluka.org.co>
• A brief history of my interaction with an indigenous tribe in the
Colombian Amazon.
- 2016 **Lo inesperado en las alturas: nutria paramuna en Boyacá**
<https://yoluka.org.co>
• Story on the record of an otter at 3110 meters above sea level in Colombia



TEACHING EXPERIENCE

- 2023
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2023 Introduction to statistics
Posgrado, Instituto de Ecología A.C
📍 Instituto de Ecología A.C., Xalapa, Mexico
• Support teacher
• 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
• Coordinating teacher
• General photo-trapping issues. Photo-trapping data organization.
Relative abundance analysis and main alpha diversity indices applied to
phototrapping.
• 8 hours

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.

2022	<p>Photo-trapping workshop in R. Occupancy and abundance modeling.</p> <p>School of Biological Sciences</p> <p>📍 Benemérita Universidad Autónoma de Puebla, Puebla, Mexico</p> <ul style="list-style-type: none"> • Coordinating teacher • 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	<p>Photo-trapping workshop in R. Fauna-habitat analysis in GIS-R</p> <p>School of Biological Sciences</p> <p>📍 Benemérita Universidad Autónoma de Puebla, Puebla, Mexico</p> <ul style="list-style-type: none"> • Teacher • Concepts, evaluation and analysis of spatial independence in camera trap studies. Support to students in the use of R • 20 hours
2022	<p>Photo-trapping workshop in R. Diversity analysis</p> <p>School of Biological Sciences</p> <p>📍 Benemérita Universidad Autónoma de Puebla, Puebla, Mexico</p> <ul style="list-style-type: none"> • Teacher • Use of multi-species occupancy models to estimate richness, limitations and advantages. Support to students in the use of R • 20 hours
2022	<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"> • Teacher • Experiences and suggestions for camera trap sampling design. Support for data organization and R language handling. • 20 hours
2022	<p>Occupancy models for the study of wildlife distribution and habitat use.</p> <p>Faculty of Biological Sciences</p> <p>📍 Universidad Autónoma de Nuevo León, Nuevo Leon, Mexico</p> <ul style="list-style-type: none"> • Coordinating teacher • 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"> • Teacher • 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"> • Teacher • 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"> • Teacher • 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"> • Teacher • 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 Professor • Talk about experience in carnivore co-occurrence studies in the Mapimí Biosphere Reserve, Durango, Mexico. • 1 hour




CONGRESSES AND SYMPOSIUMS

- 2023
- From competition to patterns: exploring the relationship between ecological theory and co-occurrence patterns in carnivorous mammals
- XV National Congress of Mastozoology  Chihuahua, Mexico
- Gabriel Patricio Andrade Ponce, Yolotli Morales Góngora, Carlos Hernández, Alan P. Suárez-López, Eva López-Tello, Fernando Ocampo-Saure, Mariano Avendaño-Díaz, Víctor Castelazo-Calva, Juan Camilo Cepeda-Duque y Jessica Duran- Antonio
- 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 Mastozoology  Chihuahua, Mexico
- Gabriel Andrade Ponce, Salvador Mandujano, Wesley Dáttilo, Verónica Farías-González, José Jiménez, Karen Velásquez Carrillo, Arturo Zavaleta y Arturo Zavaleta
- 2018
- Co-occurrence of *Vulpes macrotis* and *Canis latrans* in the Mapimí Biosphere Reserve, Mexico
- III Symposium of Small Carnivores, III Colombian congress of Mastozoology and V Colombian Congress of Zoology  Bogota, Colombia
- Gabriel Andrade Ponce, Sonia Gallina-Tessaro, Bibiana Gómez-Valencia, Andrés Lira-Noriega
- 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
- Gabriel Andrade Ponce, Andres Felipe Suárez Castro, Hector Ramirez Chaves, Sandra Montaña Salazar, Luis Miguel Riveros Loaiza



AWARDS & GRATNS

- 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 Mastozoology for the best master's thesis in its 2020 edition, first place

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| 2018 | <p>Effect of Grazing and Co-Occurrence Species on the Occupancy of Carnivore Mammals at the Mapimi Biosphere Reserve, Mexico</p> <p>The Rufford Foundation</p> <p>📍 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</p> <ul style="list-style-type: none"> • Acquired with Jessica Duran-Antonio. Total funding of ESP 3,753 |
| 2018 | <p>Scholarship for academic excellence at the V Colombian Congress of Zoology</p> <p>Asociación Colombiana de Zoología</p> <ul style="list-style-type: none"> • Scholarship awarded by the Colombian Zoology Association for the work "Co-occurrence of <i>Vulpes macrotis</i> and <i>Canis latrans</i> in the Mapimí Biosphere Reserve, Mexico" |
| 2017 | <p>Pandi's mushroom tongue salamander (<i>Bolitoglossa pandi</i>)</p> <p>Mohamed bin Zayed Species</p> <p>📍 Pandi's mushroom tongue salamander Conservation Case Study</p> <ul style="list-style-type: none"> • Acquired with Teddy Angarita. Total funding of USD 12,400 |