

# FERNANDO MACHADO-STREDEL

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## EDUCATION

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**Ph.D.** Ecology and Evolutionary Biology. **2023**. University of Kansas.

**Dissertation:** Evolutionary and Ecological Factors of Mating Systems in Caciques and Oropendolas (Aves, Cacicinae). Advisor: AT Peterson.

**Licentiate**, Biology (Cum Laude). **2015**. Universidad Central de Venezuela.

**Undergraduate Thesis:** Geographic Variation in Mitochondrial and Phenotypical Characters of the Gray-breasted Wood-Wren *Henicorhina leucophrys* (Aves: Troglodytidae) from Venezuela. Advisor: JL Pérez-Emán.

## PUBLICATIONS

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### Research

2023

- Cobos ME, C Nuñez-Penichet, PD Campbell, JC Cooper, **F Machado-Stredel**, N Barve, U Ashraf, AA Alkische, E Ng'eno, RR Nair, PJ Atauchí, A Adeboje, AT Peterson. 2023. Effects of occurrence data density on conservation prioritization strategies. *Biological Conservation* 284, 110207. <https://doi.org/10.1016/j.biocon.2023.110207>

2022

- **Machado-Stredel F**, B Freeman, D Jiménez-García, ME Cobos, C Nuñez-Penichet, L Jiménez, E Komp, U Perktas, A Khalighifar, K Ingenloff, W Tapondjou, T de Silva, S Fernando, L Osorio-Olvera, AT Peterson. 2022. On the potential of documenting decadal-scale avifaunal change from before-and-after comparisons of museum and observational data across North America. *Avian Research* 13, 100005. <https://doi.org/10.1016/j.avrs.2022.100005>
- Peterson AT, M Aiello-Lammens, G Amatulli, R Anderson, ME Cobos, JA Diniz-Filho, L Escobar, X Feng, J Franklin, L Gadelha, D Georges, M Guéguen, T Gueta, K Ingenloff, S Jarvie, L Jiménez, D Karger, J Kass, M Kearney, R Loyola, **F Machado-Stredel**, E Martínez-Meyer, C Merow, ML Mondelli, S Mortara, R Muscarella, C Myers, B Naimi, D Noesgaard, I Ondo, L Osorio-Olvera, H Owens, R Pearson, G Pinilla-Buitrago, A Sánchez-Tapia, E Saupe, W Thuiller, S Varela, D Warren, J Wiczorek, K Yates, G Zhu, G Zuquim, D Zurell. 2022. ENM2020: A Free Online Course and Set of Resources on Modeling Species' Niches and Distributions. *Biodiversity Informatics* 17, 1–9. <https://doi.org/10.17161/bi.v17i.15016>

2021

- **Machado-Stredel F**, ME Cobos, AT Peterson. 2021. A simulation-based method for selecting calibration areas for ecological niche models and species distribution models. *Frontiers of Biogeography* 13 (4), e48814. <https://doi.org/10.21425/F5FBG48814>
- **Machado-Stredel F**, AM Fernandes, F Riera, JL Pérez-Emán. 2021. A city of oropendolas: nesting colonies of Crested Oropendola (*Psarocolius decumanus*) in Caracas. *Wilson Journal of Ornithology* 132 (2), 259–270. <https://doi.org/10.1676/1559-4491-132.2.259>

2020

- Gang S, R Zhang, **F Machado-Stredel**, P Alström, U Johansson, M Irestedt, HL Mays, BD McKay, I Nishiumi, Y Cheng, Y Qu, PGP Ericson, J Fjeldså, AT Peterson, F Lei. 2020. Great journey of Great Tits (*Parus major* group): Origin, diversification, and historical demographics of a broadly- distributed bird lineage. *Journal of Biogeography* 47 (7), 1585–1598. <https://doi.org/10.1111/jbi.13863>

2019

- **Machado-Stredel F**, AM Fernandes, F Riera, R Gianni, A Rodríguez-Ferraro, JL Pérez-Emán. 2019. Monitoreo del Conoto Negro *Psarocolius decumanus* en un ecosistema urbano: una iniciativa de ciencia ciudadana en Caracas, Venezuela. *Revista Venezolana de Ornitología* 9, 4–14.
- Peterson AT, RP Anderson, ME Cobos, M Cuahutle, AP Cuervo-Robayo, LE Escobar, M Fernández, D Jiménez-García, A Lira-Noriega, JM Lobo, **F Machado-Stredel**, E Martínez-Meyer, C Nuñez-Penichet, J Nori, L Osorio-Olvera, MT Rodríguez, O Rojas-Soto, D Romero-Álvarez, J Soberón, S Varela, C Yañez-Arenas. 2019. Curso modelado de nicho ecológico, version 1.0. *Biodiversity Informatics* 14, 1–7. <https://doi.org/10.17161/bi.v14i0.8189>
- Peterson AT, RP Anderson, M Beger, J Bolliger, L Brotons, CP Burridge, ME Cobos, AP Cuervo-Robayo, E Di Minin, J Diez, J Elith, CB Embling, LE Escobar, F Essl, KJ Feeley, L Hawkes, D Jiménez-García, L Jimenez, DM Green, E Knop, I Kühn, JJ Lahoz-Monfort, A Lira-Noriega, JM Lobo, R Loyola, RM Nally, **F Machado-Stredel**, E Martínez-Meyer, M McCarthy, C Merow, J Nori, C Nuñez-Penichet, L Osorio-Olvera, P Pyšek, M Rejmánek, A Ricciardi, M Robertson, O Rojas-Soto, D Romero-Álvarez, N Roura-Pascual, L Santini, DS Schoeman, B Schröder, J Soberón, D Strubbe, W Thuiller, A Traveset, EA Treml, T Václavík, S Varela, JEM Watson, Y Wiersma, B Wintle, C Yañez-Arenas, D Zurell. 2019. Open access solutions for biodiversity journals: Do not replace one problem with another. *Diversity and Distributions* 25, 5–8. <https://doi.org/10.1111/ddi.12888>

2017

- **Machado-Stredel F**, JL Pérez-Emán. 2017. Using morphometrics to determine sex in a Neotropical passerine: the Gray-breasted Wood-Wren (*Henicorhina leucophrys*). *Ornitología Neotropical* 28, 147–153. <https://doi.org/10.58843/orneeo.v28io.240>

2016

- Fernandes AM, **F Machado-Stredel**, M Castro, JL Pérez-Emán. 2016. Identificación molecular del sexo de individuos del género *Henicorhina* en Venezuela. *Revista Venezolana de Ornitología* 6, 81–83.

#### In Review

- **Machado-Stredel F**, PJ Atauchí, C Nuñez-Penichet, ME Cobos, L Osorio-Olvera, A Khalighifar, AT Peterson, RJ Fletcher Jr. The Roles of Abiotic and Biotic Factors in Driving Range Shifts: An Invasive *Pomacea* Snail Facilitates Snail Kite Northward Range Expansion. *Ornithology*.

#### In Preparation

- Osorio-Olvera L, C Nuñez-Penichet, L Jiménez, J Mosley, **F Machado-Stredel**, LH DeCicco, A Nava-Bolaños, PJ Atauchí, RG Contreras-Díaz, A Adeboje, J Soberón, AT Peterson. Temporal Turnover of Climatic Conditions as a Pervasive Filtering Mechanism in Island Biogeography.
- Nair RR, J Joshi, **F Machado-Stredel**, AT Peterson. Phylogenetic Niche Conservatism is More Evident at Thermal than Precipitation Limits in Peninsular Indian *Rhysida* Species.
- **Machado-Stredel F**, JK Kelly, AT Peterson. Genetic Diversity and Differentiation in Two Blackbird Species with distinct Mating Systems: The Link Between Heterozygosity and Dispersal.

### PROFESSIONAL EXPERIENCE

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#### Research

2023

- **Postdoctoral Researcher** – Researching ecological niche patterns of the *Todiramphus* kingfisher radiation across the Indo-Pacific. University of New Mexico. Supervisors: Michael J Andersen and Corinne Myers.

2020-2023

- **Graduate Research Assistant (Ornithology)** – Developing Blockchain technology applications for museum collection databases (Ripple Grant). Biodiversity Institute and Information and Telecommunication Technology Center, University of Kansas. Supervisors: A Townsend Peterson and Perry Alexander.

2020

- **Graduate Research Assistant (Ornithology)** – Collecting House Sparrow (*Passer domesticus*) specimens and associated tissues in a resampling effort of 11 sites (after 50 years), across 8 states in the US. (NSF CAREER: Rapid phenotypic divergence and insulin-like growth factor 1 (IGF-1) signaling in a widespread songbird). Biodiversity Institute, University of Kansas and North Dakota State University. Supervisors: A Townsend Peterson and Britt Heidinger.

2017-2019

- **Curatorial Assistant (Ornithology)** – Preparing and sending specimen and tissue loans, specimen collecting and preparation, reporting database or labeling errors, facilitating specimens for museum exhibits, leading collection tours. Organizing, maintaining, and labeling: collection cabinets, specimen series, tissue collection (cryo facility), alcohol-preserved specimens, and physical catalogs. In 2019 spring semester, I was hired by the oVert project to assess jar integrity, concentrations and levels of alcohol-preserved specimens, as well as to prepare and mail specimens to be CT-scanned at the Field Museum. KU Natural History Museum, Biodiversity Institute, University of Kansas. Supervisor: Mark Robbins.

2015-2017

- **Research Assistant** – Collecting and non-lethal sampling of birds, databasing and mapping using GIS, extracting and amplifying DNA, morphological measuring of wild birds and specimens, analyzing song recordings, and monitoring nesting colonies of *Psarocolius decumanus*. Laboratorio de Biología y Conservación de Aves, Universidad Central de Venezuela. Supervisor: Jorge L Pérez-Emán.

2013

- **Curatorial Assistant (Ornithology)** – Specimen collecting and preparation, databasing, digitizing catalog information, organizing specimen series (skins and alcohol-preserved). Museo de Historia Natural La Salle, Venezuela. Supervisor: Vicky Malavé.

2012

- **Undergraduate Research Assistant** – Processing occurrence datasets of snail vector species, mapping infectious diseases cases using GIS tools, exploring ecological niche models of invasive gastropods. Software: Microsoft Access, ArcGIS, gvSIG, Maxent. Laboratorio de Biología de Vectores, Universidad Central de Venezuela. Supervisor: María Eugenia Grillet.

## Teaching

2021-2022

- **Graduate Teaching Assistant** – Biometry (BIOL 841, graduate course): guided lab sessions and selected lectures on experimental design, probability, hypothesis testing, parameter estimation, parametric and nonparametric statistics, likelihood approaches, multivariate statistics (GLMs), and model selection. Software: Minitab and R. University of Kansas. Supervisor: John K Kelly.

2018-2019

- **Graduate Teaching Assistant** – Biostatistics (BIOL 570, undergraduate course): guided lab sessions and development of independent projects on experimental design, probability, hypothesis testing, and parametric inference. Software: R. University of Kansas. Supervisor: Mark T Holder.

2014-2015

- **Undergraduate Teaching Assistant** – Quantitative Ecology (elective undergraduate course): guided lab sessions on multivariate statistics, ordination and classification methods, general and generalized linear models. Software: PAST and R. Universidad Central de Venezuela. Supervisor: María Eugenia Grillet.

2011-2012

- **Undergraduate Teaching Assistant** – Biostatistics (required undergraduate course): guided lab sessions on experimental design, probability, hypothesis testing, parametric and nonparametric inference. Universidad Central de Venezuela. Supervisor: Renato De Nóbrega.

## Workshops

2020, 2022

- **Invited Instructor** – “Modelado de Nicho Ecológico BUAP”, organized by La Benemérita Universidad Autónoma de Puebla, Mexico. Virtual.

2020

- **Instructor** – “Ecological Niche Modeling 2020”, online course organized by the Peterson Lab, Biodiversity Institute, University of Kansas. Virtual.

2018

- **Instructor** – “Curso Modelado de Nicho Ecológico, Versión 1.0” online course (in Spanish) organized by the Peterson Lab, Biodiversity Institute, University of Kansas. Virtual.

2017

- **Invited Instructor** – “Modelos de nicho y distribución de especies (ECO-289)” organized by Unidad de Diversidad Biológica y el Centro de Ecología (IVIC), Venezuela. Virtual.

## Other

2015

- **Analyst** – Processing remote sensing layers of cloud and forest cover across the Amazon. Software: ArcGIS, ENVI. RAISG project, Provita (NGO), Venezuela. Supervisor: Irene Zager.

## PRESENTATIONS

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### Conferences

2023

- **Machado-Stredel F, et al.** Nesting patterns, elevational shifts and thermal niche evolution in a Neotropical radiation. American Ornithological Society Conference, London, Ontario, Canada. Oral Presentation.
- **Machado-Stredel F, et al.** Population Genetic Diversity and Heterozygosity of two Blackbird Species with distinct Mating Systems. Evolution Conference, Albuquerque, New Mexico. Oral Presentation.

2022

- **Machado-Stredel F, et al.** Phylogenetic relationships and niche conservatism of caciques and oropendolas. American Ornithological Society Conference, San Juan, Puerto Rico. Oral Presentation.
- **Machado-Stredel F.** Geographic patterns of vegetation structure in nesting sites of polygynous blackbirds. Annual Meeting for The Society for Integrative & Comparative Biology, Phoenix, Arizona. Oral Presentation.
- Fernandes AM, MA Muñoz-Amaya, AJ Sargent, **F Machado-Stredel.** Descubriendo colonias de caciques y oropéndolas en Colombia. 7<sup>th</sup> Congreso Colombiano de Ornitología, Popayán, Cauca, Colombia. Poster Presentation.

2021

- **Machado-Stredel F, et al.** A package for dispersal simulations across geography and time to estimate calibration areas for niche and distribution models. American Ornithological Society Conference. Oral Presentation. Virtual.

2020

- **Machado-Stredel F.** Distributional patterns of monospecific and mixed colonies of caciques and oropendolas. 8<sup>th</sup> North American Ornithological Conference. Oral Presentation. Virtual.
- Peterson AT, **F Machado-Stredel.** Closing a Major Biogeographic Barrier: The Great Plains of North America. 72<sup>nd</sup> Kansas Ornithological Society Meeting. Oral Presentation. Virtual ([link](#)).

2019

- **Machado-Stredel F, et al.** Distributional patterns of mixed colonies of caciques and oropendolas. Geographic Information Systems Day at KU, Lawrence, Kansas. Poster Presentation. **2<sup>nd</sup> Place Student Poster Award.**
- **Machado-Stredel F, et al.** Modelling the niche in present and past climatic scenarios for the Great Tit. American Ornithological Society Conference, Anchorage, Alaska. Oral Presentation.

2018

- **Machado-Stredel F, et al.** Present and past ecological niche models for the Great Tit (*Parus major*). Geographic Information Systems Day at KU, Lawrence, Kansas. Poster Presentation. **2<sup>nd</sup> Place Student Poster Award.**
- **Machado-Stredel F, et al.** A city of Oropendolas: A characterization of *Psarocolius decumanus* nesting colonies in an urban landscape. American Ornithological Society Conference, Tucson, Arizona. Oral Presentation.
- **Machado-Stredel F, et al.** Modelling the niche of a traveler: present and past climatic scenarios for the Great Tit. 70<sup>th</sup> Kansas Ornithological Society Meeting, Lawrence, Kansas. Oral Presentation.

2017

- **Machado-Stredel F, et al.** Morphological differences between sexes of the Gray-breasted Wood-Wren: a sexually monochromatic passerine from the Neotropics. 69<sup>th</sup> Kansas Ornithological Society Meeting, Junction City, Kansas. Oral Presentation.

2016

- **Machado-Stredel F, et al.** Improving our knowledge of species ranges: ecological niche modelling of a South American wren. 6<sup>th</sup> North American Ornithological Conference, Washington DC. Poster Presentation.

2015

- **Machado-Stredel F, et al.** The Mocquerys' collections from Venezuela: Bucarito as a case study. 3<sup>rd</sup> Venezuelan Ornithological Conference, Guanare, Venezuela. Oral Presentation.
- **Machado-Stredel F, et al.** The use of digital photography to study geographic variation in plumage of a Neotropical montane bird. 11<sup>th</sup> Venezuelan Ecological Conference, Margarita, Venezuela. Oral Presentation.
- **Machado-Stredel F, et al.** Geographic variation of *Henicorhina leucophrys* in Venezuela. 10<sup>th</sup> Neotropical Ornithological Conference, Manaus, Brazil. Oral Presentation.

## Invited

2023

- **Machado-Stredel F.** The interplay of biogeography and social behavior in shaping blackbird diversity. Ecology and Evolutionary Graduate Recruitment Symposium, University of Kansas, Lawrence, Kansas, February 2023.

2021

- **Machado-Stredel F, et al.** Una ciudad de conotos: estudio de la distribución de colonias de anidación del Conoto Negro en el área metropolitana de Caracas, Venezuela. 5<sup>th</sup> Venezuelan Ornithological Conference, Caracas, Venezuela, December 2021. Virtual ([link](#)).
- **Machado-Stredel F, et al.** *grinnell*: herramientas para simular dispersión y definir áreas accesibles de especies en MNE. Seminarios de Modelado de Nichos Ecológicos y Distribuciones Geográficas, August 2021. Virtual ([link](#)).
- **Machado-Stredel F.** Blockchain in Museums. Red Hot Graduate Research, University of Kansas, Lawrence, Kansas, March 2021.

2020

- **Machado-Stredel F.** Conotos en Caracas. Charlas virtuales de la Unión Venezolana de Ornitólogos, Caracas, Venezuela. July 2020. Virtual ([link](#)).

2018

- **Machado-Stredel F.** A city of Oropendolas: Exploring Factors in Colony Size at an Urban Landscape. Ecology and Evolutionary Graduate Recruitment Symposium, University of Kansas, Lawrence, Kansas, August 2018.

2017

- Machado-Stredel F. Los Conotos de Caracas. Caracas, domicilio físico y espiritual, Museo de Ciencias, Caracas, Venezuela. July 2017.

## GRANTS AND AWARDS

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Total: \$13,855

2023

- Student Travel Support (\$500) – Biodiversity Institute, University of Kansas.

2022

- Travel & Research Award (\$375) – Graduate Student Organization, Ecology and Evolutionary Biology Department, University of Kansas.
- Panorama Grant (\$1,000) – “Evolutionary Genomics of Blackbird Mating Systems,” Biodiversity Institute, University of Kansas.
- Student Travel Award (\$580) – American Ornithological Society.

2021

- Student Research Award (\$2,000) – “The Genomic Footprint of Mating Systems in Neotropical Blackbirds,” American Ornithological Society.
- CLAS Graduate Scholarly Development Fund (\$500) – “Geographic patterns of vegetation structure in nesting sites of polygynous blackbirds,” University of Kansas.
- Student Travel Support (\$350) – Biodiversity Institute, University of Kansas.

2020

- Doctoral Student Research Fund (\$1,400) – “Phylogenetic Relationships and Mating Systems of Blackbirds,” Graduate Studies, University of Kansas.
- Vice Provost’s Graduate Retention Fund (\$500) – University of Kansas.

2019

- Panorama Grant (\$1,000) – “Evolutionary Genomics of Blackbird Mating Systems,” Biodiversity Institute, University of Kansas.
- Summer Research Award (\$2,000) – “Effective Population Size in Avian Mating Systems,” Ecology and Evolutionary Biology Department, University of Kansas.
- Student Travel Award in Support of Diversity & Inclusion (\$750) – American Ornithological Society.
- Student Travel Support (\$700) – Biodiversity Institute and Ecology and Evolutionary Biology Department, University of Kansas.

2018

- Felipe A. Gomez Opportunity Fund (\$1,500) – Ecology and Evolutionary Biology Department, University of Kansas.
- Student Travel Support (\$700) – Biodiversity Institute and Ecology and Evolutionary Biology Department, University of Kansas.

2016

- Student Membership Award – American Ornithologists' Union.



## ADDITIONAL RESEARCH PRODUCTS

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- **grinnell (Co-developer)** – Dispersal Simulations Based on Ecological Niches. R package to simulate accessible areas used in the calibration of ecological niche models ([link](#)).
- **Conotos de Caracas (Research Coordinator)** – Citizen-science monitoring project of Crested Oropendola (*Psarocolius decumanus*) colonies in Caracas, Venezuela ([link](#)).

## ADDITIONAL SKILLS

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- Languages: Spanish (native), English (fluent), Portuguese (intermediate).
- Programming languages: R, Python, bash, awk.
- Geographic Information Systems: ArcGIS, QGIS.

## FIELDWORK

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### >500 specimens deposited in natural history museums

2022

- **Kansas Resurvey** – Collecting bird specimens and recording observational records to resurvey sites visited by KU curators in the 1910s. I was part of field trips to Douglas, Greenwood, Comanche, and Barber counties.

2020-2021

- **House Sparrows across the US** – Collecting invasive House Sparrows in 11 sites across 8 states (ND, SD, MN, KS, CO, TX, LA, and FL), along with blood and tissue sampling, and morphological measuring.

2018-2021

- **Local Collecting in Kansas** – Collecting bird specimens in Douglas and Shawnee counties.

2015

- **Eastern Coastal Cordillera, Venezuela** – Collecting bird specimens and recording observational records in Paria National Park and Mount Turimiquire (Sucre and Monagas states).
- **Banding Station Volunteer** – Mist netting and handling birds in banding station of migratory and local species at Paso Portachuelo, Henri Pittier NP, Aragua, Venezuela.

2014

- **Nest Box Monitoring Volunteer** – Handling and marking *Forpus passerinus* fledglings in nest boxes at Hato Masaguaral, Guárico, Venezuela.

2013

- **Amazon River Dolphin Census** – Counting *Inia geoffrensis* and other aquatic mammals along the Orinoco River. Mist netting and collecting bird specimens at stopovers from Puerto Ayacucho to San Carlos de Río Negro, Amazonas, Venezuela.

2012-2014

- **Regional Collecting in Venezuela** – Collecting bird specimens across north-central Venezuela (Yaracuy, Aragua, Miranda, Distrito Capital).

## OUTREACH

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2018, 2019, 2021

- **Bird Mating and Reproduction Booth** – “Sexy Science” at the University of Kansas Natural History Museum, Lawrence, Kansas.

2018, 2021

- **Spooky Birds** – “Science of the Macabre” at the University of Kansas Natural History Museum, Lawrence, Kansas.

2019

- **Science Night (Ornithology Booth)** – Lawrence Beer Company, Lawrence, Kansas.
- **Marine Birds** – Discovery Day Marine Science at the University of Kansas Natural History Museum, Lawrence, Kansas.

2018-2019

- **Spanish Outreach Assistant** – Developing and guiding practical sessions in English and Spanish for third-graders in Kansas within the Microbiomes of Aquatic, Plant, and Soil Systems (MAPS) project (NSF EPSCoR). Supervisor: Peggy Schultz.

2018

- **Collections up Close (Ornithology)** – University of Kansas Student Union, Lawrence, Kansas.

2014-2015

- **Arboretum Guide** – Leading recreation activities, mainly directed at kids, about spatial learning in squirrels and avian diversity in an urban forest. Supervisor: Luis Levin.

## MENTORING

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2022-2023

- **Rahul Raveendran Nair (Postdoc)** – Mentored in accessing and cleaning biodiversity data, ecological niche modeling, and analyses in phylogenetic niche conservatism in R. University of Kansas.

2021-2022

- **Emperatriz Gamero (MS student)** – Mentored remotely on bioinformatics pipelines (bash) and phylogenetic methods (RAxML, IQTREE) using ultraconserved elements and mitogenomic data for her thesis work on *Sapajus* monkeys. Instituto Venezolano de Investigaciones Científicas (IVIC), Venezuela.

2015-2018

- **Ana Melisa Fernandes (Undergrad)** – Mentored in fieldwork, data collection, and statistical analyses (R language) within the context of a monitoring project of Crested Oropendola colonies. Universidad Central de Venezuela.

2015-2017

- **Fernando Riera (Undergrad)** – Mentored in sampling techniques and experimental design for his undergraduate project on *Zonotrichia capensis*, as well as in data collection of Crested Oropendola colonies. Universidad Central de Venezuela.

## JOURNAL REVIEWS

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- *Journal of Biogeography* (2019, 2023).
- *Frontiers in Zoology*, German Society of Zoology (2022).
- *Ecología en Bolivia* (2019).
- *Wilson Journal of Ornithology* (2018).

## PROFESSIONAL SERVICE AND SYNERGISTIC ACTIVITIES

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### Officer Positions

2020-2021

- **Co-president** – University of Kansas Ecology and Evolutionary Biology Graduate Student Organization.
- **Vice President** – Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), University of Kansas Chapter.

2019-2020

- **Vice President** – University of Kansas Ecology and Evolutionary Biology Graduate Student Organization.

2012-2015

- **President** – Biology Student Government, Universidad ty Central de Venezuela.

### Committees

2018-2021

- **Social Committee** – University of Kansas Ecology and Evolutionary Biology Graduate Student Organization.

2019-2020

- **Social Media Committee** – University of Kansas Ecology and Evolutionary Biology Graduate Student Organization.

2018-2019

- **Social Media Committee** – Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), University of Kansas Chapter.

### Professional Society Participation

2023

- Society for the Study of Evolution.

2022-2023

- Society for Integrative and Comparative Biology.

2016-2023

- American Ornithological Society.

2015-2023

- Venezuelan Ornithological Union.

2015-2017

- Neotropical Ornithological Society.

2011-2017

- Venezuelan Ecological Society.

## Workshop Organization

2021

- **Species Tree Estimation with PAUP\* and SVDQ** – Workshop directed to KU graduate students, hosted by the KU Ecology and Evolutionary Biology Graduate Student Organization in Lawrence, Kansas. Instructor: Laura Kubatko (Ohio State University).

2020-2021

- **Ecological Niche Modeling 2020** – free online course (43 weeks) for 2,541 participants (72 countries), organized by the Peterson Lab, Biodiversity Institute, University of Kansas. Virtual.

2020

- **Introduction to Python** – Workshop directed to KU undergraduate and graduate students, hosted by the KU Ecology and Evolutionary Biology Graduate Student Organization and the SACNAS KU Chapter in Lawrence, Kansas. Instructor: John K Kelly (KU).

2019

- **Grant Writing** – Workshop directed to KU and Iowa State University (ISU) students, organized by the SACNAS KU and ISU Chapters in Lawrence, Kansas. Instructor: Corey Welch (ISU).

2018

- **Web Scraping** – Workshop directed to KU undergraduate and graduate students, hosted by the SACNAS KU Chapter in Lawrence, Kansas. Instructor: Mark T Holder (KU).
- **Curso Modelado de Nicho Ecológico, Versión 1.0** – free online course (23 weeks) in Spanish for 675 participants (29 countries), organized by the Peterson Lab, Biodiversity Institute, University of Kansas. Virtual.

## PROFESSIONAL REFERENCES

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### **Dr. A. Townsend Peterson**

University Distinguished Professor, Department of Ecology and Evolutionary Biology  
Senior Curator of Ornithology, Biodiversity Institute  
Dyche Hall, 1345 Jayhawk Blvd.  
University of Kansas  
Lawrence, KS 66045  
(785) 864-3926  
town@ku.edu

### **Dr. John K. Kelly**

Professor, Department of Ecology and Evolutionary Biology  
Haworth Hall, 1200 Sunnyside Ave.  
University of Kansas  
Lawrence, KS 66045  
(785) 864-3706  
jkk@ku.edu

### **Dr. Corinne Myers**

Associate Professor, Department of Earth and Planetary Sciences  
Curator, Earth and Planetary Sciences Paleobiology  
Northrop Hall  
University of New Mexico  
Albuquerque, NM 87131  
(607) 351-2020  
cemyers@unm.edu

### **Dr. Michael J. Andersen**

Associate Professor, Department of Biology  
Curator, Division of Genomic Resources, Museum of Southwestern Biology  
Center for Environmental Research, Informatics, & the Arts (CERIA)  
University of New Mexico  
Albuquerque, NM 87131  
(505) 277-8017  
mjandersen@unm.edu

### **Dr. Jorge L. Pérez-Emán**

Professor, Department of Biology  
Instituto de Zoología y Ecología Tropical  
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