

CURRICULUM VITAE

Ivan Castro-Arellano, PhD
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EDUCATION

Texas A&M University (2005)

Doctor in Philosophy in Wildlife and Fisheries Sciences
Dissertation: Ecological patterns of the small mammal communities at El Cielo
Biosphere Reserve, Tamaulipas, México.

Texas A&M University (2000)

Master of Science in Wildlife and Fisheries Sciences (non-thesis)

Universidad Nacional Autónoma de México (1997)

Bachelor of Science in Biology.
Honors thesis: Patterns of geographic distribution in the terrestrial mammals of Africa
("Mención honorífica"/cumm laude distinction for thesis/degree).

UNIVERSITY EXPERIENCE

August 2017 to date	Associate Professor , Department of Biology, Texas State University, San Marcos, TX
Aug 2011 – July 2017	Assistant Professor , Department of Biology, Texas State University, San Marcos, TX.
Jan 2010 – July 2011	Assistant Professor , Instituto Tecnológico de Ciudad Victoria, Tamaulipas, México.
Jan 2006 – Dec 2008	Postdoctoral Fellow , Department of Ecology and Evolutionary Biology/Center for Environmental Sciences and Engineering, University of Connecticut, Storrs, CT.

OTHER PROFESSIONAL EXPERIENCE

- 2010 to date **Adjunct Faculty**, Instituto de Ecología Aplicada, Universidad Autónoma de Tamaulipas, Ciudad Victoria, Tamaulipas, México.
- 2012 to date **Adjunct Faculty**, Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México, México, Ciudad de México, México.
- Sept 2011 to date **Research associate**, Museum of Natural History of Tamaulipas (TAMUX), Ciudad Victoria, Tamaulipas, Mexico.
- Jan 2009 to date **Research specialist**, Center for Environmental Sciences and Engineering. University of Connecticut, Storrs, CT.
- Jan 2005–Dec 2005 **Research assistant**, Texas A&M University, College Station, TX.
- Jan 1997–July 1998 **Field Technician**, Montgomery-Watson México (environmental consulting firm), Ciudad de Mexico, Mexico.
- Jan 1993–Dec 1996 **Research/field assistant**, Instituto de Ecología. Universidad Nacional Autónoma de México, Ciudad de México, México.

GRANTS AND CONTRACTS

- 2024-2025 (\$106,805). **Co-PI**. Texas Department of Transportation. Ascertaining best management practices for the roadside habitat of Texas kangaroo rats.
- 2022-2023 (€ 119,984). **Collaborator** for the project: Relation between biodiversity and farmers sociocultural practices for zoonotic disease risks in rural populations of the Selva Maya: Opportunities for the implementation of a One Health Program to enhance living conditions and biological conservation. Funded by the Mexico office of the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ).
- 2020-2022 (€1,000,000). **External advisor** for the proposal: Protecting human health through environmental protection in the Selva Maya: Healthy ecosystems, healthy lives submitted by the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) and funded by the Federal Ministry of Economic Cooperation and Development of Germany (BMZ).
- 2021-2022 (\$50,655). **Co-PI**. United States Fish and Wildlife Services Endangered Species Candidate Conservation Funds. Estimating density and size of roadside populations of the Texas Kangaroo Rat.

- 2019-2023 (\$499,988) **Co-PI**. Texas Parks and Wildlife State Wildlife Grants. Distribution and abundance of summer bats in TX. *Stepped down during project 2nd year due to health reasons.*
- 2018 (\$86,973) **Co-PI**. Texas Parks and Wildlife Section 6 Grants. The next phase of the Texas kangaroo rat research: dispersal, fine-scale movement, habitat management, and initiation of a captive population.
- 2017-2021 (\$23,559). **PI**. United States Forest Service. Using stable isotopes to assess range and dietary shifts of an important insectivorous predator, the Brazilian Free-tailed Bat (*Tadarida brasiliensis*).
- 2016-2019 (\$306,403) **PI**. Texas Parks and Wildlife State Wildlife Grants. Studying Behavior and Testing Strategies to Reduce Impact of Wind Energy on Bats in Texas.
- 2015-2016 (\$69,717) **Co-PI**. Texas Parks and Wildlife State Wildlife Grants. Distribution of the Texas Kangaroo Rat (*Dipodomys elator*) in Texas.
- 2015-2017 (\$386,463) **Co-PI**. NIH R21 (PA13-303). Population genetic structure of *Ixodes scapularis* and disease transmission. **\$138,230 subaward** to Texas State University.
- 2014-2015 (\$1,000,000). Research project for Integrated Control of the Southern Cattle Fever tick in Puerto Rico. Puerto Rico Department of Agriculture. **\$101,793** for **Castro-Arellano** as **PI** for sub award project: Possible role of invasive *Herpestes javanicus* in sustaining cattle fever tick populations in Puerto Rico.
- 2012-2014 (\$390,014) **Research Supervisor (PI)**. Texas Department of Transportation. Contribution of Bridge Dwelling Birds to Bacterial Quality Impairments.
- 2012-2015 (\$130,000 aprox). **Co-PI** with Gerardo Suzan (PI). Consejo Nacional de Ciencia y Tecnologia (Mexico). Proyecto de ciencia básica #179482. Effect of diversity on the prevalence of zoonotic agents in wild rodents in northeastern Chihuahua.
2011. (\$8,000). **PI**. Research Enhancement Program Grant. Texas State University. Tick-borne pathogens from rodents in the MX-US transboundary zone.
- 2010-2012. (\$24,000) **PI**. Texas A&M-CONACyT Collaborative Research Grant Program. Prevalence and characterization of Hantaviruses and Arenaviruses in wild and peridomestic settings of northeastern Mexico.
- 2010-2011 (\$25,000) **PI**. New Professor Grant Program. Secretaria de Educación Publica (Mexico). Ecology of Hantavirus reservoir rodent species in northeastern Mexico.
- 2002 (\$1,000) Grants in aid for research. American Society of Mammalogists.

- 2001 (\$1,760) Theodore Roosevelt Memorial Fund research grant. American Museum of Natural History.
- 2000 (\$2,117) Research grant. Chicago Zoological Society (Brookfield Zoo, Brookfield, Illinois).
- 2000 3 camera trap units (worth \$1,400). Idea Wild (conservation NGO, Fort Collins, Colorado).

PUBLICATIONS

PRINTED/IN PRESS.

Underlined when author is student/former student advised, * when I fulfilled the role of contact author.

- 1) Haney, J., J.A. Veech, **I. Castro-Arellano**, and S. Fritts. 2022. Using museum and citizen-science data to test for possible range contraction of a threatened lizard species. *Herpetologica* 78(2): 102-109. doi 10.1655/Herpetologica-D-21-00022
- 2) Musila, S., **I. Castro-Arellano**, R. Syingi, N. Gichuki. 2022. Diversity of invertebrates in Arabuko-Sokoke Forest and adjacent farmland, Gede-Kilifi County, Kenya. *Journal of Zoological Research* 4(2). doi 10.30564/jzr.v4i2.4666
- 3) Salgado, R., I. Barja, M. D. C. Hernández, B. Lucero, **I. Castro-Arellano**, C. Bonacic, and A. V. Rubio. 2022. Activity patterns and interactions of rodents in an assemblage composed by native species and the introduced black rat: implications for pathogen transmission. *BMC Zoology* 7(1):1-11. doi 10.1186/s40850-022-00152-7
- 4) Martínez-Borrego, D., D.S. Rogers, E. Arellano, F. X. González-Cózatl, **I. Castro-Arellano**, and L. León-Paniagua. 2022. Molecular phylogenetics of the *Reithrodontomys tenuirostris* species group (Rodentia: Cricetidae) with focus in the *Reithrodontomys microdon* species complex. *Journal of Mammalogy* 103:29-44. doi.org/10.1093/jmammal/gyab13
- 5) Tietjen M., M. D. Esteve-Gasent, **I. Castro-Arellano**, and R. F. Medina. 2021. Genomic evidence for host-associated differentiation in an animal parasite, *Dermacentor variabilis*, the American dog tick. *Entomologia Experimentalis et Applicata* 107:95-107. doi 10.1111/eea.13120
- 6) Krishnavajhala, A., A. Brittany, A. Armstrong, S. R. Kneubehl, J. M. Gunter, H. Piccione, J. Kim, R. Ramirez, **I. Castro-Arellano**, W. Roachell, P.D. Teel, J. E. Lopez. 2021. Diversity and distribution of the tick-borne relapsing fever spirochete *Borrelia turicatae*. *PLOS Neglected Tropical Diseases* 15(11):e0009868. doi 10.1371/journal.pntd.0009868
- 7) Cordoba-Aguilar, A., C. N. Ibarra-Cerdeña, **I. Castro-Arellano**, and G. Suzan. 2021. Tackling zoonoses in a crowded world: lessons to be learned from the COVID-19 pandemic. *Acta Tropica* 214:10780. doi: 10.1016/j.actatropica.2020.105780

- 8) Weaver, S.P., A. K. Jones, C. D. Hein and **I. Castro-Arellano**. 2020. Estimating bat fatalities at a wind energy facility in south Texas: implications transcending the U.S.-Mexico border. *Journal of Mammalogy*. Early online. doi: 10.1093/jmammal/gyaa132
- 9) Modarelli, J.J., B. J. Westrich, M. Milholland, M. Tietjen, **I. Castro-Arellano**, R. F. Medina, M. D. Esteve-Gasent. 2020. Prevalence of protozoan parasites in small and medium mammals in Texas, USA. *International Journal of Parasitology, Parasites and Wildlife* 11:229-234. doi: 10.1016/j.ijppaw.2020.02.005
- 10) Weaver, S.P., C. D. Hein, T.R. Simpson, J.W. Evans and **I. Castro-Arellano**. 2020. Ultrasonic acoustic deterrents significantly reduce bat fatalities at wind turbines in Texas. *Global Ecology and Conservation* 24:e01099. doi: 10.1016/j.gecco.2020.e01099
- 11) Musila, S., N. Gichuki, **I. Castro-Arellano** and A. Rainho. 2020. Composition and diversity of bat assemblages at Arabuko-Sokoke Forest and the adjacent farmlands, Kenya. *Mammalia* 84(2). doi: 10.1515/mammalia-2018-0117
- 12) Milholland, M.M., **I. Castro-Arellano***, G.E. Garcia-Peña and J. N. Mills. 2019. The Ecology and Phylogeny of Hosts Drive the Enzootic Infection Cycles of Hantaviruses. *Viruses* 11(7):67. doi: 10.3390/v11070671.
- 13) Benavidez, K.M., T. Guerra, M. Torres, D. Rodriguez, J. A. Veech, D. Hahn, R. J. Miller, F. V. Soltero, A. E. Pérez-Ramírez, A. Perez de León, and **I. Castro-Arellano***. 2019. The prevalence of *Leptospira* among invasive small mammals on Puerto Rican cattle farms. *PLOS Neglected Tropical Diseases* 13(5): e0007236. doi: 10.1371/journal.pntd.0007236.
- 14) Bliss, L., J.A. Veech, **I. Castro-Arellano** and T.R. Simpson. 2019. GIS-based habitat fragmentation assessment for the Gulf Coast kangaroo rat (*Dipodomys compactus*) in the Carrizo Sands Region of Texas. *Mammalian Biology* 98:17-27. doi: 10.1016/j.mambio.2019.01.005.
- 15) Ott, S., J.A. Veech, T.R. Simpson, **I. Castro-Arellano** and J. Evans. 2019. Mapping potential habitat and range-wide surveying for the Texas kangaroo rat (*Dipodomys elator*). *Journal of Fish and Wildlife Management* 10(2): e1944-678x. doi: 10.3996/122018-JFWM-113
- 16) Curtis, J.L., M.T. Milholland, T. Schountz, **I. Castro-Arellano** and I. Mali. 2019. Detection of hantavirus-specific antibodies in eastern New Mexico small mammals. *Journal of Wildlife Diseases* 55(4). doi: 10.7589/2018-11-272
- 17) Briskin, E.A., A. Casanovas-Massana, K.R. Ryff, S. Morales-Estrada, C. Hamond, N.M. Perez-Rodriguez, K.M. Benavidez, D.M. Weinberger, **I. Castro-Arellano**, E.A. Wunder Jr., T.M. Sharp, B. Rivera-Garcia, and A.I. Ko. 2019. Seroprevalence, risk factors, and rodent reservoirs of leptospirosis in an urban community of Puerto Rico. *Journal of Infectious Diseases* 220(9). doi: 10.1093/infdis/jiz339
- 18) Gomez-Ortiz, Y., O. Monroy-Vilchis, and **I. Castro-Arellano**. 2019. Activity patterns in a carnivore assemblage from Sierra Nanchititla Natural Park, Central Mexico. *Mammal Research* 64(3):333-342. doi: 10.1007/s13364-019-00415-8

- 19) Musila, S., R. Syingi, N. Gichuki, and I. Castro-Arellano. 2018. Bat activity in the interior of Arubuko-Sokoke Forest and adjacent farmlands in Kenya. *Journal of Bat Research and Conservation* 11(1):39-51. doi: 10.14709/BarbJ.11.1.2018.05
- 20) Romero-Salas, D., A. Cruz-Romero, M.A. Domínguez, N. Ibarra-Priego, F.T. Barradas-Piña, L. N. Domingues, **I. Castro-Arellano**, A.A. Pérez-de-León. 2018. Seroepidemiology of Bovine Herpes Virus-1 infection in water buffaloes from the state of Veracruz, Mexico. *Tropical biomedicine* 35(2):541-552.
- 21) Milholland, M.T., I. Castro-Arellano*, E. Arellano Arenas, F. Gonzalez-Cozatl, G. Suzan, T. Schountz, S. Gonzalez-Padron, A. Vigueras, T. Maikis, B. Westrich, M. D. Esteve-Gassent, M. Torres, E. R. Rodriguez-Ruiz, D. Hahn, and T. E. Lacher, Jr. 2018. Species identity supersedes the dilution effect concerning hantavirus prevalence at sites across Texas and Mexico. *ILAR Journal* 58(3):401-412. doi: 10.1093/ilar/ily001
- 22) Arriaga-Flores, J. C., A. Rodriguez-Moreno, A. Correa-Sandoval, J. V. Horta-Vega, I. Castro-Arellano, C. J. Vazquez-Reyes, and C. S. Venegas-Barrera. 2018. Spatial and environmental variation in phyllostomid bat (Chiroptera, Phyllostomidae) distribution in Mexico. *Animal Biodiversity and Conservation* 41(1):141-159. doi: 10.32800/abc.2018.41.0141
- 23) Milholland, M.T., I. Castro-Arellano*, G. Suzán, G.E. Garcia-Peña, T. E. Lee Jr., R. E. Rohde, A. A. Aguirre and J. N. Mills. 2018. Global Diversity and Distribution of Hantaviruses and their Hosts. *EcoHealth* 15(1):163-208. doi: 10.1007/s10393-017-1305-2.
- 24) Rubio, A. V., I. Castro-Arellano, J. N. Mills, R. List, R. Ávila-Flores, and Gerardo Suzán. 2017. Is species richness driving intra-and interspecific interactions and temporal activity overlap of a hantavirus host? An experimental test. *PloS one* 12, no. 11 (2017): e0188060.
- 25) Aleman A., T. Guerra, T. J. Maikis, M. T. Milholland, I. Castro-Arellano*, M. R. J. Forstner and D. Hahn. 2017. Prevalence of *Trypanosoma cruzi*, the Causal Agent of Chagas Disease, in Texas Rodent Populations. *EcoHealth*. doi: 10.1007/s10393-017-1205-5
- 26) Arriaga-Flores, J. C., E. R. Rodríguez-Ruíz, J. P. Gallo-Reynoso, and I. Castro-Arellano*. 2016. Total leucism in Neotropical otters (*Lontra longicaudis annectens*) from northern Mexico. *Southwestern Naturalist* 61(1): 63-68.
- 27) Esteve-Gassent, M. D., **I. Castro-Arellano**, T. P. Feria-Arroyo, R. Patino, A. Li, R. F. Medina, A. A. Pérez de León, and R. I. Rodríguez-Vivas. 2016. Translating ecology, physiology, biochemistry and population genetics research to meet the challenge of tick and tick-borne diseases in North America. *Archives of Insect Biochemistry and Physiology*, 92(1):38-64. doi: 10.1002/arch.21327
- 28) Donaldson, T. G., A. A. Perez de Leon, **I. Castro-Arellano**, E. Wozniak, W. K. Boyle, R. Hargrove, H. K. Wilder, H. J. Kim, P. D. Teel, and J. E. Lopez. 2016. Geographic distribution of *Ornithodoros turicata*: Assessments based upon climate variation and host diversity. *PLOS Neglected Tropical Diseases*, 10(2):e0004383. doi: 10.1371/journal.pntd.0004383

- 29) Meng, H., A. Y. Li, L. M. C. Junior, **I. Castro-Arellano**, and J. Liu. 2016. Evaluation of DEET and eight essential oils for repellency against nymphs of the lone star tick, *Amblyomma americanum* (Acari: Ixodidae). *Experimental and Applied Acarology*, 68(2):241-9. doi: 10.1007/s10493-015-9994-0
- 30) Di Giacomo, L. D., J. Hernandez, **I. Castro-Arellano** and M. C. Green. 2016. Influence of light and temperature on bridge use by swallows. *Bulletin of the Texas Ornithological Society* 49: 75-81.
- 31) Esteve-Gassent, M. D., A. Grover, T. P. Feria-Arroyo, **I. Castro-Arellano**, R. F. Medina, G. Gordillo-Pérez, and A. A Pérez de León. 2015. Prevalence of *Borrelia burgdorferi*-infected ticks from wildlife hosts, a response to Norris et al. *Parasites and Vectors* 8:129. doi:10.1186/s13071-015-0739-z
- 32) Suzán, G., G. E. García-Peña, **I. Castro-Arellano**, O. Rico, A. V. Rubio, M. J. Tolsá, B. Roche, P. R. Hosseini, A. Rizzoli, K. A. Murray, C. Zambrana-Torrel, A. Alonso Aguirre, P. Daszak, A. Prieur-Richard, J. N. Mills, and J. Guégan. 2015. Metacommunity and phylogenetic structure determine wildlife and zoonotic infectious disease patterns in time and space. *Ecology and Evolution*, 5:865-873.
- 33) Esteve-Gassent, M. D., A. Pérez de León, D. Romero-Salas, T. P. Feria-Arroyo, R. Patino, **I. Castro-Arellano**, G. Gordillo-Perez, A. Auclair, J. Goolsby, R. I. Rodriguez-Vivas, and J. G. Estrada-Franco. 2014. Pathogenic landscape of transboundary zoonotic diseases in the Mexico-US border along the Rio Grande. *Frontiers in Public Health*, 2:177. doi: 10.3389/fpubh.2014.00177.
- 34) Feria-Arroyo, T. P., **I. Castro-Arellano**, G. Gordillo-Perez, A. L. Cavazos, M. Vargas-Sandoval, A. Grover, J. Torres, R. Medina, A. Pérez de León, and M. D. Esteve-Gassent. 2014. Implications of climate change on the distribution of the tick vector *Ixodes scapularis* and risk for Lyme disease in the Texas-Mexico transboundary region. *Parasites and Vectors* 7:199. doi:10.1186/1756-3305-7-199 *This contribution was classified in the journal as a “highly accessed” paper. Equal contribution for first 3 authors.*
- 35) Mancina, C. and **I. Castro-Arellano***. 2013. Unusual overlap in a phytophagous bat ensemble of Western Cuba. *Journal of Tropical Ecology* 29:511-521.
- 36) Almazán, C., **I. Castro-Arellano***, and E. Camacho-Puga. 2013. First record of *Ixodes scapularis* in jaguars (*Panthera onca*). *Southwestern Naturalist* 58:126-127.
- 37) Rodríguez-Ruíz, E. R., **I. Castro-Arellano***, J. Garcia-Jiménez, A. Moreno-Valdez, E. Camacho-Puga, and F. J. Yeberino-González. 2013. First specimens of the collared anteater (*Tamandua mexicana*) for Tamaulipas, Mexico. *Southwestern Naturalist* 58:124-125.
- 38) Arriaga-Flores, J. C., **I. Castro-Arellano***, A. Moreno-Valdez, and A. Correa-Sandoval. 2012. Temporal niche overlap of a riparian forest bat assemblage in subtropical Mexico. *Revista Mexicana de Mastozoología, Nueva Epoca* 2:6-20.
- 39) Arellano, E., **I. Castro-Arellano**, G. Suzan, F. González-Cozatl, R. Morales-Jiménez. 2012. Seroprevalence to Hantavirus in wild rodents from the Sierra de Huautla Biosphere Reserve, Morelos. *Western North American Naturalist* 72:105-109.

- 40) Correa, A., V. Martinez, J. Horta, and **I. Castro**. 2012. Zoogeografía de los gasteropodos terrestres del sur de Tamulipas, Mexico. *International Journal of Tropical Biology* 60:317-331.
- 41) Rodríguez-Ruíz, E. R., **I. Castro-Arellano***, y J. Valencia-Herverth. 2012. New records and appropriate northern range limit of pacas (*Cuniculus paca*) in Mexico. *Southwestern Naturalist* 57:219-221.
- 42) Willig, M. R., S. J. Presley, C. P. Bloch, **I. Castro-Arellano**, L. M. Cisneros, C. L. Higgins, and B. T. Klingbeil. 2011. Tropical metacommunities and elevational gradients: disentangling effects of forest type from other elevational factors. *Oikos* 120:1497-1508.
- 43) Presley, S. J., M. R. Willig, C. P. Bloch, **I. Castro-Arellano**, C. L. Higgins, and B. T. Klingbeil. 2011. A complex metacommunity structure for gastropods along an elevational gradient. *Biotropica* 43:480-488.
- 44) **Castro-Arellano, I.** 2010. Cronoecología y su aplicación al estudio de mamíferos. *Revista Mexicana de Mastozoología* 14:4-6. (*Invited editorial*).
- 45) **Castro-Arellano, I.***, T. E. Lacher, Jr., M. R. Willig, and T. Rangel. 2010. Assessment of assemblage-wide temporal-niche segregation using null models. *Methods in Ecology and Evolution* 1:311-318.
- 46) **Castro-Arellano, I.*** and T. E. Lacher, Jr. 2009. Temporal niche segregation in two rodent assemblages of subtropical Mexico. *Journal of Tropical Ecology* 25:593-603.
- 47) **Castro-Arellano, I.***, G. Suzán, R. Flores-León, R. Morales-Jiménez, and T. E. Lacher, Jr. 2009. Survey for antibody to hantaviruses in Tamaulipas, Mexico. *Journal of Wildlife Diseases*, 45:207-212.
- 48) **Castro-Arellano, I.***, S. J. Presley, L. N. Saldanha, M. R. Willig, and J. M. Wunderle, Jr. 2009. Reduced-impact logging and temporal activity of understorey bats in lowland Amazonia. *Biological Conservation* 142:2131-2139.
- 49) Presley, S., M. R. Willig, **I. Castro-Arellano**, and S. Weaver. 2009. Effects of habitat conversion on temporal activity patterns of phyllostomid bats in lowland Amazonian rainforest. *Journal of Mammalogy* 90:210-221.
- 50) Presley, S. J., M. R. Willig, L. N. Saldanha, J. Wunderle, and **I. Castro-Arellano**. 2009. Reduced-impact logging has little effect on temporal activity of frugivorous bats (Chiroptera) in lowland Amazonia. *Biotropica* 41:369-378.
- 51) **Castro-Arellano, I.***, C. Madrid, T. E. Lacher, Jr., and L. Leon-Paniagua. 2008. Hair trap efficacy to detecting mammalian carnivores in the tropics. *Journal of Wildlife Management* 72:1405-1412.
- 52) **Castro-Arellano, I.***, S. J. Presley, L. N. Saldanha, M. R. Willig, and J. M. Wunderle, Jr. 2007. Effects of reduced-impact logging on bat biodiversity in terra firme forest of lowland Amazonia. *Biological Conservation* 138: 269-285.

- 53) **Castro-Arellano, I.**, G. Suzán, R. Flores-León, R. Morales-Jiménez, and T. E. Lacher, Jr. 2007. First report of Hantavirus occurrence in the nimble-footed mouse, *Peromyscus levipes*, in northern Mexico. *Peromyscus Newsletter* 42:36-38.
- 54) **Castro-Arellano, I.** 2006. Ecological patterns of the small mammal communities at el Cielo Biosphere Reserve, Tamaulipas, México. *Mastozoología Neotropical*, 13:153-155.
- 55) **Castro-Arellano, I.*** and T. E. Lacher, Jr. 2005. A new record and altitudinal extensions for El Cielo Biosphere Reserve mammals, Tamaulipas, México. *Revista Mexicana de Mastozoología* 9:150-154.
- 56) Ortega, J. and **I. Castro-Arellano**. 2001. *Artibeus jamaicensis*. *Mammalian species* 663:1-9.
- 57) **Castro-Arellano, I.**, H. Zarza and R. Medellín. 2000. *Philander opossum*. *Mammalian species* 638:1-8.

MANUSCRIPTS IN JOURNAL REVIEW, DRAFT, IN PREPARATION.

Arnal A., O. Rico, M. T. Milholland, M. L. Vargas, **I. Castro-Arellano**, J. N. Mills, G. Suzán, B. Roche. Larger spatial scale decreases the magnitude of, but does not eliminate, the observed dilution effect for hantaviruses. Submitted to *Journal of Infectious Diseases*.

McCain, C., D.J. Hoeninghaus, **I. Castro-Arellano**, J.E. Jiménez. Structure and mechanisms of metacommunity assembly among medium- and large-bodied mammals in a north Texas countryside ecosystem. Submitted to *Journal of Applied Ecology*.

Castro-Arellano, I. and G. Suzan. Implications for potential spillback SARS-CoV-2 into neotropical wildlife and its relevance for conservation and human health. Draft for submission to *Revista de Medicina Veterinaria*. Invited editorial.

Weaver, S.P., A. K. Jones, N. D. Durish, C. D. Hein and **I. Castro-Arellano**. Bat acoustic activity at wind turbines in South Texas. Draft for submission to *Journal of Mammalogy*.

Peña, T., D. G. Huffman, M. C. Green, **I. Castro-Arellano**. Endangered fish, invasive parasites, and migratory birds: habitat modification as a method to mitigate parasite spillover. Draft for submission to *Endangered Species Research*.

Stoneham, M, **I. Castro-Arellano**, J. Veech, and C. Green. Neotropical carnivores reveal consistent intraspecific temporal niche conservatism and temporal partitioning among species. Draft for submission to *Ecology and Evolution*.

Javan, E., M. Willig, J. Veech, and **I. Castro-Arellano**. Evaluation of the elements of metacommunity structure of small mammals in elevational gradients worldwide. In prep for *Biodiversity and Distributions*.

BOOK CHAPTERS.

Arriaga-Flores, J. C., A. Moreno-Valdez, **I. Castro-Arellano**, E. R. Rodríguez-Ruíz, A. Rodríguez-Moreno and C. S. Venegas-Barrera. 2022. Murciélagos. In: La biodiversidad en Tamaulipas. Estudio de Estado. Vol. ii. Conabio, México, pp. 452-462.

Natural history monographs for 35 mexican mammal species published in: Ceballos, G. (editor). 2014. Mammals of Mexico. John Hopkins University Press. Baltimore, Maryland. The authored species monographs are:

Didelphimorphia

- *Philander opossum*. Pp. 80-82.

Rodentia

- *Otospermophilus atricapillus*. Pp. 166-167.
- *Heteromys desmarestianus*. Pp. 209-211.
- *Chaetodipus fallax*. Pp. 226-227.
- *Chaetodipus goldmani*. Pp. 228-229.
- *Chaetodipus intermedius*. Pp. 230-231.
- *Chaetodipus penicillatus*. Pp. 234-235.
- *Chaetodipus pernix*. Pp. 235-236.
- *Cratogeomys castanops*. Pp. 246.
- *Thomomys bottae*. Pp. 265-267.
- *Thomomys umbrinus*. Pp. 267-269.
- *Oligoryzomys fulvescens*. Pp. 320-321.
- *Oryzomys nelsoni*. Pp. 332-333.
- *Peromyscus hooperi*. Pp. 363-364.
- *Peromyscus melanocarpus*. Pp. 375-376.
- *Peromyscus melanurus*. Pp. 379-380.
- *Peromyscus perfulvus*. Pp. 388-390.
- *Peromyscus polius*. Pp. 390-391.
- *Peromyscus spicilegus*. Pp. 397-398.

Insectivora

- *Cryptotis mexicana*. Pp. 459-460.
- *Cryptotis parva*. Pp. 462-463.
- *Sorex milleri*. Pp. 478.
- *Sorex oreopolus*. Pp. 480.
- *Sorex sclateri*. Pp. 484-485.
- *Sorex stizodon*. Pp. 485-486.
- *Sorex ventralis*. Pp. 486-487.
- *Scalopus aquaticus*. Pp. 491-492.
- *Scapanus latimanus*. Pp. 494-495.

Chiroptera

- *Peropteryx kappleri*. Pp. 673-674.
- *Peropteryx macrotis*. Pp. 674-675.
- *Noctilio albiventris*. Pp. 751-752.
- *Noctilio leporinus*. Pp. 752-754.
- *Molossus aztecus*. Pp. 767-768.
- *Molossus molossus*. Pp. 769-770.
- *Molossus rufus*. Pp. 770-771.

OTHER PUBLICATIONS (REPORTS).

- Veech, J., Milholland, M., Ott, S., Simpson, R., and Castro-Arellano, I. 2018. The next phase of Texas kangaroo rat research: dispersal, fine-scale movement, habitat management, and initiation of a captive population. Final project report for Grant TX E-195-R-1, TPWD and USFWS, 25 pp.
- Weaver, S. P., C. D. Hein, I. **Castro-Arellano**. 2018. Studying behavior and testing strategies to reduce impact of wind energy on bats in Texas. Interim Report. Prepared for Texas Parks and Wildlife Department. Texas State University, San Marcos, Texas.
- Castro-Arellano, I.**, K. Talley, C. Green, D. Hahn, C. Gaedicke, and M. R. J. Forstner. 2014. Contribution of bridge dwelling birds to bacterial water quality impairments. Final report for project 0-6764 prepared for the Texas Department of Transportation.
- Castro-Arellano, I.**, G. Suzán, R. Flores-León, R. Morales-Jiménez, and T. E. Lacher, Jr. 2007. First report of Hantavirus occurrence in the nimble-footed mouse, *Peromyscus levipes*, in northern Mexico. *Peromyscus Newsletter* 42:36-38.

INVITED SEMINARS / SYMPOSIA

- 2023 Invited seminar. Rethinking time as a mediator of ecological interactions has implications from conservation to public health. Biology Department, University of South Florida. Tampa, Florida, April 13th, 2023.
- 2022 Keynote Speaker. New Mexico State University Research Symposium for a USDA funded project. Las Cruces, New Mexico, May 31st, 2022.
- 2021 Capstone talk of Seminar Series. Impacts of wind energy on bats in southern Texas. Centro de investigación en Biodiversidad y conservación, Universidad Autónoma del Estado de Morelos. Cuernavaca, México, April 28th, 2021.
- 2019 Seminar Speaker. Ecological factors affecting Hantavirus prevalence in small mammal communities. Biology Department, Baylor University. Waco, Texas, September 18th, 2019.
- 2017 Keynote Speaker. Prevalence of *Trypanosoma cruzi*, the causative agent of Chagas Disease, in rodent host populations in Texas. Science Symposium for the Anniversary of University Inauguration. Universidad Autónoma del Estado de Morelos. Cuernavaca, Mexico, September 9th, 2017.
- 2015 Keynote Speaker. Host related ecological factors affecting Hantavirus prevalence from global to local scales. 4th International Congress on Disease Ecology. Villahermosa, Tabasco, México, October 14th, 2015.
- 2014 Invited Seminar. Prevalence of Hantaviruses in small mammal assemblages from sylvan and disturbed habitats in Mexico and Texas. Biology Department, Texas Lutheran University, Seguin, Texas, February 21st, 2014.
- 2014 Invited Seminar. Chronoecology studies of wild mammal assemblages in the neotropics. Department of Biology, Trinity University, San Antonio, TX. October 17th, 2014.

- 2013 Keynote speaker. Metacommunity theory as a framework to study symbiont community composition across hosts, space, and time. 3rd International Congress on Disease Ecology. Yucatan, Merida, México. November 22nd, 2013.
- 2012 Invited talk. Use of ecological tools for the study of zoonotic pathogen distribution among hosts. Kika de la Garza Fellowship, USDA-ARS laboratory in Kerrville, TX. June 25th, 2012.
- 2011 Invited Seminar. Role of wildlife ecology across scales as a framework to assess pathogen risks in a human dominated planet. Texas State University, San Marcos. March 30th, 2011.
- 2010 Invited Seminar. Null model assessment of assemblage-wide temporal niche overlap. Instituto de Ecología, A.C. Xalapa, Veracruz, México. June 15th, 2010.

CONFERENCE PRESENTATIONS

2023. Evidence for intraspecific niche conservatism in Tapiridae and Felidae species in the Neotropics. 23rd Annual Texas A&M Ecological Integration Symposium. College Station, Texas. March 29th-31st.

2023. Evidence for temporal partitioning in two wild suid species in the Neotropics. 23rd Annual Texas A&M Ecological Integration Symposium. College Station, Texas. March 29th-31st.

2023. Sars Cov-2 in mammal species across the globe. 23rd Annual Texas A&M Ecological Integration Symposium. College Station, Texas. March 29th-31st.

2023. Activity levels related to lunar brightness and diel activity patterns of Tapiridae and Felidae species across neotropical sites. 41st Annual Meeting of the Texas Society of Mammalogists. Texas Tech University Center, Junction, TX. February 10-12th. ***This presentation led by a MS at my lab was awarded the Robert Packard award for best overall oral presentation.***

2022. Community structure in a countryside – testing predictions from island biogeography vs. habitat amount hypotheses. 101st Annual Meeting of the American Society of Mammalogists. Tucson, Arizona. June 17th-21st.

2021. Mitigating disease risks by analyzing activity patterns of wildlife. 100th Annual Meeting of the American Society of Mammalogists. Virtual meeting. June 14th–18th.

2021. Temporal partitioning between two Neotropical peccary species. 100th Annual Meeting of the American Society of Mammalogists. Virtual meeting. June 14th–18th.

2020. Analysis of landscape variables impacting pathogen presence in medium and small sized mammals. 38th Annual Meeting of the Texas Society of Mammalogists. Texas Tech University Center, Junction, TX. February 9-11th.

2020. Behavioral analysis of bats at a south Texas wind energy facility using thermal cameras and acoustic detectors. 38th Annual Meeting of the Texas Society of Mammalogists. Texas Tech University Center, Junction, TX. February 9-11th.

2019. Ultrasonic acoustic deterrents reduce bat fatalities at wind turbines in south Texas. Conference on Wind Energy and Wildlife, Stirling, Scotland. August 27th–30th.

2019. Acoustic activity of *Tadarida brasiliensis* during fall at wind turbines in south Texas. 99th Annual Meeting of the American Society of Mammalogists, Washington, D.C. June 28th–July 2nd.

2019. Using stable isotopes to assess range and dietary shifts of an important insectivorous predator, the Brazilian free-tailed bat (*Tadarida brasiliensis*). 99th Annual Meeting of the American Society of Mammalogists, Washington, D.C. June 28th–July 2nd.

2019. Estimating bat fatalities at a wind energy facility in Texas: implications transcending the U.S.-Mexico border. 99th Annual Meeting of the American Society of Mammalogists, Washington, D.C. June 28th–July 2nd.

2019. Ultrasonic acoustic deterrents reduce bat fatalities at wind turbines in south Texas. 99th Annual Meeting of the American Society of Mammalogists, Washington, D.C. June 28th–July 2nd.

2019. Determining vertebrate host communities of a relapsing fever vector (*Ornithodoros turicata*) in Central TX. 99th Annual Meeting of the American Society of Mammalogists. Washington D.C. June 28th-July 2nd.

2019. Microhabitat use by the Texas kangaroo rat along roadsides dominated by cropland. 99th Annual Meeting of the American Society of Mammalogists. Washington D.C. June 28th-July 2nd.

2019. Ultrasonic acoustic deterrents reduce bat fatalities at wind turbines in south Texas. American Wind Energy Associations Wind Power Conference, Houston, Texas. June 1st–4th.

2019. Ultrasonic acoustic deterrents reduce bat fatalities at wind turbines in south Texas. 55th Annual Meeting of the Texas Chapter of The Wildlife Society, Montgomery, Texas. February 20th–23rd. ***This presentation led by a PhD student at my lab was awarded 1st place in Clarence Cottam Award competition.***

2019. Fine scale movement of the Texas kangaroo rat along roadsides dominated by cropland. 55th Annual Meeting of the Texas Chapter of The Wildlife Society, Montgomery, Texas. February 20th–23rd.

2019. The host community ecology of a tick-borne relapsing fever vector. 37th Annual Meeting of the Texas Society of Mammalogists. Texas Tech University Center, Junction, TX. February 8-10th.

2019. Possible hosts for *Ornithodoros turicata*, a relapsing fever vector in Central Texas. Women in Science and Engineering Conference. Texas State University, San Marcos, TX. ***This presentation led by a MS student at my lab was awarded 1st place in poster competition.***

2019. Determining a Possible Host Community for *Ornithodoros turicata*, a tick-borne relapsing fever vector in Central Texas. 3rd International Conference on Relapsing Fever. New Braunfels, TX. March 31st-April 3rd.
2018. Testing ultrasonic acoustic deterrents for reducing bat fatalities at wind turbines in south Texas. Wind-Wildlife Conference, American Wind Wildlife Institute and National Wind Coordinating Collaborative Conference. St. Paul, Minnesota. November 27th-30th, 2018.
2018. Post-construction fatality monitoring at a wind energy facility in Starr County, Texas. 98th Annual Meeting of the American Society of Mammalogists. Manhattan, Kansas. June 25th-29th, 2018.
2018. Testing ultrasonic acoustic deterrents for reducing bat fatalities at wind turbines in south Texas. 65th Annual meeting of the Southwestern Association of Naturalists, San Marcos, TX. April 12th-16th, 2018.
2018. Species identity of hosts is more relevant than host richness regarding hantavirus prevalence at sites across Texas and Mexico. 65th Annual meeting of the Southwestern Association of Naturalists, San Marcos, TX. April 12th-16th, 2018.
2018. Activity patterns of Hantavirus infected cotton rats. 65th Annual meeting of the Southwestern Association of Naturalists. Texas State University, San Marcos, TX. April 12th-16th, 2018.
2018. Integrating host community ecology into disease ecology of tick-borne relapsing fever. 65th Annual meeting of the Southwestern Association of Naturalists, San Marcos, TX. April 12th-16th, 2018.
2018. Modeling potential habitat throughout the historic range of the Texas Kangaroo Rat. 65th Annual meeting of the Southwestern Association of Naturalists, San Marcos, TX. April 12th-16th, 2018.
2018. Testing ultrasonic acoustic deterrents for reducing bat fatalities at wind turbines in south Texas. Women in Science and Engineering Conference, San Marcos, Texas. March 2nd, 2018. ***This presentation led by a PhD student at my lab was awarded 1st place in poster competition.***
2018. Potential effects of Hantavirus on activity patterns of *Sigmodon hispidus*. Women in Science and Engineering Conference, San Marcos, Texas. March 2nd, 2018.
2018. Testing ultrasonic acoustic deterrents for reducing bat fatalities at wind turbines in south Texas. 54th Annual Meeting of the Texas Chapter of the Wildlife Society. Dallas, Texas. February 8th-11th, 2018. ***This presentation led by a PhD student at my lab was awarded 1st place in poster competition.***
2018. Potential effects of Hantavirus on activity patterns of *Sigmodon hispidus*. 54th Annual Meeting of the Texas Chapter of the Wildlife Society. Dallas, Texas. February 8th-11th, 2018.

2018. Comparing the behavior, ecology, and host-associations of *Ixodes scapularis* between regions with low and high Lyme disease prevalence. Program Symposium: Crossing Borders for a Healthier Tomorrow: the Role of Entomology in the One Health Initiative. Entomological Society of America Annual Meeting. Vancouver, British Columbia, Canada. Nov 11th-14th.
2018. Activity patterns of hantavirus infected cotton rats. 12th Annual Undergraduate Research Conference. Texas State University, San Marcos, TX. March 8th, 2018. ***This presentation led by an undergraduate summer intern at my lab was awarded 1st place in poster competition.***
2017. Potential effects of Hantavirus on activity patterns of *Sigmodon hispidus*. STEM Undergraduate Research Conference. Texas State University, San Marcos, TX. April 28th, 2018.
2017. Assessing mammalian host use patterns of hard-bodied ticks and infection with *Borrelia burgdorferi* in Texas. 35th Annual Meeting, Texas Society of Mammalogists. Junction, Texas. February 10th-11th, 2017.
2017. Using soil associations to model potential habitat of the kangaroo rat. 53rd Annual Meeting of the Texas Chapter of the Wildlife Society. San Antonio, TX. February 17th-19th, 2017.
2017. Rodents, Hantaviruses, and the Long Road Ahead. 67th Annual James Steele Conference on Diseases in Nature Transmissible to Man. Irving, Texas. 24th-26th May 2017.
2017. Prevalence of hantaviruses in rodent assemblages from sylvan and disturbed habitats in Mexico and Texas. 97th Annual Meeting of the American Society of Mammalogists, Moscow, Idaho. June 20th-24th, 2017.
2016. Population genetic structure of *Ixodes scapularis* questing at different heights. 25th International Congress of Entomology, Orlando, Florida. September 25th-30th, 2016.
2016. Prevalence of hantaviruses in rodent assemblages in from sylvan and disturbed habitats in Mexico and Texas. 63th Annual meeting of the Southwestern Association of Naturalists, México City, México. April 14th-17th, 2016.
2016. New records for Puerto Rico of endoparasitic helminths from the Small Indian Mongoose (*Herpestes auropunctatus*). 52nd Annual Meeting of the Texas Chapter of the Wildlife Society, San Antonio, Texas. February 18th-20th, 2016.
2016. Role of small mammals as *Leptospira* reservoirs on Puerto Rican dairy farms. 52nd Annual Meeting of the Texas Chapter of the Wildlife Society, San Antonio, Texas. February 18th-20th, 2016.
2016. *Leptospira* prevalence in small mammals on Puerto Rican dairy farms. 63th Annual meeting of the Southwestern Association of Naturalists, México City, México. April 14th-17th, 2016.

2016. Investigation of potential avian and bat impacts at a proposed wind farm in South Texas. 52th Annual Meeting of the Texas Chapter of the Wildlife Society, San Antonio, Texas. February 18th-19th, 2016.

2016. Prevalence of endoparasitic helminths of the Small Indian Mongoose (*Herpestes auropunctatus*) on the island of Puerto Rico. Southwestern Association of Parasitologists. Lake Texoma, Oklahoma. April 14th-16th, 2016.

2015. Prevalence of *Trypanosoma cruzi*, the causal agent of Chagas disease, from wild rodent populations from Texas. 4th International Congress on Disease Ecology. Villahermosa, Tabasco, México. October 13th-15th, 2015.

2015. Integrated tick management to mitigate the impact of *Rhipicephalus microplus*, bovine babesiosis, and anaplasmosis in livestock farming systems of Puerto Rico. 14th International Symposium for Veterinary Epidemiology and Economics. Mérida, Yucatán, México. November 3rd-7th, 2015.

2015. The potential role of wildlife reservoirs on *Leptospira* prevalence in Puerto Rico. 62nd Annual meeting of the Southwestern Association of Naturalists. San Diego, California. April 2nd-5th, 2015.

2015. A macro ecological approach to emerging zoonotic pathogens: a key role for interspecies barriers examined by metacommunity and phylogenetic theories. 100th Ecological Society of America annual meeting. Baltimore, Maryland. August 9th-14th, 2015.

2015. Small Mammal Assemblage Structure Can Predict Hantavirus Seroprevalence Worldwide. 65th Annual James Steele Conference on Diseases in Nature Transmissible to Man. Galveston, Texas. May 20th-22nd, 2015. **Talk selected on a competitive basis, presenter was PhD student from my lab.**

2015. Metacommunity theory and infectious diseases. Empirical data at local and broader scales. 27th International Congress of the Society for Conservation Biology. Montpellier, France. August 2nd-6th, 2015.

2015. Ecology and phylogenetic diversity of bats modulate their viral metacommunities. II Biennial Conference of the Latin American Wildlife Disease Association. Bogota, Colombia. September 24th-27th, 2015.

2015. Identifying ecological correlates of Hantavirus prevalence in small mammal assemblages worldwide. 33rd Annual Meeting from the Texas Society of Mammalogists. Junction, Texas. February 13th-15th, 2015.

2015. Assessment of invasive mongoose home range at farms with presence of cattle fever ticks in Puerto Rico. 33rd Annual Meeting from the Texas Society of Mammalogists. Junction, Texas. February 13th-15th, 2015.

2014. Tick prevalence from rodent assemblages at peridomestic and sylvan sites across Texas. 32nd Annual Meeting from the Texas Society of Mammalogists. Junction, Texas. February 14th-16th, 2015. ***MS student presenting won William Davis award for best graduate level oral presentation in classical mammalogy.***
2014. Preliminary comparison of Hantavirus seroprevalence in rodent assemblages from sylvan and peridomestic sites in Texas. 32nd Annual Meeting from the Texas Society of Mammalogists. Junction, Texas. February 14th-16th, 2014.
2014. Climate change, wildlife and the distribution of *Ixodes scapularis*, the Lyme disease vector tick, in the US-Mexico Transboundary region. 63rd Annual International Conference of the Wildlife Disease Association. Albuquerque, New Mexico. July 27th-August 1st, 2014.
2014. Challenges with the southern cattle fever tick in Puerto Rico: then and now. 62nd Annual meeting of the Entomological Society of American. Portland, Oregon. November 16th-19th, 2014.
2013. Antibody seroprevalence of Hantavirus in rodents in mountain cloud forests at central Veracruz. 3rd International Congress on Disease Ecology. Yucatán, Mérida, México. November 20th-23rd, 2013.
2013. Spatial and temporal distribution of *Borrelia burgdorferi*, the agent for Lyme disease, across Texas. 3rd International Congress on Disease Ecology. Yucatán, Mérida, México. November 20th-23rd, 2013.
2013. Current and future distribution of Lyme disease vector ticks in the Texas-México region. 3rd International Congress on Disease Ecology. Yucatán, Mérida, México. November 20th-23rd, 2013.
2013. Diversidad y abundancia de reservorios de Hantavirus en un gradiente de perturbación en México. 3rd International Congress on Disease Ecology. Yucatán, Mérida, México. November 20th-23rd, 2013.
2013. Distribution of *Borrelia burgdorferi* in humans, dogs and ticks in Southern USA. 13th International Conference on Lyme Borreliosis and other tick-borne diseases. Boston, Massachusetts. August 18th-21st, 2013.
2013. Spatial and Temporal distribution of Lyme disease infected ticks in the Texas-México border Region. 13th International Conference on Lyme Borreliosis and other tick-borne diseases. Boston, Massachusetts. August 18th-21st, 2013.
2012. Hantavirus presence at rodent assemblages from Northeastern and Central México. 62nd Annual James Steele Conference on Diseases in Nature Transmissible to Man. San Antonio, Texas. June 20th-22nd, 2012. ***Talk selected on a competitive basis, I. Castro-Arellano as presenter.***
2012. Hantavirus ecology at rodent assemblages from northeastern México. First Conference in Subtropical Biology. Edinburg, Texas. February 20th-22nd, 2012.

2011. Global evaluation of metacommunity structure of bats along elevational gradients. III Congreso Mexicano de Ecología. Sociedad Mexicana de Ecología. Boca del Rio, Veracruz, México. April 3rd-7th, 2011.

2011. Elements of metacommunity structure of bird species over an elevational gradient in northwest México. III Congreso Mexicano de Ecología. Sociedad Mexicana de Ecología. Boca del Rio, Veracruz, México. April 3rd-7th, 2011.

2010. Analysis of temporal niche overlap with null models and its application on mammalian ecology studies. X Congreso Nacional y I Congreso Latinoamericano de Mastozoología. Guanajuato, Guanajuato, México. September 20th-24th, 2010.

2010. Elements of metacommunity structure of small mammals along global elevational gradients. X Congreso Nacional y I Congreso Latinoamericano de Mastozoología. Guanajuato, Guanajuato, México. September 20th-24th, 2010.

2010. Metacommunity structure of small mammals along elevational gradients: a global assessment. Interdisciplinary studies on Global Climate Change and the Ecology and Management of Tropical Montane Ecosystems. Workshop organized by the Pan-American Advanced Studies Institute and funded by NSF. March 6th-14th, 2010.

2007. Temporal niche overlap in a diverse Amazonian bat community. 87th Annual meeting of the American Society of Mammalogists, Albuquerque, New Mexico. June 6th-10th, 2010.

2007. Molecular evolutionary relationships among members of the *Reithrodontomys tenuirostris* species group. 87th Annual meeting of the American Society of Mammalogists, Albuquerque, New Mexico. June 6th-10th, 2010.

2007. Effects of reduced impact logging on bat biodiversity in terra firme forest of lowland Amazonia. 87th Annual meeting of the American Society of Mammalogists, Albuquerque, New Mexico. June 6th-10th, 2010.

2007. Community structure and species composition as determinants in Hantavirus prevalence in Tamaulipas, Mexico. 87th Annual meeting of the American Society of Mammalogists, Albuquerque, New Mexico. June 6th-10th, 2010.

2006. Efficiency of two hair trap designs to detect medium and large mammals. 86th Annual meeting of the American Society of Mammalogists, Amherst, Massachusetts. June 18th-21st, 2006.

2005. Terrestrial and scansorial microhabitat use at two contrasting small mammal communities in subtropical Mexico. 85th Annual meeting of the American Society of Mammalogists, Springfield, Missouri. June 15th-19th, 2005.

2004. Relevance of temporal niche dynamics for rodent community patterns at El Cielo Biosphere Reserve, Mexico. 41st Annual meeting of the Association of Tropical Biology and Conservation. Miami, Florida. July 12th-15th, 2004.

2002. Mammalian species density gradients in Africa. 43rd Annual Symposium of the British Ecological Society: Macroecology, reconciling divergent perspectives on large scale ecological patterns. Birmingham, United Kingdom. April 17th-19th, 2002.

2000. Diversity, endemism, and endangerment patterns of the continental African mammals. 14th International Congress for Conservation Biology. Missoula, Montana. July 23rd-27th, 2000.

1999. Patterns of distribution in the terrestrial mammals of Africa. 79th Annual Meeting of the American Society of Mammalogists. Seattle, Washington. June 20th-24th, 1999.

TEACHING EXPERIENCE

COURSES AS INSTRUCTOR OF RECORD

Texas State University

Techniques in Wildlife Management (BIO443/5435).

Wildlife Management (BIO4423-5423).

Biological Resources: Conservation and Planning (BIO4319).

Problems in Biological Sciences (BIO5390).

Internship in Biological Laboratory Techniques (BIO4481).

Ecology of Infectious Diseases in Wildlife (BIO7414). *New course developed.*

Population and Conservation Biology Seminar (BIO7120).

Wildlife and Recreation: Impact, Management, and Policy (BIO4304-5304).

Conservation of Large Mammals (BIO4351H- 5324). *New course developed.*

These last two courses are associated to my summer Study in America program where I take students for a 2.5 week field trip to the Greater Yellowstone Ecosystem.

Instituto Tecnológico de Cd Victoria, México

Conservation Biology (Graduate level).

Community Ecology (Graduate level). *New course developed.*

Foundations of Research (Graduate level). *New course developed.*

Wildlife Management (Upper undergraduate). *New course developed.*

Mammalogy (Upper undergraduate). *New course developed.*

OTHER TEACHING EXPERIENCE

Texas A&M University

Invited Guest Lecturer

Population ecology graduate class (WFSC624). October, 2002.

Laboratory Instructor

Mammalogy (WFSC401). 2001-2004.

GRADUATE STUDENTS MENTORED

PHD STUDENTS

Current: 1 (Chair); 3 Total (by start year and alphabetically).

- Bahndari, Namrata (2023). Dissertation title to be determined. **Committee Chair.**
- Guerra, Daniel (2021). Investigating home range size, movement, habitat use, and thermal ecology of the Texas Tortoise (*Gopherus berlandieri*) in south Texas. TX State University. Committee Member.
- Adcock, Michelle (2020). Community Ecology Dynamics of Mammalian Wildlife at Road Crossing Structures in South Texas. TX State University. Committee Member.

Graduates: 2 (Chair); 7 Total (by graduation year and alphabetically).

- Nganda Musila, Simon (PhD. 2019). Factors influencing bat community structure and temporal activity patterns in Arabuko-Sokoke Forest, Malindi-Kenya. University of Nairobi. External Committee member.
- Sara Weaver (PhD. 2019). Understanding wind energy impacts on bats and testing reduction strategies in south Texas. TX State University. **Committee Chair. This dissertation received the award for best dissertation at Texas State University in 2019.**
- Villamizar-Gomez, Andrea (PhD. 2019). Prevalence and geographic patterns of *Batrachochytrium dendrobatidis* in Texas. TX State University. Committee member.
- Nolen, Zach (PhD. 2019). A consideration into ways biology-based student organizations facilitate participation in STEM. TX State University. Committee member.
- Matthew Milholland (PhD. 2017). Rodent assemblage structure and ecological factors affecting Hantavirus prevalence at varying spatial scales. Texas State University. **Committee Chair. This dissertation received the award for best dissertation at Texas State University in 2017.**
- Oscar Rico Chavez (PhD. 2015). Ecological and phylogenetic diversity of bats modulate their viral metacommunities. Universidad Nacional Autónoma de México. External Committee member.
- Andre Victor Rubio Carrasco (PhD. 2015). Rodent diversity and its relation with the infectious agent dynamics and encounter frequency among reservoirs from northeast Chihuahua. Universidad Nacional Autónoma de México. External Committee member.

M.SC. STUDENTS

Current: 10 (Chair or Co-Chair), 11 total (by start year and alphabetically).

- Brier Klossing (M.Sc. 2023). Starting fall 2023. Texas State University. **Committee Chair**
- Lofland, Alexandra (M.Sc. 2023). Starting fall 2023. Texas State University. **Committee Chair**
- McElligot, Brian (M.Sc. 2023). Starting fall 2023. Texas State University. **Committee Chair**
- Patterson, Kaitlin (M.Sc. 2023). Starting fall 2023. Texas State University. **Committee Chair**
- Slack, Lauren (M.Sc. 2023). Starting fall 2023. Texas State University. **Committee Chair**

- Berkenkamp, Erin (M.Sc. 2022). Analyzing burrow spacing to assess the establishment of Black-Tailed Prairie Dog (*Cynomys ludovicianus*) colonies. Texas State University. Committee member.
- Berry, Jennifer (M.Sc. 2022). SARS-CoV-2 in mammal species around the world. Texas State University. **Committee Chair**
- Mena, Brianna (M.Sc. 2022). Ascertaining differential use of cave habitats by mammal species based on soft tick abundance. **Committee Chair**
- Gomez, Virgilio (M.Sc. 2021). Non thesis program. Texas State University. **Exit Committee Chair.**
- Reagan, Cassidy (M.Sc. 2021). Elements of Metacommunity Structure for Bat Assemblages Across Elevational Gradients Worldwide. Texas State University. **Committee Chair.**
- Ramirez, Rosa (M.Sc. 2019). Integrating Host Community Ecology into the Disease Ecology of a Tick-Borne Relapsing Fever Vector. Texas State University. **Committee Chair.**

Graduates: 18 (Chair/Co-chair); 41 Total (by graduation year and alphabetically).

- Fallah Abed, Meraj (M.Sc. 2023). Non-thesis MSc program. Texas State University. Committee member.
- Guajardo, Christian (M.Sc. 2023). A Regional and Landscape-scale Analysis of the Habitat Associations of the Mexican Wolf (*Canis lupus baileyi*) Reintroduced into New Mexico and Arizona. Committee member.
- Bergmanson, Stephanie (M.Sc. 2022). Comparison of Tapir species activity patterns across multiple sites in the Neotropics. Texas State University. **Committee Chair.**
- Hernandez-Vazquez, Alfredo (M.Sc. 2022). Efecto de la perturbación de la selva baja caducifolia en la comunidad de helmintos parásitos de roedores. Universidad Autónoma del Estado de Morelos, México. External committee member.
- McCain, Wesley (M.Sc. 2022). The metacommunity ecology and community structure of medium- and large-bodied mammals in north Texas. University of North Texas. External committee member.
- Pena, Tania (M.Sc. 2022). Endangered fish, invasive parasites, and migratory birds: a habitat modification plan designed to mitigate parasite spillover. Committee member.
- Sontheimer, Willis (M.Sc. 2022). Ontogenetic scaling of body mass and antler mass in white-tailed deer (*Odocoileus virginianus*) consuming contrasting low and high energy diets. Texas State University. Committee member.
- Stoneham, Margaret (M.Sc. 2022). Temporal overlap among common mesocarnivores throughout the neotropics. Texas State University. **Committee Chair.**
- Beck, Heather (M.Sc. 2021). Diversity of blood meal sources of triatomines and feral hogs as a potential wildlife reservoir for *Trypanosoma cruzi* in South Central Texas. TX State University. Committee member.
- Tleimat, Jacqueline (M.Sc. 2021). Skirting the Edge: A Study on the Impacts of Habitat Fragmentation on Animal Movements and Assemblages. Texas State University. Committee member.
- Bowlsby, Michaela (M.Sc. 2020). Repellent activity of essential oil blends and isolate compounds against adult *Ornithodoros* ticks. Texas State University. **Committee Chair.**
- Espinoza, Sebastian (M.Sc. 2020). Drivers of a temporal change in the adult sex ratio of a population of roosevelt elk (*Cervus elaphus roosevelti*). TX State University. Committee member.

- Kilgore, Rebecca (M.Sc. 2020). Detection of *Trypanosoma cruzi* in animals from central Texas, USA. TX State University. Committee member.
- Haney, Jared (M.Sc. 2019). Using museum and citizen-science data to examine the range contraction of a threatened lizard species. TX State University. Committee member.
- Spilinek, Sterling (M.Sc. 2019). Rumen-reticulum organ mass and rumen mucosa surface area of white-tailed deer (*Odocoileus virginianus*) consuming two energy diets. Texas State University. Committee member.
- Terry, William (M. Sc. 2019). Habitat use of co-occurring anuran species in three-dimensional cave environments. Committee member.
- Bell, Coby (M.Sc. 2018). Non-thesis MSc program. Texas State University. **Chair of exit committee.**
- Rodriguez, Candice (M.Sc. 2018). Food habits of the invasive mongoose at agricultural landscapes in Puerto Rico. Texas State University. **Committee Chair.**
- Javan, Emily (M.Sc. 2018). Small mammal metacommunity structure over global elevational gradients. Texas State University. **Committee Chair.**
- Martinez, Jose (M.Sc. 2018). Endoparasite fauna present in the invasive mongoose in Puerto Rico. Texas State University. **Committee Co-Chair.**
- Torres, Madison (M.Sc. 2018). Possible role of invasive *Herpestes javanicus* in sustaining cattle fever tick populations in Puerto Rico. Texas State University. **Committee Chair.**
- Fink, Alyssa (M.Sc. 2017). Analysis of dispersal, survival, and habitat selection of reintroduced Texas Horned Lizards (*Phrynosoma cornutum*). Texas State University. Committee member.
- Gold, Brian (M.Sc. 2017). Tick load in ground dwelling avian hosts from disturbed and sylvan habitats in Eastern Texas. Texas State University. **Committee Chair.**
- Ott, Silas (M.Sc. 2017). Distribution of the Texas kangaroo rat (*Dipodomys elator*) in Texas, with comments on microhabitat, habitat, and habitat modeling. Committee member.
- Solis, Gabriela (M.Sc. 2017). Alternative splicing in the superkdf sodium channel mutation in pyrethroid-resistance horn fly *Haematobia irritans*. Texas State University. **Committee Co-Chair.**
- Westrich, Bradford (M.Sc. 2017). Prevalence of *Ixodes scapularis* ticks in mesocarnivores and small mammals from disturbed and sylvan habitats in Eastern Texas. Texas State University. **Committee Chair.**
- Bliss, Laura (M.Sc. 2016). Habitat Availability Assessment for the Gulf Coast Kangaroo Rat (*Dipodomys compactus*) in South-Central Texas. Texas State University. Committee member.
- Jenkerson, Jeffrey (M.Sc. 2016). Patch occupancy and abundance of the crevice Spiny Lizard (*Sceloporus poinsetti*) in the Central Mineral Region of Texas. Texas State University. Committee member.
- Benavidez, Michelle (M.Sc. 2016). Potential role of the invasive mongoose and commensal rodents as *Leptospira* reservoirs in Puerto Rico. Texas State University. **Committee Chair.**
- Aleman, Adriana (M.Sc. 2015). The prevalence of *Trypanosoma cruzi*, the causal agent of Chagas disease, detected in rodent host populations in Texas. Committee member.
- DiGiacomo, Lorissa (M.Sc. 2015). Resource use by Cliff Swallows (*Petrochelidon pyrrhonota*) and Cave Swallows (*Petrochelidon fulva*) during the breeding season. Texas State University. **Committee Co-Chair.**
- Gonzales-Padron, Shiara (M.Sc. 2014). Hantavirus seroprevalence comparison in rodents along a disturbance gradient. Universidad Nacional Autónoma de México. External Committee member.

- Hernandez, Jaqueline (M.Sc. 2014). Assessing fecal contamination at bridges in different streams in Central Texas with and without potential runoff. Texas State University. Committee member.
- Huston, Daniel (M.Sc. 2014). Effects of an invasive trematode on two Texas native fish species. Texas State University. Committee member.
- Maikis, Troy (M.Sc. 2014). Detection of *Borrelia burgdorferi sensu lato* infection in rodents from disturbed and sylvan assemblages across Texas. Texas State University. **Committee Chair.**
- Miller, Stephanie (M.Sc. 2014). Species-specific traits versus site-specific properties as factors influencing the abundances of species. Texas State University. Committee member.
- Orsak, Benjamin (M.Sc. 2014). Impacts of bridge design and land cover characteristics on Cliff Swallow nesting. Texas State University. **Committee Co-Chair.**
- Uthupuru, Susan (M.Sc. 2013). Size and density of a terrestrial gastropod along an elevational gradient. Texas State University. **Committee Chair.**
- Peter Shepherd (M.Sc. 2013). Non-thesis MSc program. Texas State University. **Chair of exit committee.**
- Villamizar-Gomez, Andrea (M.Sc. 2013). Prevalence of *Batrachochytrium dendrobatidis* in amphibian populations of central Texas. Texas State University. Committee member.
- Armando Marines Muñoz (M.Sc. 2012). Evaluation of compaction, sustainability, and durability of pervious concrete mixes. Texas State University. Committee member.
- Julio Cesar Arriaga Flores (M.Sc. 2012). Global evaluation of metacommunity structure of bats along elevational gradients. Instituto Tecnológico de Ciudad Victoria, Tamaulipas, México. **Committee Chair.**

MENTORING/HOSTING INTERNATIONAL SCHOLARS/VISITORS

- 2013-2014 Mentor of Hao Meng, PhD student from Hebei Normal University. Mr. Meng came to my laboratory as a visiting scholar funded by the Chinese Scholarship Council.

MENTORING OF UNDERGRADUATE STUDENT RESEARCH

- 2022-2023 Mentor of Anthony Gomez for an undergraduate volunteer project at my lab.
- 2020 Mentor of Valeria Reyna and Ruben Garza for the summer internship as part of the SURE (STEM Undergraduate Research Experience) program organized by the University College with funding from the US Department of Education.
- 2019 Mentor of Brittany Myrhang for the summer internship as part of the SURE (STEM Undergraduate Research Experience) program organized by the University College with funding from the US Department of Education.
- 2018 Mentor of Danielle Cordani for the summer internship as part of the SURE (STEM Undergraduate Research Experience) program organized by the University College with funding from the US Department of Education.

- 2017 Mentor of Kristin Dyer and Karina Salinas for the summer internship as part of the SURE (STEM Undergraduate Research Experience) program organized by the University College with funding from the US Department of Education.
- 2014 Mentor of Candice Rodriguez and Daisy Garcia (TSU-Biology) summer internships as part of their participation in the USDA-FATE program (TSU-Ag. Dept). Candice presented her work at the Agri-Science Education for the 21st Century Symposium at Florida International University, Miami, Florida.
- 2013 Mentor of Candice Rodriguez (TSU-Biology) and Jennifer Lopez (TSU-Geography) summer internships as part of their participation in the USDA-FATE program (TSU-Ag Dept). Both presented their work at the 2nd Symposium on Agriculture and Related Sciences, CETARS-USDA, Mayaguez, Puerto Rico.

WORKSHOPS

- 2010 Instituto de Ecología, A.C. Null model analysis of temporal niche overlap. June 14-15th, 2010.
- 2010 Interdisciplinary studies on Global Climate Change and the Ecology and Management of Tropical Montane Ecosystems. Presenter/participant. Workshop organized by the Pan-American Advanced Studies Institute and funded by NSF. March 6-14th, 2010.

AWARDS, HONORS, FELLOWSHIPS

- 2017 Presidential Distinction Award for Excellence in Scholarly/Creative Activities from the College of Science and Engineering, Texas State University.
- 2012 **E. Kika de la Garza Science Fellow. United States Department of Agriculture.** Hispanic Serving Institutions National Program.
- 2000 (\$200) Travel award. Society for Conservation Biology annual meeting.
- 2000-2004 (\$32,000 per annum) Fellowship from the Science and Technology Council of Mexico (CONACyT) for PhD at Texas A&M (tuition, stipend and health insurance).
- 1999-2005 (\$4,400) Travel awards from Texas A&M for talk and poster presentations at 4 scientific meetings.
- 1998 (\$32,000) **Fulbright Fellowship** for MS at Texas A&M. Tuition, stipend and health insurance.
- 1998 (\$6,000) Encyclopedia Britannica award for MS tuition.
- 1997 Honorific mention of undergraduate thesis, UNAM.
- 1996 (\$1,200) Fellowship from Fundación UNAM (stipend).
- 1995 (\$1,900 plus housing and travel allowance) Research Training Program (**REU**). National Museum of Natural History, **Smithsonian Institution**. Washington, DC.

PROFESSIONAL ACTIVITIES

UNIVERSITY SERVICE

- 2021 to date Member of the Advisory Council for the National Science Foundation (NSF) Partnership for Research and Education in Materials (PREM) Center for Intelligent Materials Assembly (CIMA), Department of Chemistry and Biochemistry, Texas State University.
- 2017-2020 Member. Institutional Animal Care and Use Committee (IACUC).
- 2017-2021 Member of the Advisory Council for the STEM Undergraduate Research Experience (SURE) program. University College, Texas State University.
- 2013-2016 Session Chair/Judge. International Research Conference for Graduate Students. Event organized by the Graduate College, Texas State University.
- 2013 Serve as Faculty Mentor in the H-LSAMP Scholars Program. Texas State University.
- 2012-2013 Interim Campus Director for the Institute for the Study of Invasive Species. Texas State University
- 2013 Organizing committee. Hispanic Serving Institution Research Symposium. Texas State University.
- 2012 Judge/moderator for presentations at the International Research Conference for Graduate Students. Event organized by the Graduate College, Texas State University.

DEPARTMENTAL SERVICE

- 2023 Member. Search committee for Wildlife Ecology faculty position.
- 2023 Member. Search committee for Evolutionary Ecology faculty position.
- 2019-2022 Member. Diversity and Inclusion Committee. Biology Department, Texas State University.
- 2017-2018 Member. Search committee for Human Dimensions of Wildlife faculty position.
- 2017-2022 Member. Curriculum Committee. Biology Department, Texas State University.
- 2017-2018 Faculty advisor for Texas State Student Chapter of the Wildlife Society.
- 2017-2022 Program director for B.S. in Wildlife Biology.

- 2016-2017 Faculty co-advisor for Texas State Student Chapter of the Wildlife Society.
- 2016 Member. Search committee for Wildlife Biology faculty position.
- 2016 Judge for posters at the 21st Annual Department of Biology student Colloquium.
- 2015 Judge for posters at the 20th Annual Department of Biology student Colloquium.
- 2015 to date Committee Chair for the John T. Baccus Outstanding Archivement Award in Wildlife Biology.
- 2015-2019 Committee Chair for the Lamar and Marilyn Johanson Fellowship award.
- 2013-2014 Member. Search committee for microbiology faculty position.
- 2013-2014 Member. Search committee for stream ecology faculty position.
- 2013 Judge for the talks at the 18th Annual Department of Biology student Colloquium.
- 2012-2017 Member of the weekly Departmental seminar committee.

COMMUNITY SERVICE/OUTREACH

- 2017-2018 Elected vicepresident of HOA council board at the neighborhood where I live in San Marcos.
- July 2016 Presentation/workshop about mammals and wildlife studies for the Boy Scouts Troop 18th, San Marcos, TX.
- Oct 2015 Presentation about myths and facts about vampire bats with 3rd grade students from Crockett Elementary School in San Marcos, TX.
- Nov 2012 Presentation and question/answer session about bats with 1st grade students from Spicewood Elementary School in Austin, TX.

PROFESSIONAL SERVICE

External manuscript reviewer for the following journals: *Viruses*, *PLOS NTD*, *PLOS One*, *Acta Theriologica*, *Biological Conservation*, *Biologia Integrativa y Conservacion*, *Biotropica*, *Community Ecology*, *EcoHealth*, *Ecological Applications*, *Ecology and Evolution*, *Ecology*, *Journal of Mammalogy*, *Journal of Tropical Ecology*, *Journal of Wildlife Management*, *Journal of Wildlife Diseases*, *Oecologia*, *Mastozoología Neotropical*, *Revista Chilena de Historia Natural*, *Revista Latinoamericana de Conservación*, *Revista de Medicina Veterinaria*, *Revista Mexicana de Biodiversidad*, *Revista Mexicana de Mastozoología*, *Southwestern Naturalist*, and *Western North American Naturalist*.

- 2023 to date Associate Editor. [Biología Integrativa y Conservación \(uaem.mx\)](http://Biología Integrativa y Conservación (uaem.mx)). I form part of the inaugural Editorial Team for this recently created Open Access Journal.
- 2023 to date Member of the Conservation Committee, Texas Society of Mammalogists.
- 2021 to date **Board Member (elected position)** of the Wildlife Diseases Working Group (National level) from the Wildlife Society.
- 2019 External Reviewer for Tenure and Promotion for a faculty in the wildlife program at the University of Michigan.
- 2018 to date Associate Editor. Southwestern Naturalist.
- 2017 Member of the FY2017 1890 Capacity Building Grants (CBG) Teaching and Extension Peer Review Panel. National Institute of Food and Agriculture, **U.S. Department of Agriculture.**
- 2015 Member of the FY2015 1890 Capacity Building Grants (CBG) Teaching and Extension Peer Review Panel. National Institute of Food and Agriculture, **U.S. Department of Agriculture.**
- 2017 to date Member of the Scientific Committee for the journal Revista de Medicina Veterinaria published by the Universidad La Salle, Bogota, Colombia.
- 2016-2020 Member of Editorial Committee for the Journal Veterinaria Mexico OA published by the Facultad de Medicina Veterinaria y Zootecnia from the National Autonomous University of Mexico, Mexico City, Mexico.
- 2014 to date Member of the Small Mammal Specialist Group from the International Union for Conservation of Nature (**IUCN**). <https://small-mammals.org/members/>
- 2010 Reviewer for the **National Science Foundation** (Dissertation Improvement Grants).
- 2010 Member of the COTACyT review committee to evaluate applications for federal fellowships to study graduate degrees abroad (Biology/Chemistry division).
- 2008 Participated as a Mexican mammal expert in the **Global Mammal Assessment** Workshop organized by IUCN-World Conservation Union in Zamorano, Honduras. Aided assessment of conservation status of 150+ mammal species (<http://www.iucnredlist.org/mammals>).
- 2007 to date Associate editor. *Revista Mexicana de Mastozoología* (Mexican Mammalogy Journal).
- 2005 - 2007 Member of the Conservation Committee of the American Society of Mammalogists.
- 2005 - 2010 Member of the International Relations Committee of the American Society of Mammalogists.
- 2000 - 2003 Co-chair of the Graduate Program Enhancement Fund (GPEF) Committee at the Department of Wildlife and Fisheries Sciences, Texas A&M.
- 1999 - 2003 Member of the GPEF committee at the Department of Wildlife and Fisheries Sciences, TAMU.
- 2002 Co-chair organizing Committee. Third Annual Ecological Integration Symposium: *Evolutionary Perspectives in Ecological Integration*. This symposium is multidisciplinary event completely run by graduate students at Texas A&M.
- 1999 Treasurer of the TAMU chapter of the Society for Conservation Biology.

PROFESSIONAL ORGANIZATION MEMBERSHIP

American Society of Mammalogists.
Texas Society of Mammalogists.
Southwestern Association of Naturalists.
Asociación Mexicana de Mastozoología.
Asociación Mexicana de Medicina de la Conservación.
Sociedad Mexicana de Ecología.
The Wildlife Society.
Wildlife Disease Association.