

## TEXAS STATE VITA

### I. Academic/Professional Background

A. Name: Ivan Castro-Arellano

Title: Associate Professor

#### B. Educational Background

Degree	Year	University	Major	Thesis/Dissertation
PhD	2005	Texas A&M	Wildlife and Fisheries Sciences	Ecological patterns of the small mammal communities at El Cielo Biosphere Reserve, Tamaulipas, México.
MS	2000	Texas A&M	Wildlife and Fisheries Sciences	Non-thesis
BS	1997	Universidad Nacional Autónoma de México	Biology	Patterns of geographic distribution in the terrestrial mammals of Africa

#### C. University Experience

Position	University	Dates
Associate Professor	Texas State University	August 2017 – to date
Assistant Professor	Texas State University	Aug 2011 – July 2017
Assistant Professor	Instituto Tecnológico de Ciudad Victoria	Jan 2010 – July 2011
Postdoctoral Fellow	Center for Environmental Sciences and Engineering. University of Connecticut	Jan 2006 – Dec 2008

#### D. Relevant Professional Experience

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

## II. TEACHING

### A. Teaching Honors and Awards:

Four official citations from the Student Affairs Office – program that requests graduating students to name a faculty member that most contribute to their success and development (*Erica Ortega, Desiree LaVigne, Jeffrey Jenkerson and Pugh Howell*).

**B. Courses Taught:**

Techniques in Wildlife Management (BIO443/5435, TX State University)  
 Wildlife Management (BIO4423-5423, Texas State University)  
 Wildlife and Recreation: Impact, Management, and Policy (BIO4304-5304, TX State University)  
 Conservation of Large Mammals (BIO4351H / 5324, TX State University)  
 Biological Resources: Conservation and Planning (BIO4319, TX State University)  
 Problems in Biological Sciences (BIO5390, TX State University)  
 Internship in Biological Laboratory Techniques (BIO4481, TX State University)  
 Ecology of Infectious Diseases in Wildlife (BIO7414, TX State University)  
 Population and Conservation Biology Seminar (BIO7120, TX State University)  
 Conservation Biology (Graduate level-Instituto Tecnológico de Cd Victoria, México, 2011)  
 Community Ecology (Graduate level-Instituto Tecnológico de Cd Victoria, México, 2011)  
 Foundations of Research (Graduate level-Instituto Tecnológico de Cd Victoria, México, 2010)  
 Wildlife Management (Upper undergraduate-Instituto Tecnológico de Cd Victoria, México, 2010)

**C. Graduate Theses/Dissertations or Exit Committees (if supervisor, please indicate):****PhD STUDENTS SUPERVISED (by start date).****Current: 0 (Chair); 1 Total.**

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 date 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. Chair.

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. Chair.

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 SUPERVISED (by start date and alphabetically).****Current: 5 (Chair or Co-Chair), 10 total.**

Gomez, Virgilio (M.Sc. 2021). Title of thesis pending. Texas State University. Chair.

Reagan, Cassidy (M.Sc. 2021). Title of thesis pending. Texas State University. Chair.

- Guajardo, Christian (M.Sc. 2021). 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. 2020). Comparison of Tapir species activity patterns across multiple sites in the Neotropics. Texas State University. Chair.
- Hernandez-Vazquez, Alfredo (M.Sc. 2020). 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. 2020). The metacommunity ecology and community structure of medium- and large-bodied mammals in north Texas. University of North Texas. External committee member.
- Sontheimer, Willis (M.Sc. 2020). 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. 2020). Temporal overlap among common mesocarnivores throughout the neotropics. Texas State University. Chair.
- Ramirez, Rosa (M.Sc. 2017). Integrating Host Community Ecology into the Disease Ecology of a Tick-Borne Relapsing Fever Vector. Texas State University. Chair.
- Scott, Allison (M.Sc. 2017). Title of thesis pending. Texas State University. Committee member.

**Graduates: 15 (Chair/Co-chair); 34 Total (by graduation date and alphabetically).**

- 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. Committee member.
- Bowlsby, Michaela (M.Sc. 2020). Repellant activity of essential oil blends and isolate compounds against adult *Ornithodoros* ticks. Texas State University. 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). Chair of exit committee. Texas State University. Non-thesis MSc program student.
- Rodriguez, Candice (M.Sc. 2018). Food habits of the invasive mongoose at agricultural landscapes in Puerto Rico. Texas State University. Chair.
- Javan, Emily (M.Sc. 2018). Small mammal metacommunity structure over global elevational gradients. Texas State University. Chair.
- Martinez, Jose (M.Sc. 2018). Endoparasite fauna present in the invasive mongoose in Puerto Rico. Texas State University. 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. 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. 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. 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. 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. 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. 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. 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. Co-Chair.
- Uthupuru, Susan (M.Sc. 2013). Size and density of a terrestrial gastropod along an elevational gradient. Texas State University. Chair.
- Peter Shepherd (M.Sc. 2013). Chair of exit committee. Texas State University. Non-thesis MSc program student.
- 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. Co-Chair.

D. Courses Prepared and Curriculum Development:

BIO7414. Ecology of Infectious Diseases in Wildlife (taught for the first time at Texas State University in Spring 2012).

BIO4351H-5324. Conservation of Large Mammals (developed to be part of my Study in America program, first offered summer 2018).

E. Funded External Teaching Grants and Contracts:

N/A

F. Submitted, but not Funded, External Teaching Grants and Contracts:

N/A

G. Funded Internal Teaching Grants and Contracts:

N/A

H. Submitted, but not Funded, Internal Teaching Grants and Contracts:

N/A

I. Other:

**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**

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 21<sup>st</sup> 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 2<sup>nd</sup> Symposium on Agriculture and Related Sciences, CETARS-USDA, Mayaguez, Puerto Rico.

### **HELPING STUDENTS OBTAIN SUPPORT**

- 2016 Candice Rodriguez (MSc) obtained a MS fellowship (\$25K/2 years) through a USDA funded program (TSU-Ag Dept).
- 2015-2016 Sara Weaver (PhD) has received multiple awards including the Texas State Graduate College Merrick Doctoral Merit Fellowship (\$9,000), Houston Safari Club Dan L. Duncan Scholarship (\$6,000), Texas Chapter of the Wildlife Society Scholarship (\$1,500), Texas State Biology Department Durrenberger Scholarship for Women in Science (\$1500) and the Howard Schulze Biology Scholarship (\$500).
- 2014-2015 Kathryn Michelle Benavides obtained a MS fellowship through the USDA-FATE program (TSU-Ag Dept).
- 2013-2014 Matt Milholland (PhD) was granted the Houston Safari Club Dan L. Duncan Scholarship (\$10 K).
- 2013 Matt Milholland (PhD, \$1.5 K) and Troy Maikis (MSc, \$1 K) obtained Scholarships from the Deer Breeder Corp.

### **III. SCHOLARLY/CREATIVE**

#### **A. Works in Print**

##### **1. Books (if not refereed, please indicate)**

##### **a. Scholarly Monographs:**

N/A

##### **b. Textbooks:**

N/A

## c. Edited Books:

N/A

## d. Chapters in Books:

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.

## e. Creative Books:

N/A

## 2. Articles

- a. Refereed Journal Articles: (underlined when author is student/former student, \* when I fulfilled the role of contact author).

**IN PRESS**

- 1) Martínez-Borrego, D., D.S. Rogers, E. Arellano, F. X. González-Cózatl, **I. Castro-Arellano**, and L. León-Paniagua. 2021. Molecular phylogenetics of the *Reithrodontomys tenuirostris* species group (Rodentia: Cricetidae) with focus in the *Reithrodontomys microdon* species complex. *Journal of Mammalogy*. doi.org/10.1093/jmammal/gyab133

**PRINTED**

- 2) Tietjen M., M. D. Esteve-Gasent, **I. Castro-Arellano**, and R. F. Medina. Genomic evidence for host-associated differentiation in an animal parasite, *Dermacentor variabilis*, the American dog tick. 2021. *Entomologia Experimentalis et Applicata* 107:95-107. doi 10.1111/eea.13120
- 3) 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
- 4) 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
- 5) 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
- 6) 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
- 7) 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
- 8) 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
- 9) 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.



- 10) 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.
- 11) 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.
- 12) 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
- 13) 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
- 14) 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
- 15) 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
- 16) 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
- 17) 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.
- 18) Milholland, M.T., **I. Castro-Arellano\***, E. Arellano Arenas, F. Gonzalez-Cozatl, G. Suzan, T. Schountz, S. Gonzalez-Padron, A. Viguera, 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
- 19) 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

- 20) 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.
- 21) 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.
- 22) 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
- 23) 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.
- 24) 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
- 25) 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
- 26) 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
- 27) 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.
- 28) 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
- 29) 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.
- 30) 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.
- 31) 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 Leon, 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.*
  - 32) Mancina, C. and **I. Castro-Arellano\***. 2013. Unusual overlap in a phytophagous bat ensemble of Western Cuba. *Journal of Tropical Ecology* 29:511-521.
  - 33) Almazán, C., **I. Castro-Arellano\***, and E. Camacho-Puga. 2013. First record of *Ixodes scapularis* in jaguars (*Panthera onca*). *Southwestern Naturalist* 58:126-127.
  - 34) 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.
  - 35) 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.
  - 36) 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.
  - 37) 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.
  - 38) 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.
  - 39) 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.
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  - 41) **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.
  - 42) **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.

- 43) **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.
- 44) **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.
- 45) 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.
- 46) 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.
- 47) **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.
- 48) **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.
- 49) **Castro-Arellano, I.** 2006. Ecological patterns of the small mammal communities at el Cielo Biosphere Reserve, Tamaulipas, México. *Mastozoología Neotropical*, 13:153-155.
- 50) **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.
- 51) Ortega, J. and **I. Castro-Arellano**. 2001. *Artibeus jamaicensis*. *Mammalian species* 663:1-9.
- 52) **Castro-Arellano, I.**, H. Zarza and R. Medellín. 2000. *Philander opossum*. *Mammalian species* 638:1-8.

## SUBMITTED

Haney, J., J.A. Veech, **I. Castro-Arellano**, and S. Fritts. Using museum and citizen-science data to test for possible range contraction of a threatened lizard species. Submitted to *Herpetologica*. Minor corrections sent back on November 2021.

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 *Ecology*.

b. Non-refereed Articles:

**Castro-Arellano, I.** 2010. Cronoecología y su aplicación al estudio de mamíferos. *Revista Mexicana de Mastozoología* 14:4-6. (Invited editorial).

**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.

3. Abstracts:

N/A

4. 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.

5. Book Reviews:

N/A

6. Other:

N/A

B. Works not in Print

1. Papers Presented at Professional Meetings:

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. doi.org/10.1093/jmammal/gyab133
2019. Using stable isotopes to assess range and dietary shifts of an important insectivorous predator, the Brazilian free-tailed bat (*Tadarida brasiliensis*). 99<sup>th</sup> 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. 99<sup>th</sup> 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. 99<sup>th</sup> 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. 99<sup>th</sup> Annual Meeting of the American Society of Mammalogists. Washington D.C. June 28th- July 02.
2019. Microhabitat use by the Texas kangaroo rat along roadsides dominated by cropland. 99<sup>th</sup> Annual Meeting of the American Society of Mammalogists. Washington D.C. June 28th- July 02.
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. 55<sup>th</sup> 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 1<sup>st</sup> place in Clarence Cottam Award competition/.*
2019. Fine scale movement of the Texas kangaroo rat along roadsides dominated by cropland. 55<sup>th</sup> 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. 37<sup>th</sup> 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 1<sup>st</sup> 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 27-30, 2018.

2018. Post-construction fatality monitoring at a wind energy facility in Starr County, Texas. 98<sup>th</sup> Annual Meeting of the American Society of Mammalogists. Manhattan, Kansas. June 25-29, 2018.

2018. Testing ultrasonic acoustic deterrents for reducing bat fatalities at wind turbines in south Texas. 65<sup>th</sup> Annual meeting of the Southwestern Association of Naturalists, San Marcos, TX. April 12-16, 2018.

2018. Species identity of hosts is more relevant than host richness regarding hantavirus prevalence at sites across Texas and Mexico. 65<sup>th</sup> Annual meeting of the Southwestern Association of Naturalists, San Marcos, TX. April 12-16, 2018.

2018. Activity patterns of Hantavirus infected cotton rats. 65<sup>th</sup> Annual meeting of the Southwestern Association of Naturalists. Texas State University, San Marcos, TX. April 12-16, 2018.

2018. Integrating host community ecology into disease ecology of tick-borne relapsing fever. 65<sup>th</sup> Annual meeting of the Southwestern Association of Naturalists, San Marcos, TX. April 12-16, 2018.

2018. Modeling potential habitat throughout the historic range of the Texas Kangaroo Rat. 65<sup>th</sup> Annual meeting of the Southwestern Association of Naturalists, San Marcos, TX. April 12-16, 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 2, 2018. *This presentation led by a PhD student at my lab was awarded 1<sup>st</sup> 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 2, 2018.

2018. Testing ultrasonic acoustic deterrents for reducing bat fatalities at wind turbines in south Texas. 54<sup>th</sup> Annual Meeting of the Texas Chapter of the Wildlife Society. Dallas, Texas. February 8-11, 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 8-11, 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 11-14.

2018. Activity patterns of hantavirus infected cotton rats. 12<sup>th</sup> Annual Undergraduate Research Conference. Texas State University, San Marcos, TX. *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.

2017. Assessing mammalian host use patterns of hard-bodied ticks and infection with *Borrelia burgdorferi* in Texas. 35<sup>th</sup> Annual Meeting, Texas Society of Mammalogists. Junction, Texas. February 10-11, 2017.

2017. Using soil associations to model potential habitat of the kangaroo rat. 53<sup>rd</sup> Annual Meeting of the Texas Chapter of the Wildlife Society. San Antonio, TX. February 17-19, 2017.

2017. Rodents, Hantaviruses, and the Long Road Ahead. 67<sup>th</sup> Annual James Steele Conference on Diseases in Nature Transmissible to Man. Irving, Texas. 24-26 May 2017.

2017. Prevalence of hantaviruses in rodent assemblages from sylvan and disturbed habitats in Mexico and Texas. 97<sup>th</sup> Annual Meeting of the American Society of Mammalogists, Moscow, Idaho. June 20-24<sup>th</sup>, 2017.

2016. Population genetic structure of *Ixodes scapularis* questing at different heights. 25<sup>th</sup> International Congress of Entomology, Orlando, Florida. September 25-30, 2016.

2016. Prevalence of hantaviruses in rodent assemblages in from sylvan and disturbed habitats in Mexico and Texas. 63<sup>th</sup> Annual meeting of the Southwestern Association of Naturalists, México City, México. April 14-17, 2016.

2016. New records for Puerto Rico of endoparasitic helminths from the Small Indian Mongoose (*Herpestes auropunctatus*). 52<sup>nd</sup> Annual Meeting of the Texas Chapter of the Wildlife Society, San Antonio, Texas. February 18-20, 2016.

2016. Role of small mammals as *Leptospira* reservoirs on Puerto Rican dairy farms. 52<sup>nd</sup> Annual Meeting of the Texas Chapter of the Wildlife Society, San Antonio, Texas. February 18-10, 2016.

2016. *Leptospira* prevalence in small mammals on Puerto Rican dairy farms. 63<sup>th</sup> Annual meeting of the Southwestern Association of Naturalists, México City, México. April 14-17, 2016.



2016. Investigation of potential avian and bat impacts at a proposed wind farm in South Texas. 52<sup>th</sup> Annual Meeting of the Texas Chapter of the Wildlife Society, San Antonio, Texas. February 18-19, 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 14-16, 2016.
2015. Prevalence of *Trypanosoma cruzi*, the causal agent of Chagas disease, from wild rodent populations from Texas. 4<sup>th</sup> International Congress on Disease Ecology. Villahermosa, Tabasco, México. October 13-15, 2015.
2015. Integrated tick management to mitigate the impact of *Rhipicephalus microplus*, bovine babesiosis, and anaplasmosis in livestock farming systems of Puerto Rico. 14<sup>th</sup> International Symposium for Veterinary Epidemiology and Economics. Mérida, Yucatán, México. November 3-7, 2015.
2015. The potential role of wildlife reservoirs on *Leptospira* prevalence in Puerto Rico. 62<sup>nd</sup> Annual meeting of the Southwestern Association of Naturalists. San Diego, California. April 2-5, 2015.
2015. A macro ecological approach to emerging zoonotic pathogens: a key role for interspecies barriers examined by metacommunity and phylogenetic theories. 100<sup>th</sup> Ecological Society of America annual meeting. Baltimore, Maryland. August 9-14, 2015.
2015. Small Mammal Assemblage Structure Can Predict Hantavirus Seroprevalence Worldwide. 65<sup>th</sup> Annual James Steele Conference on Diseases in Nature Transmissible to Man. Galveston, Texas. May 20-22, 2015. *Talk selected on a competitive basis and presenter was PhD student from my lab.*
2015. Metacommunity theory and infectious diseases. Empirical data at local and broader scales. 27<sup>th</sup> International Congress of the Society for Conservation Biology. Montpellier, France. August 2-6, 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 24-27, 2015.
2015. Identifying ecological correlates of Hantavirus prevalence in small mammal assemblages worldwide. 33<sup>rd</sup> Annual Meeting from the Texas Society of Mammalogists. Junction, Texas. February 13-15, 2015.
2015. Assessment of invasive mongoose home range at farms with presence of cattle fever ticks in Puerto Rico. 33<sup>rd</sup> Annual Meeting from the Texas Society of Mammalogists. Junction, Texas. February 13-15, 2015.
2014. Tick prevalence from rodent assemblages at peridomestic and sylvan sites across Texas. 32<sup>nd</sup> Annual Meeting from the Texas Society of Mammalogists. Junction, Texas. February 14-16, 2015. *Graduate student presenting won award for best graduate level oral presentation.*

2014. Preliminary comparison of Hantavirus seroprevalence in rodent assemblages from sylvan and peridomestic sites in Texas. 32<sup>nd</sup> Annual Meeting from the Texas Society of Mammalogists. Junction, Texas. February 14-16, 2014.
2014. Climate change, wildlife and the distribution of *Ixodes scapularis*, the Lyme disease vector tick, in the US-Mexico Transboundary region. 63<sup>rd</sup> Annual International Conference of the Wildlife Disease Association. Albuquerque, New Mexico. July 27-August 1<sup>st</sup>, 2014.
2014. Challenges with the southern cattle fever tick in Puerto Rico: then and now. 62<sup>nd</sup> Annual meeting of the Entomological Society of American. Portland, Oregon. November 16-19, 2014.
2013. Antibody seroprevalence of Hantavirus in rodents in mountain cloud forests at central Veracruz. 3<sup>rd</sup> International Congress on Disease Ecology. Yucatán, Mérida, México. November 20-23<sup>rd</sup>, 2013.
2013. Spatial and temporal distribution of *Borrelia burgdorferi*, the agent for Lyme disease, across Texas. 3<sup>rd</sup> International Congress on Disease Ecology. Yucatán, Mérida, México. November 20-23<sup>rd</sup>, 2013.
2013. Current and future distribution of Lyme disease vector ticks in the Texas-México region. 3<sup>rd</sup> International Congress on Disease Ecology. Yucatán, Mérida, México. November 20-23<sup>rd</sup>, 2013.
2013. Diversidad y abundancia de reservorios de Hantavirus en un gradiente de perturbación en México. 3<sup>rd</sup> International Congress on Disease Ecology. Yucatán, Mérida, México. November 20-23<sup>rd</sup>, 2013.
2013. Distribution of *Borrelia burgdorferi* in humans, dogs and ticks in Southern USA. 13<sup>th</sup> International Conference on Lyme Borreliosis and other tick-borne diseases. Boston, Massachusetts. August 18-21, 2013.
2013. Spatial and Temporal distribution of Lyme disease infected ticks in the Texas-México border Region. 13<sup>th</sup> International Conference on Lyme Borreliosis and other tick-borne diseases. Boston, Massachusetts. August 18-21, 2013.
2012. Hantavirus presence at rodent assemblages from Northeastern and Central México. 62<sup>nd</sup> Annual James Steele Conference on Diseases in Nature Transmissible to Man. San Antonio, Texas. June 20-22<sup>nd</sup>, 2012. *Talk selected on a competitive basis.*
2012. Hantavirus ecology at rodent assemblages from northeastern México. First Conference in Subtropical Biology. Edinburg, Texas. February 20-22<sup>nd</sup>, 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 3-7, 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 3-7, 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 20-24, 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 20-24, 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 6-14<sup>th</sup>, 2010.
2007. Temporal niche overlap in a diverse Amazonian bat community. 87<sup>th</sup> Annual meeting of the American Society of Mammalogists, Albuquerque, New Mexico. June 6-10, 2010.
2007. Molecular evolutionary relationships among members of the *Reithrodontomys tenuirostris* species group. 87<sup>th</sup> Annual meeting of the American Society of Mammalogists, Albuquerque, New Mexico. June 6-10, 2010.
2007. Effects of reduced impact logging on bat biodiversity in terra firme forest of lowland Amazonia. 87<sup>th</sup> Annual meeting of the American Society of Mammalogists, Albuquerque, New Mexico. June 6-10, 2010.
2007. Community structure and species composition as determinants in Hantavirus prevalence in Tamaulipas, Mexico. 87<sup>th</sup> Annual meeting of the American Society of Mammalogists, Albuquerque, New Mexico. June 6-10, 2010.
2006. Efficiency of two hair trap designs to detect medium and large mammals. 86<sup>th</sup> Annual meeting of the American Society of Mammalogists, Amherst, Massachusetts. June 18-21, 2006.
2005. Terrestrial and scansorial microhabitat use at two contrasting small mammal communities in subtropical Mexico. 85<sup>th</sup> Annual meeting of the American Society of Mammalogists, Springfield, Missouri. June 15-19<sup>th</sup>, 2005.
2004. Relevance of temporal niche dynamics for rodent community patterns at El Cielo Biosphere Reserve, Mexico. 41<sup>st</sup> Annual meeting of the Association of Tropical Biology and Conservation. Miami, Florida. July 12-15, 2004.
2002. Mammalian species density gradients in Africa. 43<sup>rd</sup> Annual Symposium of the British Ecological Society: Macroecology, reconciling divergent perspectives on large scale ecological patterns. Birmingham, United Kingdom. April 17-19, 2002.
2000. Diversity, endemism and endangerment patterns of the continental African mammals. 14<sup>th</sup> International Congress for Conservation Biology. Missoula, Montana. July 23-27<sup>th</sup>, 2000.

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

## 2. Invited Talks, Lectures, Presentations:

2021. Capstone talk (Impacts of wind energy on bats in southern Texas. Centro de investigación en Biodiversidad y conservación, Universidad Autónoma del Estado de Morelos, Morelos, México. April 28<sup>th</sup>, 2021.
2019. Seminar Speaker (Host related ecological factors affecting Hantavirus prevalence from global to local scales). Department of Environmental Sciences, Baylor University, Waco, TX. September 18<sup>th</sup>, 2019.
2017. Keynote Speaker. Anniversary of University Foundation. Universidad Autónoma del Estado de Morelos. September 9<sup>th</sup>, 2017.
2015. Keynote Speaker. 4<sup>th</sup> International Congress on Disease Ecology. Villahermosa, Tabasco, México. October 14, 2015.
2014. Invited Seminar. Department of Biology, Texas Lutheran University, Seguin, TX. February 21<sup>st</sup>, 2014.
2014. Invited Seminar. Department of Biology, Trinity University, San Antonio, TX. October 17<sup>th</sup>, 2014.
2013. Keynote speaker at the 3<sup>rd</sup> International Congress on Disease Ecology. Yucatan, Merida, México. November 22<sup>nd</sup>, 2013.
2012. Invited Talk. HSI Research Symposium. Texas State University. March 20<sup>th</sup>, 2013.
2012. Invited talk during Kika de la Garza Fellowship at USDA-ARS laboratory in Kerrville, TX. June 25<sup>th</sup>, 2012.
2011. Invited Seminar. Texas State University, San Marcos. March 30<sup>th</sup>, 2011.
2010. Invited Seminar and workshop. Instituto de Ecología, A.C. Xalapa, Veracruz, México. Null model assessment of assemblage-wide temporal niche overlap. June 14-15<sup>th</sup>, 2010.
2002. Guest lecturer for WFSC-624. Population ecology graduate class. Department of Wildlife and Fisheries Sciences, Texas A&M. October 15<sup>th</sup>, 2002.

## 3. Consultancies:

N/A

## 4. Workshops:

2010. Instituto de Ecología, A.C. Null model analysis of temporal niche overlap. June 14-15<sup>th</sup>, 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 6-14<sup>th</sup>, 2010.

## 5. Other:

## C. Grants and Contracts

## 1. Funded External Grants and Contracts:

- 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). **Collaborator**. USFWS 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 from Co-Pi role 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.
- 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).

2. Submitted, but not Funded, External Grants and Contracts:

2018. (\$806,186). Co-PI. Statewide Assessment of Tricolored Bats. Texas State Comptroller.
2017. (\$272,531/ 3 years). Co-PI. Establishment of a Texas Kangaroo Rat population at Copper Breaks State Park. Texas Parks and Wildlife (Pittman-Robertson funds).
2016. (\$391,206/ 3 years). Collaborator/mentor. REU in Global Change Ecology at the University of Texas Rio Grande Valley. NSF-REU program.
2016. (\$72,250/2 years). Co-PI. Using vectors and reservoirs to assess endemic risk for Chagas disease in South Texas. Texas Department of Health Services.
2016. (\$299,119/3 years). CO-PI. IDEALS for Undergraduates: Infectious Disease Ecology and Leadership Skills. NIFA-USDA.
2015. (\$29,937/1 year). PI. Texas Parks and Wildlife (Conservation License Plate grants). Wildlife impacts from wind energy development in south Texas.
2015. (\$209,062/4 years). PI. Texas Parks and Wildlife. *Pseudogymnoascus destructans* surveillance for early detection of White Nose Syndrome in Texas.
2014. (\$82,146/2 years). Co-PI. State of Texas Comptroller Office. RFP No. 209f for Endangered Species Research Projects for the Texas Kangaroo Rat.

2013. (\$295,969/3 years). Co-PI. NSF-Geography and Spatial Sciences Program. Pathogenic landscapes of arthropod borne pathogens in the Texas-Mexico transboundary regions: spatiotemporal and molecular patterns of Chagas and Lyme disease.
2013. (\$417,000/3 years). Co-PI. NSF-ABI. EcoHelio: Weather data for ecological research.
2013. (\$775,000/3 years). Collaborator. NSF. Integrating Biodiversity and Human Society with Ecological, Evolutionary, and Socioeconomic Processes in Texas.
2013. (\$998,000/3 years). Co-PI. USDA-NIFA-AFRI. Effects of Climate Variability and Change on the Emergence and Re-emergence of High-Threat Diseases of Livestock in the United States.
2013. (\$397,646/2 years). Co-PI. NIH (R21). Population genetic structure of *Ixodes scapularis* and disease transmission. Proposal got a score of 29, which is close to funding rate (23) so has been submitted again integrating comments from reviewers.
2013. (\$250,000/2 years). Co-PI. NIH (R21). Tick microbiome as surveillance tools for emergence of tick-borne pathogens.
2012. (\$500,000/2 years). Co-PI. National Center for Foreign Animal and Zoonotic Disease Defense. Foundational research for surveillance of Tick-borne emerging diseases along the Texas-Mexico border.
2012. (Pre-proposal). Co-PI. National Science Foundation, Division of Environmental Biology. A probabilistic model to predict the geographical spread of species.
2011. (\$9,000). Co-PI. Morris Animal Foundation. Surveying ticks and wildlife in Texas for Lyme disease causing agent affecting domestic animals.

### 3. Funded Internal Grants and Contracts:

2011. (\$8,000). **PI**. Research Enhancement Program Grant. Texas State University. Tick-borne pathogens from rodents in the MX-US transboundary zone.

### 4. Submitted, but not Funded, Internal Grants and Contracts:

2019. (\$16,000). Co-PI. Research Enhancement Program Grant. Texas State University. Estimating the total population size of an endangered kangaroo rat in north-central Texas
2018. (\$16,000). Co-PI. Research Enhancement Program Grant. Texas State University. Habitat fragmentation by oil palm in Borneo.
2017. (\$16,000). Co-PI. Research Enhancement Program Grant. Texas State University. Small mammals as bioindicators of sustainable development of a tropical agroforestry program in the rural Borneo highlands.
2014. (\$8,000). **PI**. Research Enhancement Program Grant. Texas State University. Potential role of the invasive mongoose and commensal rodents as *Leptospira* reservoirs in Puerto Rico.

2015. (\$8,000). PI. Research Enhancement Program Grant. Texas State University. Bat community structure contrast between sylvan and degraded habitats in south Kenya.

#### 5. Pending Internal and External Grants and Contracts

#### D. Fellowships, Awards, Honors:

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 (\$22,000 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 (\$3,040) Travel awards from Texas A&M for talk and poster presentations at 6 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) REU award. National Museum of Natural History, Smithsonian Institution.

#### IV. SERVICE

##### A. University:

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) that is based in the Department of Chemistry and Biochemistry.

2017-to 2020. Member. Institutional Animal Care and Use Committee (IACUC).

2017-to date Member of the Advisory Council for 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.

2012-2013 Interim Campus Director for the Institute for the Study of Invasive Species.

2013. Organizing committee. Hispanic Serving Institution Research Symposium.



2012. Judge/moderator for presentations at the International Research Conference for Graduate Students. Event organized by the Graduate College, Texas State University.

B. Departmental:

2019-to date Member. Diversity and Inclusion Committee. Biology Department, Texas State University.

2017-2018 Member. Search committee for Human Dimensions of Wildlife faculty position.

2017-to date Member. Curriculum Committee. Biology Department, Texas State University.

2017-2018 Faculty advisor for Texas State Student Chapter of the Wildlife Society.

2017-2021 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 21th Annual Department of Biology student Colloquium.

2015 Judge for posters at the 20th Annual Department of Biology student Colloquium.

2015-to 2020 Chair of the selection committee for the John T. Baccus Outstanding Archivement Award in Wildlife Biology.

2015-2019 Chair of the selection committee 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.

C. Community:

2017-2018 Elected vicepresident of HOA council board at the neighborhood where I live in San Marcos.

7/2016 Presentation about mammals and wildlife studies for the Boy Scouts Troop 18<sup>th</sup>, San Marcos, TX.

- 9/2015 Presentation about myths and facts about vampire bats with 3<sup>rd</sup> grade students from Crockett Elementary School in San Marcos, TX.
- 11/2012 Presentation and question/answer session about bats with 1<sup>st</sup> grade students from Spicewood Elementary School in Austin, TX.

D. Professional:

External manuscript reviewer (over 160 in total) for the following journals: *Viruses*, *PLOS NTD*, *PLOS One*, *Acta Theriologica*, *Biological Conservation*, *Biotropica*, *Community Ecology*, *EcoHealth*, *Ecological Applications*, *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 Mexicana de Biodiversidad*, *Revista Mexicana de Mastozoología*, *Southwestern Naturalist*, and *Western North American Naturalist*.

- 2021-date Board Member (elected position) of the Wildlife Diseases Working Group from the Wildlife Society.
- 2018-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.
- 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.
- 2017-date Member of the Scientific Committee for the journal *Revista de Medicina Veterinaria* published by the Universidad La Salle, Bogota, Colombia.
- 2014-date Member of the Small Mammal Specialist Group from the International Union for Conservation of Nature (IUCN).
- 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– 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.

E. Organizations

1. Honorary:

N/A

2. Professional:

Member of the following professional organizations:

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.

F. Service Honors and Awards:

N/A