

## CURRICULUM VITAE

### T. Marie Tipps

Texas A&M University-San Antonio  
1 University Way San  
Antonio, TX 78224  
tmtipps@tamusa.edu

#### Education:

Bachelors of Science in Biology      2010      Angelo State University  
Minor in Chemistry  
Graduated Magna Cum Laude, Highest Honors through the ASU Honors Program

Masters of Science in Biology      2012      Angelo State University  
Thesis: Morphological and molecular variation in Townsend's big-eared bat  
(*Corynorhinus townsendii*) in West Texas

#### Job/Research Experience:

*Texas A&M University-San Antonio*      *San Antonio, TX*  
*Instructor/General Biology Lab Coordinator*      *August 2021-present*  
Responsible for development of curriculum and instruction in General Biology I lecture and lab courses, General Biology II lab courses, and Life Sciences I courses, including coordination of adjuncts. Coordinate TAs for General Biology laboratory courses, including instruction on teaching, classroom management, and experiment design.

*Texas A&M University-San Antonio*      *San Antonio, TX*  
*Adjunct Instructor*      *June 2014-August 2021*  
Responsible for development of curriculum and instruction of a wide variety of courses in the Biology and Chemistry departments. Topics include General Biology I, General Biology II, Life Sciences I, Genetics, Introduction to Microbiology, Organic Chemistry labs, Vertebrate Zoology, History of Biology, and Mammalogy. Maintain Blackboard courses and taught fully online versions of several of these courses.

*Texas A&M University-San Antonio*      *San Antonio, TX*  
*Laboratory Manager/Coordinator*      *August 2013-August 2021*  
Responsible for maintenance of six teaching labs that run 28-30 labs per semester in a variety of disciplines including General Biology, Anatomy and Physiology, Microbiology, Genetics, Molecular Biology, Ecology, Vertebrate Zoology, Vertebrate Embryology, and Bacteriology. Additionally, responsible for laboratory safety, course budgets and spending, supply ordering, and equipment maintenance. Supervises several student workers each semester and collaborates and develops lab activities for several courses including Mammalogy, Ecology, Genetics, Animal Physiology. Acting General Biology I Laboratory coordinator, which includes curriculum development and assessment, maintaining Blackboard site, communication with, and textbook adoption for adjuncts and teaching assistants,

*Eco-Health Alliance*      *New York, NY*  
*EcoHealth Net Research Exchange Program*      *August 2012-November 2012*  
Completed a review of coronaviruses including analysis of new sequence data, learning how to apply different statistical analyses to global data sets and application of molecular and ecological techniques to disease surveillance studies; also attended the EcoHealthNet workshop entitled "Epidemiology and Outbreak Investigation" in June 2012 in Madison, WI with an emphasis on survey design, outbreak

response, ecological niche modeling, disease modeling, molecular diagnostics in outbreak response, and investigating case studies at the National Wildlife Health Center

*Angelo State Natural History Collection*

*San Angelo, TX*

*Graduate Assistant*

*July 2011-August 2012*

One of the lead technicians in updating the museum database, Specify 5, in preparation for an upgrade to Specify 6; duties also included preparing, cataloguing, and installing new museum specimens and tissues; preparing tissue and specimen loans; maintenance of the specimen and tissue collections; training new museum volunteers and workers

*Angelo State University*

*San Angelo, TX*

*Teaching Assistant*

*September 2011-May 2012*

Taught five lab sections each semester for Human Biology and Man and the Environment, the two non-majors Biology courses offered at Angelo State University. Developed introductory lessons for the students, maintained grades and Blackboard course shells for all sections, and motivated students to understand and ask questions about the Biological Sciences.

*Angelo State University*

*San Angelo, TX*

*Graduate Assistant*

*September 2010-May 2011*

Managed two cell biology labs and one molecular biology lab consisting of 20 students each; Maintained instruction handbook for future graduate and lab assistants, assigned and posted grades online for weekly grades; prepared a new lab each week including labs on ELISA, cell culturing, isoenzymes, karyotyping, western blots, restriction enzymes using cell cultures, and sequencing

*Angelo State Natural History Collection (ASNHC)*

*San Angelo, TX*

*Student Worker*

*November 2007-May 2010*

Prepared both tissue and skin specimens; key operator of the museum database (Specify 5); install specimens, catalogue new additions to the collection, and maintenance of both skin and tissue collections; trained new museum workers

*Dr. Loren K. Ammerman's Molecular Research Lab*

*San Angelo, TX*

*Research Assistant*

*September 2008-August 2009*

Lab work included performing DNA extractions, PCR and sequencing reactions, and sequence analysis; completed a systematic review of the bat family Molossidae; saw to the day-to-day functioning of the lab, including solution preparation, autoclaving, equipment upkeep, and ordering lab reagents/equipment; worked on sequencing Bovine viral diarrhea virus using RNA extraction and RT-PCR

*San Antonio Zoo*

*San Antonio, TX*

*Zookeeper Intern-Bird Department*

*May 2007-August 2007*

Tasks included maintenance of zoo enclosures and care and maintenance of zoo animal health under supervision of a trained zookeeper; Worked within the bird department and took care of several different species of birds, including hornbills, bustards, kookaburras, many different passerines, and owls; learned basic husbandry and care of eggs and hatchlings

### **Teaching Experience (Outside Texas A&M-San Antonio):**

- |           |  |
|-----------|--|
| 2013      | Private tutor for high school freshman in all subjects including Biology, Algebra, Speech, Geography, and English        |
| 2013      | Substitute teacher for middle and high school students in various subjects including Science, Math, English, and Spanish |
| 2012      | Covered Man and the Environment lecture period, Department of Biology, Angelo State University                           |
| 2012      | Covered Biogeography lecture period, Department of Biology, Angelo State University                                      |
| 2010-2012 | Covered Zoology classes for 5 lecture periods, Department of Biology, Angelo   |

	State University
2008-2012	Science Days Instructor, taught 4 <sup>th</sup> graders from the San Angelo area during hands-on activities and mini-lectures about birds, mammals, lizards, anatomy, and microbiology, Department of Biology, Angelo State University
2009-2010	STEM/Women in Science Conference Instructor, developed and conducted my own session about Museum Science for girls aged 9-16, in conjunction with the Girl Scouts of America and the Department of Biology, Angelo State University
2009, 2011	Camp Mira Sol Guest Lecturer on bats, conducted sessions for the Haunted Forest weekend at Camp Mira Sol on bats, including lessons on diversity, anatomy, and Texas species for girls aged 6-16, in conjunction with the Girl Scouts of America, Camp Mira Sol, San Antonio, TX

### **Computer Skills:**

Genetic Analysis: Sequencher, MEGA5, PAUP 4.0, Modeltest, Mr. Bayes, Geneious, Genetic Analysis Systems for Beckman Coulter

GIS Software: ArcGIS 9.3 and ArcView 9.3

General: Windows and Apple Platforms, Microsoft Office (including Access and Publisher), R for statistical analysis, SYSTAT statistical program, Blackboard Academic Suite, Adobe Acrobat, Specify 5-Biodiversity Collections Software

### **Relevant Field Experience:**

- Co-leader for bat surveys in Costa Rica during study abroad trip in June 2012 for the class “Measuring and Monitoring Biodiversity”; included mist-netting in tropical rainforest, identification of bat species, recording data, and fecal sample collection
- Assistant to Dr. Loren Ammerman in bat survey and class entitled “Natural History of Bats” including a bat survey in Big Bend National Park; included leading a group of 5-6 students in conducting surveys
- Assistant to Sarah Bartlett for a project on corn-ear worms as a food source for bat species in Big Bend National Park; included mist net surveys and fecal sample collection
- Assistant to Andi Lewis in her project on analyzing species distribution expansions in Texas based on bats submitted to the Texas Department of Health for rabies testing; included specimen and tissue preparation for specimens housed at Texas Tech University and analysis of range extensions based on these records
- Assistant to Dr. Loren Ammerman in several bat surveys to Big Bend National Park, Texas; included mist net set-up, processing of live bats, data entry
- Assistant to Dr. Loren Ammerman for a population survey of the endangered species, *Leptonycteris nivalis*, using thermal imaging technology
- Assistant to Eric Pomposelli for his thesis work on the hog-nosed skunk, *Conepatus leuconotus*; conducted radio-tracking surveys for den site selection study
- Assistant to Dr. Robert Dowler in several mammal surveys in Bentsen Rio Grande Valley State Park; utilized several trapping methods such as Sherman traps, Tomahawk traps, mist nets, and pit falls; processed and prepped mammals for a museum collection
- Assistant to Drs. Robert Dowler and Mike Dixon in mammal and herp trapping at Camp Bowie National Guard training site utilizing the same methods as in the Bentsen Rio Grande Valley State Park Survey

### **Fellowships:**

Carr Research Fellow – Undergraduate 2009-2010

Carr Research Fellow – Graduate 2010-2011

## Presentations:

- 2009           **T. M. Tipps**, D.N. Lee, and L.K. Ammerman. Optimizing PCR conditions in DMP1 for phylogenetic analysis of molossid genera.  
Given at:  
Texas Society of Mammalogists, Texas Tech Biological Station, Junction, TX;  
Tri-Beta South Central Regional Convention. University of Oklahoma Biological Station, Lake Texoma, OK **1<sup>st</sup> Place John C. Johnson Award**
- 2009-2010      L.K. Ammerman, D.N. Lee, and **T.M. Tipps**. Molecular phylogeny of the family Molossidae.  
Given at:  
North American Symposium for Bat Research, Portland, OR; International Conference for Bat Research, Prague, Czech Republic
- 2010           **T.M. Tipps** and L.K. Ammerman. Five new county records of bats (Vespertilionidae and Molossidae) in Texas identified using molecular and morphological techniques. Texas Society of Mammalogists, Texas Tech Biological Station, Junction, TX
- 2010           **T.M. Tipps** and L.K. Ammerman. A molecular approach to the position of *Cheiromeles* (Chiroptera: Molossidae).  
Given at:  
Tri-Beta South Central Regional Convention. University of Oklahoma Biological Station, Lake Texoma, OK **2<sup>nd</sup> place Oral Presentation**; Tri-Beta National Convention. Fort Lewis College, Durango, CO. **1<sup>st</sup> place Frank G. Brooks Award**; Texas Academy of Science, St. Edward's University, Austin, TX
- 2011-2012      **T.M. Tipps** and L.K. Ammerman. Morphological and Molecular Variation in Townsend's Big-eared Bat (*Corynorhinus townsendii*) in west Texas.  
Given at:  
Carr Research Symposium, Angelo State University, San Angelo, TX; 2011 Texas Society of Mammalogists, Texas Tech Biological Station, Junction, TX; North American Society for Bat Research, Toronto, Canada; 2012 Texas Society of Mammalogists, Texas Tech Biological Station, Junction, TX; Texas Academy of Science, Sul Ross University, Alpine, TX

## Research Grants

- 2009-2010      **T.M. Tipps** and L.K. Ammerman. A molecular approach to the phylogenetic position of *Cheiromeles* (Molossidae: Chiroptera)  
 Carr Academic Research Grant \$300; Tri-Beta Research Grant \$650; Texas Academy of Science \$2000

- 2010-2011 **T.M. Tipps** and L.K. Ammerman. Investigating an unusual population of Townsend's big-eared bat in the southwestern U.S. using genetic data
- Carr Academic Research Grant \$500; Texas Academy of Science \$1250; Head of the River Ranch Grant \$1000

**Publications:**

Anthony, S. J., R. Ojeda-Flores, O. Rico-Chávez, I. Navarrete-Macias, C. M. Zambrana-Torrel, M. K. Rostal, J. H. Epstein, **T. M. Tipps**, E. Liang, M. Sanchez-Leon, J. Sotomayor-Bonilla, R. Ávila, R. Medellín, T. Goldstein, G. Suzán, P. Daszak, and W. I. Lipkin, Coronaviruses in bats from Mexico. *Journal of General Virology*. 94: 1028-1038

**Tipps, T. M.**, B. Mayes, and L. K. Ammerman. Accepted. New county records for six species of bats (Vespertilionidae and Molossidae) in Texas. *Texas Journal of Science* 63(2): 141-152

Ammerman, L. K., D. N. Lee, and **T. M. Tipps**. Accepted. Molecular phylogenetic insights into the evolution of free-tailed bats in the subfamily Molossinae (Molossidae: Chiroptera). *Journal of Mammalogy* 93:12-28.

**Professional Membership:**

American Society of Mammalogists – 2011-Present  
Southwestern Association of Naturalists – 2008-Present  
Texas Society of Mammalogists – 2008-Present  
North American Society for Bat Research – 2009-2016  
Texas Academy of Science – 2010-2013