

Caleb D. Phillips

CONTACT INFORMATION

Texas Tech University
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Google Scholar Link

<http://scholar.google.com/citations?user=kCqavJ0AAAAAJ&hl=en>

Natural Science Research Laboratory Link

<http://www.nsrl.ttu.edu/personnel/CalebPhillips/index.htm>

EDUCATION

Ph.D. in Genetics- 2009 Purdue University
Department of Forestry and Natural Resources, advised by John W. Bickham

M.S. in Biology- 2006 Tarleton State University
Department of Biological Sciences, advised by Russell S. Pfau

B.S. in Biology- 2003 Tarleton State University
Department of Biological Sciences

PRESENT POSITIONS

Curator of Genetic Resources Collection, Natural Science Research Laboratory
Museum of Texas Tech University, Lubbock, TX, 79409

Assistant Professor, Department of Biological Sciences
Texas Tech University, Lubbock, Tx, 79409 (as of September 1, 2015)

PROFESSIONAL EXPERIENCE

1. Adjunct Faculty (2014-2015)
Department of Biological Sciences, Texas Tech University, Lubbock, Tx, 79409
2. Principal Scientist (2014-2015)
Bioinformatics Team, Research and Testing Laboratory, Lubbock, TX, 79407
3. Postdoctoral Fellow (2009-2014)
Department of Biological Sciences, Texas Tech University, Lubbock, TX 79409
4. Research Assistant (2006-2009)
Center for the Environment, Purdue University, West Lafayette, IN 47904
5. Genetics Laboratory Technician (2006)
Biology Department, Tarleton State University, Stephenville, TX 76042
6. Graduate Assistant (2003-2006)
Biology Department, Tarleton State University, Stephenville, TX 76042

7. Laboratory Technician (2001-2003)
Pioneer Dairy Laboratory, Stephenville, TX 76041

LECTURES AND SYMPOSIA

1. American Society of Mammalogists
Symposium Organizer, June 22, 2017
"Addressing Consequential Questions in Mammalogy Using Genomics"
2. Society for Integrative and Comparative Biology
Microbiome Workshop, January 6, 2017
"Metagenomic Challenges and Approaches"
3. Society for Integrative and Comparative Biology
Metagenomics Symposium, January 6, 2017
"Microbiome Structural and Functional Interactions Across Bat Dietary Niche Space"
4. Texas Tech University
Department of Biological Sciences, Undergraduate Introduction to Biology, April 12 2016
"Genomics of Mammalian Adaptation"
5. University of New Mexico
Department of Biology Seminar Series, October 2015
"Genome Evolution and Adaptations for Dietary Success"
6. American Society of Mammalogy
Recent Advances in Mammalogy Symposium, June 2014
"Bat Salivary Gland Transcriptomes and Inferences on Adaptation"
7. Department of Immunology and Molecular Microbiology
Texas Tech University Health Sciences Center, February 2014
"Recruitment of alternative splicing in the remarkable evolution of vampire bats"
8. University of Texas at Arlington
Genome Biology Group Seminar Series, October 2012
"A model for Musashi-mediated translational regulation in development and morphological evolution"

PROFESSIONAL RECOGNITION

1. Mortar Board and Omnicron Delta Kappa
Faculty Teaching Recognition Award- January 2017
2. Texas Genetics Society
Outstanding Postdoctoral Fellow Platform Presentation- March 2012
3. Howard Hughes Medical Institute
Summer Postdoctoral Teaching Scholar at Texas Tech University- Summer 2010

SOCIETY MEMBERSHIPS

1. American Society of Mammalogists - Life Member - Systematic Collections Committee Member
2. Texas Genetics Society - Member - Board of Directors (2017-2018) - President-Elect (2018-2019)
3. Texas Society of Mammalogists - Member
4. Society for Integrative and Comparative Biology - Member

TEACHING EXPERIENCES

1. Metagenomics - Graduate
2. Bioinformatics - Graduate
3. Advanced Statistical Phylogeography - Graduate
4. Molecular Systematics and Evolution - Graduate
5. Host-parasite Co-evolution - Undergraduate
6. Animal Biology - Undergraduate
7. Cell and Molecular Biology for Teachers - Graduate

MENTORSHIP

GRADUATE STUDENT COMMITTEE MEMBERSHIP

COMPLETED

1. Jeremy Wilkinson, Ph.D. Student - Major Advisor: Greg Mayer - Completed (Fall 2016)
Texas Tech University, The Institute of Environmental and Human Health
2. Christopher Dunn, MS Student- Major Advisor: Robert Bradley- Completed (Fall 2016)
Texas Tech University, Biological Sciences
3. Amie Sommers, MS Student- Major Advisor: Liam McGuire- Completed (Fall (2017)
Texas Tech University, Biological Sciences

CURRENT

1. Bravada Hill, Masters Student - Major Advisor: Amanda Brown - Current
Texas Tech University, Biological Sciences
2. Hendra Sihaloho, Ph.D. Student - Major Advisor: Amanda Brown - Current
Texas Tech University, Biological Sciences
3. Michael Pinasci, Ph.D. Student - Major Advisor: Clint Boal - Current
Texas Tech University, Natural Resources Management
4. Kelsey Thompson, Ph.D. Student - Major Advisor: Greg Mayer - Current
Texas Tech University, The Institute of Environmental and Human Health
5. Jaspreet Kaur, Ph.D. Student - Major Advisor: Dr. Jyotsna Sharma - Current
Texas Tech University, Plant and Soil Sciences
6. Emma Roberts, Ph.D. Student - Major Advisor: Robert Bradley - Current
Texas Tech University, Biological Sciences
7. Taylor Soniat, Masters Student -Major Advisor: Robert Bradley - Current
Texas Tech University, Biological Sciences
8. Meijun Dong, Ph.D. Student- Major Advisor: Deborah Carr- Current
Texas Tech University, Biological Sciences
9. Anisha Navlekar, Ph.D. Student- Major Advisor: Deborah Carr- Current
Texas Tech University, Biological Sciences
10. Heidi Stevens, MS Student-Major Advisor: Robert Bradley- Current
Texas Tech University, Biological Sciences
11. Laura Blanco-Berdug, Ph.D. Student- Major Advisor: David Ray- Current
Texas Tech University, Biological Sciences

12. Austin Osmanski, Ph.D. Student- Major Advisor: David Ray- Current
Texas Tech University, Biological Sciences
13. Kevin Sullivan, Ph.D. Student- Major Advisor: David Ray- Current
Texas Tech University, Biological Sciences
14. Nicole Paulat, MS Student- Major Advisor: David Ray- Current
Texas Tech University, Biological Sciences
15. Iroro Tanshi, Ph.D. Student- Major Advisor: Tigga Kingston- Current
Texas Tech University, Biological Sciences
16. Saba Nafees, Ph.D. Student- Major Advisor: Sean Rice- Current
Texas Tech University, Biological Sciences
17. Arnab Ghosh, Ph.D. Student- Major Advisor: David Ray- Current
Texas Tech University, Biological Sciences
18. Jordan Brown, Ph.D. Student- Major Advisor: Deborah Carr- Current
Texas Tech University, Biological Sciences
19. Mark Lee, Ph.D. Student- Major Advisor: Lou Densmore- Current
Texas Tech University, Biological Sciences
20. Beth Rogers, Ph.D. Student- Major Advisor: Liam McGuire- Current
Texas Tech University, Biological Sciences
21. Moamen Elmassry, Ph.D. Student- Major Advisors: Hamood Abdul, Michael San Francisco- Current
Texas Tech University, Health Sciences Center, Biological Sciences

GRADUATE STUDENT COMMITTEE CHAIRS

1. Preston McDonald, Masters Student - Current
Texas Tech University, Biological Sciences
2. Oscar Sandate, Masters Student - Current
Texas Tech University, Biological Sciences
3. Jack Francis, Masters Student - Co-chair: Robert Bradley - Current
Texas Tech University, Biological Sciences
4. Laramie Lindsey, Ph.D. Student - Co-chair: Robert Bradley - Current
Texas Tech University, Biological Sciences
5. Howard Huynh, Ph.D. Student - Current
Texas Tech University, Biological Sciences
6. Craig Tipton, Ph.D. Student - Current
Texas Tech University, Biological Sciences
7. Matthew Fox, Ph.D. Student - Current
Texas Tech University, Biological Sciences

UNDERGRADUATE MENTORSHIP

1. Marilyn Mathew, Honors Student; TTU CISER Scholar - (Graduated - Spring 2017)
Texas Tech University Biological Sciences
2. Gregory Knox; TTU CISER Scholar - (Current)
Texas Tech University Biological Sciences

STUDENT PRESENTATIONS

1. Craig Tipton, Phillips Caleb. Chronic Wound Microbiome Colonization on Mouse Model Following Cryogenic Preservation.
Texas Tech University Health Sciences Center BCORE. 22 February 2018. Oral Presentation.
2. Oscar Sandate, Phillips Caleb. Gut-microbiome dynamics throughout reproduction in the Mexican free-tailed bat, *Tadarida brasiliensis*.
Texas Society of Mammalogist, Junction, Texas. 16-18 February 2018. Oral Presentation.
3. McDonald Preston, Phillips Caleb. Status, Distribution, Morphology and Genetics Of *Sigmodon fulviventer dalquesti* in the Chihuahuan Desert Ecoregion.
Texas Society of Mammalogist, Junction, Texas. 16-18 February 2018. Poster Presentation.
4. Vandewege Mike, Phillips Caleb. Identifying the genetic adaptations of salivary glands within Phyllostomidae.
Society for Molecular Biology and Evolution Annual Meeting, 2017.
5. Lindsey Laramie, Platt Neal, Phillips Caleb, Ray David, Bradley Robert. Evaluating the Lineage diversification of *Peromyscus* using a phylogenomic approach.
8th Texas Tech Annual Biological Science Symposium Meeting. April 8th, 2017.
Second Place Oral Presentation in Evolutionary Biology Category.
6. Soniat Taylor, Phillips Caleb, MacDonald Kathy, Wilkinson Jeremy, Bradley Robert. Assessing levels of DNA and RNA degradation in frozen tissues archived in natural history collections.
8th Texas Tech Annual Biological Science Symposium Meeting. April 8th, 2017. First place for Oral Presentation in the category of Museum Science.
7. Francis James, Platt Roy, Phillips C, Bradley Robert. Resolving the Phylogenetic variation in *Peromyscus maniculatus*; Possible evidence for multiple species.
8th Texas Tech Annual Biological Science Symposium Meeting. 2017. Oral Presentation. April 8th, 2017.
8. Mathew, Marilyn, Tipton Craig, Wolcott Randy, Wolcott Rick, Kingston Tigga, Phillips Caleb, Temporal community variance and relative abundance of chronic wound microbiota.
CALUE Undergraduate Research Conference, 28-29 March, 2017. Poster Presentation.
9. Knox Gregory, Sandate Oscar, Mathew Marilyn, Tipton Craig, Fox Matthew, Phillips Caleb, Microbiome and physiological responses to pregnancy.
CALUE Undergraduate Research Conference, 28-29 March, 2017. Poster Presentation.
10. Lindsey Laramie, Platt Neal, Ray David, Phillips Caleb, Bradley Robert. The lineage diversification of *Peromyscus*: evidence from a transcriptomic dataset.
Texas Society of Mammalogist, Junction, Texas. 10-12 February 2017. Oral Presentation.
11. Sandate Oscar, Matthew Fox, Gregory Knox, Marylin Mathew, Craig Tipton, Caleb Phillips. Gut microbiome analysis during pregnancy in *Tadarida brasiliensis*.
Texas Society of Mammalogist, Junction, Texas. 10-12 February 2017. Poster Presentation. Clyde Jones Award: Best Poster Presentation by a Graduate Student in Mammalian Systematics, Molecular Biology and Evolution
12. Soniat Taylor, Phillips Caleb, MacDonald Kathy, Wilkinson Jeremy, Bradley Robert. Assessing levels of DNA and RNA degradation in frozen museum tissues.
Texas Society of Mammalogist, Junction, Texas. 10-12 February 2017. Poster Presentation.
13. Francis James, Platt Neal, Phillips Caleb, Bradley Robert. Resolving the phylogeography and phylogenetic variation in *Peromyscus maniculatus* based on Cytochrome-b.
Texas Society of Mammalogist, Junction, Texas. 10-12 February 2017. Oral Presentation.
14. Wilkinson Jeremy, Hanson John, Phillips Caleb, Wages M, Rees Eric, Mayer Greg. Effects of two polyphenols on the gut microbiome and associated weight gain in mice.

7th Texas Tech Annual Biological Sciences Symposium. Texas Tech University, Lubbock, Texas. 1-2 April 2016.

Second Place, Oral Category, Microbiology Section.

15. Lindsey Laramie, Platt Neal, Ray David, Phillips Caleb, Bradley Robert. Addressing the adaptive radiation in *Peromyscus* using transcriptome data. 7th Texas Tech Annual Biological Sciences Symposium. Texas Tech University, Lubbock, Texas. 1-2 April 2016.

First Place, Oral Category, Evolutionary Biology Section.

16. Francis James, Phillips Caleb, Bradley Robert. Resolving the phylogeography and phylogenetic variation in *Peromyscus maniculatus* using molecular systematics and next gene sequencing.

7th Texas Tech Annual Biological Sciences Symposium. Texas Tech University, Lubbock, Texas. 1-2 April 2016.

First Place, Oral Category, Proposals Section.

17. Lindsey Laramie, Platt Neal, Ray David, Phillips Caleb, Bradley Robert. Addressing the adaptive radiation in *Peromyscus* using transcriptome data.

Annual meeting of the Texas Society of Mammalogists. 12-13 February 2016. Oral Presentation.

18. Francis James, Phillips Caleb, Bradley Robert. Phylogenetics of *Peromyscus maniculatus* based on the mitochondrial gene cytochrome-b.

Annual meeting of the Texas Society of Mammalogists. 12-13 February 2016. Poster Presentation.

REVIEWER ACTIVITY

Nature Ecology and Evolution, Genome Biology and Evolution, Molecular Ecology, Molecular Phylogenetics and Evolution, Journal of Biogeography, Canadian Journal of Zoology, Genetica, Comparative Biochemistry and Physiology, Marine Mammal Science, GENE, Oikos, PLoS One, Journal of Mammalian Evolution, Zoological Studies, BMC Research Notes, PeerJ, MicrobiologyOpen

RESEARCH FOCUS

Thematic Interest: Functional Genomics, Metagenomics

We study the evolution of microbiome community composition and associated metagenomic functional capabilities. Understanding how ecological assembly rules, functional redundancy, host genetics and other environmental factors shape microbial communities is a central theme. Major ongoing projects focus on human wound microbiomes, as well as those of Southeast Asian bats.

We also investigate the role of the post-transcriptional regulatory protein, Musashi-2, during development of the mammalian face.

Other efforts are conservation oriented, with a current project assessing the status and origin of a rare endemic rodent in the Chihuahuan Desert Ecoregion.

PUBLICATIONS

1. DUNN CD, MAULDIN MR, WAGLEY ME, WILKINSON JE, **PHILLIPS CD**, BRADLEY RD (2017) Genetic diversity and the possible origin of contemporary elk (*Cervus canadensis*) populations in the Trans-Pecos region of Texas. *Occasional Papers of the Museum of Texas Tech University*, No. 350.
2. TIPTON CD, MATHEW ME, WOLCOTT RA, WOLCOTT RD, KINGSTON T, **PHILLIPS CD** (2017) Temporal dynamics of relative abundances and bacterial succession in chronic wound communities. *Wound Repair and Regeneration*, DOI: 10.1111/wrr.12555.

3. **PHILLIPS CD**, HANSON JD, WILKINSON J, KOENIG L, REES E, WEBALA P, KINGSTON T (2017) Microbiome Structural and Functional Interactions across Host Dietary Niche Space. *Integrative and Comparative Biology*, DOI: 10.1093/icb/ix011.
4. KUSHAK RI, WINTER HS, BUIE TM, COX SB, **PHILLIPS CD**, WARD NL (2017) Analysis of the duodenal microbiome in autistic individuals: associations with carbohydrate digestions. *Journal of Pediatric Gastroenterology, & Nutrition*. 64:110-116.
5. BAKER RJ, DICKINS B, WICKLIFFE JK, KHAN FA, GASCHAK S, MAKOVA K, **PHILLIPS CD** (2017) Elevated mitochondrial genome variation after 50 generations of radiation exposure in a wild rodent. *Evolutionary Applications*, DOI: 10.1111/eva.12475.
6. ROWAN N, WANG EW, KANAAN A, SAHU N, WILLIAMS JV, **PHILLIPS CD**, LEE, S (2017) Respiratory Viral Detection in the Paranasal Sinuses of Patients with Cystic Fibrosis. *American Journal of Rhinology and Allergy*, 31:105-108.
7. LARSEN RJ, LARSEN PA, **PHILLIPS CD**, GENOWAYS HH, KWIECINSKI GG, PEDERSEN SC, PHILLIPS CJ, BAKER RJ (2017) Patterns of Morphological and Molecular Evolution in the Antillean Tree Bat, *Ardops nichollsi* (Chiroptera: Phyllostomidae). *Occasional Papers Museum Texas Tech University*, No. 345.
8. WOLCOTT RD, HANSON JD, REES E, KOENIG L, **PHILLIPS CD**, WOLCOTT R, COX SB, WHITE J (2016) Analysis of the Chronic Wound Microbiota of 2963 Patients by 16S rDNA Pyrosequencing. *Wound Repair and Regeneration*, DOI:10.1111/wrr.12370.
9. * Webb CVR, Kobozev I, Furr KL, **PHILLIPS CD**, Kottapalli KR, Ostanin DV, Bakkar HC, Grisham MB (2016) Intestinal bacterial composition of lymphopenic mice and susceptibility to CD45RBhigh T cell-induced colitis. *The Journal of Immunology*, 196:188.10.
* Published Conference Abstract, not peer-reviewed
10. WARD NL, **PHILLIPS CD**, NGUYEN D, SHANMUGAM NKN, SONG Y, HODIN R, SHI HN, CHERAYIL BJ, GOLDSTEIN AM (2016) Antibiotic treatment induces long-lasting changes in the fecal microbiota that protect against colitis. *Inflammatory Bowel Diseases*, 10:2328-2340.
11. SAGOT M, **PHILLIPS CD**, BAKER RJ, STEVENS, R (2016) Human-modified habitats change patterns of population genetic structure and group cohesion in Peters tent-roosting bats. *Ecology and Evolution*, doi: 10.1002/ece3.2255.
12. KONSTANTINOS EP, WARD NL, **PHILLIPS CD**, TESHAGER A, PATEL P, MOHAMED MMR, HAKIMIAN S, COX SB, AHMED R, MOAVEN O, KALIANNAN K, ALAM SN, HALLER JF, GOLDSTEIN AM, BHAN AK, MALO MS, HODIN RA (2016) Prevention of antibiotic-associated metabolic syndrome in mice by intestinal alkaline phosphatase. *Diabetes, Obesity and Metabolism*, DOI: 10.1111/dom.12645
13. **PHILLIPS CD**, BAKER RJ (2015) Gene Recruitment by Alternative Splicing Underlies Vampire Bat Salivary Adaptations and Convergences with Sanguivorous Leeches, *Frontiers in Ecology and Evolution*, DOI:10.3389/fevo.2015.00122
14. MCDONOUGH MM, UMBERA R, MAZUCH V, FERGUSON AW, **PHILLIPS CD**, BRYJA J (2015) Multilocus phylogeography of a widespread savanna-woodland adapted rodent reveals the influence of Pleistocene geomorphology and climate change in Africa's Zambezi region. *Molecular Ecology*, 24:5248-5266.
15. ROWAN, N, LEE S, SAHO N, KANAAN A, COX SB, **PHILLIPS CD**, WANG E (2015) The role of viruses in the clinical presentation of chronic rhinosinusitis. *International Forum of Allergy and Rhinology*, 29(6):197-200.

16. * **PHILLIPS CD** (2015) Life history, ecology, and status of fur seals and sea lions of Australia and New Zealand. (Book Review of Fur Seals and Sea Lions, By Roger Kirkwood and Simon Goldsworthy; CSIRO Publishing) *Journal of Mammalian Evolution*, 22(4):597-597.
* Book Review
17. THOMAS J, **PHILLIPS CD**, BAKER RJ, PRITHAM EJ (2014) Rolling-circle transposons catalyze genomic innovation in a mammalian lineage. *Genome Biology and Evolution*, 6, 2595-2610.
18. KLIMOVA A, **PHILLIPS CD**, FIETZ K, OLSEN M, HARWOOD J, AMOS W, HOFFMAN J (2014) Global population structure and demographic history of the grey seal. *Molecular Ecology*, 16, 3999-4017.
19. PHILLIPS CJ, **PHILLIPS CD**, GOECKS J, LESSA EP, SOTERO-CAIO CG, TANDLER B, GANNON MR, BAKER RJ (2014) Dietary and fight energetic adaptations in a salivary gland transcriptome of an insectivorous bat. *PLoS One*, e83512.
20. KHAN FAA, **PHILLIPS CD**, BAKER RJ (2014) Timeframes of speciation, reticulation, and hybridization in the Bulldog bat explained through phylogenetic analysis of all genetic transmission elements. *Systematic Biology*, 63, 96-110.
21. SAGOT M, **PHILLIPS CD**, STEVENS RD, BAKER RJ (2013) Development and characterization of seventeen microsatellite loci for the Peters tent-roosting bat (*Uroderma bilobatum*). *Conservation Genetics Resources*, DOI 10.1007.
22. **PHILLIPS CD**, BUTLER B, FONDON JW, MANTILLA-MELUK H, BAKER RJ (2013) Contrasting evolutionary dynamics of the developmental regulator PAX9, among bats, with evidence for a novel post-transcriptional regulatory mechanism. *PLoS One*, e57649.
23. **PHILLIPS CD**, HOFFMAN JI, GEORGE JC, SUYDAM RS, HUEBINGER RM, PATTON JC, BICKHAM JW (2012) Molecular insights into the historical demography of bowhead whales: understanding the evolutionary basis of contemporary management practices. *Ecology and Evolution*, doi: 10.1002/ece3.374
24. **PHILLIPS CD**, PHELAN G, DOWD SE, MCDONOUGH MM, FERGUSON AW, HANSON JD, SILES L, ORDONEZ-GARZA N, SANFRANCISCO M, BAKER RJ (2012) Microbiome analysis among bats describes influences of host phylogeny, life history, physiology and geography. *Molecular Ecology*, 11, 2617-2627.
25. HOFFMAN JI, GRANT SM, FORCADA J, **PHILLIPS CD** (2011) Bayesian inference of historical bottleneck in a heavily exploited marine mammal. *Molecular Ecology*, 20, 3989-4008.
26. * **PHILLIPS CD**, GELATT TS, PATTON JC, BICKHAM JW (2011) Phylogeography of Steller sea lions: relationships among climate change, effective population size, and genetic diversity. *Journal of Mammalogy*. 92, 1091-1104.
* Cover Article
27. HOFFMAN JI, DASMAHAPATRA KK, AMOS W, **PHILLIPS CD**, GELATT TS, BICKHAM JW (2009) Contrasting patterns of genetic diversity at three different genetic markers in a marine mammal metapopulation. *Molecular Ecology*, 18, 2961-2978.
28. **PHILLIPS CD**, PATTON JC, TRUJILLO R, GELATT TS, BICKHAM JW (2009) Assessing patterns, rates, and homoplasy at HVRI in Steller sea lions, *Eumetopias jubatus*. *Molecular Ecology*, 18, 3379-3393.
29. **PHILLIPS CD**, BICKHAM JW, PATTON JC, GELATT TS (2009) Systematics of Steller sea lions (*Eumetopias jubatus*): subspecies recognition based on concordance of genetics and morphometrics. *Occasional Papers of the Museum of Texas Tech University*, 283.

30. **PHILLIPS CD, HENARD CA, PFAU RS** (2007) Amplified Fragment Length Polymorphism and mtDNA analyses reveal patterns of divergence and hybridization in the cotton rat, *Sigmodon hispidus*. *Journal of Mammalogy*, 88, 351-359.

PRESS COVERAGE

1. <https://www.youtube.com/watch?v=6bd9iqq12Vs>
2. <http://today.ttu.edu/posts/2016/10/expert-halloween>
3. <http://www.sciencedaily.com/releases/2015/10/151030220837.html>
4. <http://phys.org/news/2015-11-vampire-saliva-specially-evolved-blood-feeding.html>
5. <http://gizmodo.com/the-genetic-basis-for-vampirism-may-be-buried-across-th-1739793378>
6. <http://today.ttu.edu/posts/2015/10/vampire-bats-saliva-specially-evolved-for-blood-feeding>
7. <http://esciencenews.com/sources/newswise.scinews/2015/10/30/researchers.and.vampire.bats.saliva.specially.evolved.for.blood.feeding>.
8. <http://pirman.es/videos/la-saliva-de-murcielagos-vampiro-evoluciono-para-alimentarlos-de-sangre/>
9. <http://www.newswise.com/articles/view/642374/?sc=rsla>
10. <http://www.depts.ttu.edu/vpr/discoveries/features/a-design-for-blood.html>
11. <http://today.ttu.edu/posts/2017/01/nsrl-2>
12. <https://www.youtube.com/watch?v=6bd9iqq12Vs>

FUNDING ACTIVITY

1. Title: Community processes structuring assembly and disassembly of bat gut-microbial communities across a gradient of habitat degradation
Organization: National Science Foundation
Division: Division of Environmental Biology
Roles: Tigga Kingston (PI), Caleb Phillips (Co-PI) Award: \$829,576
Year: 2018-2021
2. Title: Genetic Species Identification of *Cicurina sp.*
Organization: Zara Environmental LLC
Mechanism: Contract
Award: \$16,199
Year: 2017-2021
3. Title: Status, Distribution, Morphology and Genetics of *Sigmodon fulviventer dalquesti* in the Chihuahuan Desert Ecoregion
Organization: Texas Parks and Wildlife Department
Mechanism: State Wildlife Grants
Award: \$99, 588
Year: 2017-2019
4. Title: Development of the Wolcott Wound Care Research Collection in the Genetic Resources Collection of the NSRL
Organization: Private Donation from Randy Wolcott
Donation: \$100,000
Year: 2017

5. Title: Status of bighorn sheep in Texas: translocation history, disease risk potential, and establishment of archival tissue collection for range-wide disease surveillance
 Organization: Donation from the Wild Sheep Foundation
 Roles: Warren Conway (lead), Robert Bradley, Caleb Phillips, Samuel Cunningham (research team)
 Donation: \$50,000
 Year: 2017
6. Title: Funding for a PhD student
 Organization: Donation from the Texas Bighorn Sheep Foundation
 Roles: Warren Conway (lead), Robert Bradley, Caleb Phillips, Samuel Cunningham (research team)
 Donation: \$160,000
 Year: 2017
7. Title: Endangered Eyeless *Cicurina* (Araneae: Dictynidae): Species Identification with Genetic Applications
 Organization: TxDOT
 Co-PIs: Robert Baker, James Cokendolpher
 Award: \$ 89,717
 Year: 2014-2016
8. Title: Understanding the genetic consequences of multigenerational exposure to low-dose radiation
 Organization: Private Donation from Jim Sowell
 Award: \$57,000
 Year: 2011
9. Title: Gut microbial compositions of ecologically diversified Chiropteran species
 Organization: RTLGenomics
 Program/solicitation: Cost-sharing grant program for 454-sequencing and data processing
 Award: \$12,000
 Year: 2010

BIOLOGICAL CONSULTING

1. Genetic advisor to Permian Basin Oil Drillers Association. Diagnosis of population genetics and demographics using existing genetic data for the Dune Sagebrush Lizard (*Sceloporus arenicolus*). Advisement regarding proposed listing as Endangered under the Endangered Species Act. (2012)
2. Biostatistical lead at Research and Testing Laboratory. Advisement on experimental design and analysis of metagenomic and genomic studies for cliental from academic and private institutions. (2014-15)
3. Analytical and experimental role in assessing species-status and distribution of endangered eyeless cave spiders, genus *Cicurina*, contracted by TxDOT. (2014-current)
4. Contractor, Battelle Memorial Institute, bioinformatic and biostatistical roles in environmental DNA studies. (2015)