DAREN C. CARD, PH.D.

Curriculum Vitae

Harvard University
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Cambridge, MA 02138

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PROFESSIONAL POSITIONS

National Science Foundation Postdoctoral Research Fellow — 09/2018 – Present
Research Advisor: Dr. Scott V. Edwards
Department of Organismic & Evolutionary Biology & Museum of Comparative Zoology
Harvard University, Cambridge, MA

EDUCATION

Doctor of Philosophy (Ph.D.) in Quantitative Biology — 08/2018
Research Advisor: Dr. Todd A. Castoe
University of Texas, Arlington (UTA), Arlington, TX

Bachelor's Degree (B.S.) in Conservation Biology — 05/2011
SUNY College of Environmental Science and Forestry (ESF), Syracuse, NY

Associate's Degree (A.S.) in Individual Studies — 05/2008
SUNY Jamestown Community College (JCC), Jamestown, NY

PUBLICATIONS

Citation Statistics

Publications: 29 total (plus 3 articles in review/revision)
Total citations: Google Scholar = 459, Scopus = 325
Average citations per publication: Google Scholar = 15.8, Scopus = 11.2
i10-index (*papers cited a minimum of 10 times*): Google Scholar = 13, Scopus = 10
H-index (*h papers cited a minimum of h times*): Google Scholar = 11, Scopus = 10

Google Scholar Profile: http://scholar.google.com/citations?user=umOwsMAAAAAJ
PDFs available for personal use at http://www.darencard.net/publications
* Authors who are/were undergraduate students mentored by the lab
† Authors contributed equally

Peer Reviewed

29. **Card, D.C.**, B.W. Perry, R.H. Adams, D.R. Schield, A.S. Young*, A.L.Andrew, T. Jezkova, G.I.M. Pasquesi, N.R. Hales, M.R. Walsh, M.R. Rochford, F.J. Mazzotti, K.M. Hart, M.E. Hunter, & T.A. Castoe. **In Press**. Novel ecological and climatic conditions drive rapid adaptation in invasive Florida Burmese pythons. ***Molecular Ecology***.

28. Perry, B.W.†/**D.C. Card**†, J.W. McGlothlin, G.I.M. Pasquesi, R.H. Adams, D.R. Schield, N.R. Hales, A.B. Corbin, J.P. Demuth, F.G. Hoffmann, M.W. Vandewege, R. Schott, N. Bhattacharyya, B.S.W. Chang, N.R. Casewell, G. Whiteley, J. Reyes-Velasco, S.P. Mackessy, K.B. Storey, K.K. Biggar, C.N. Passow, C.-H. Kuo, S.E. McGaugh, A.M. Bronikowski, J. de Koning, S.V. Edwards, M.E. Pfrender, P. Minx, E.D. Brodie III, E.D. Brodie Jr., W.C. Warren, & T.A. Castoe. **2018**. Molecular adaptations for sensing and securing prey, and insights into amniote diversity, from the garter snake genome. ***Genome Biology & Evolution***. doi: 10.1093/gbe/evy157.

27. Pasquesi, G.I.M., R.H. Adams, **D.C. Card**, D.R. Schield, A.B. Corbin, B.W. Perry, J. Reyes-Velasco, R.P. Ruggiero, M.W. Vandewege, J.A. Shortt, & T.A. Castoe. **2018**. Evolutionary dynamics of genomic repeat element landscapes in squamate reptiles. ***Nature Communications*** *9*: 2774. doi: 10.1038/s41467-018-05279-1.

26. Schield, D.R., **D.C. Card**, R.H. Adams, A.B. Corbin, T. Jezkova, N.R. Hales, J.M. Meik, C.L. Spencer, L.L. Smith, G. C. Garcia, N.M. Bouzid, J.L. Strickland, C.L. Parkinson, O. Flores-Villela, S.P. Mackessy, & T.A. Castoe. **2018**. Cryptic genetic diversity, population structure, and gene flow dynamics in the highly venomous Mohave rattlesnake (*Crotalus scutulatus*). ***Molecular Phylogenetics & Evolution*** *127*: 669-681. doi: 10.1016/j.ympev.2018.06.013.

25. Adams, R.H, D.R. Schield, **D.C. Card**, & T.A. Castoe. **2018**. Assessing the impacts of positive selection on coalescent-based species tree estimation and delineation. ***Systematic Biology***. doi: 10.1093/sysbio/syy034.

24. **Card, D.C.**, D.R. Schield, & T.A. Castoe. **2018**. Plasticity and local adaptation explain lizard cold tolerance. ***Molecular Ecology*** *27(9)*: 2173-2175. doi: 10.1111/mec.14575.

23. Schott, R.K., A. Van Nynatten, **D.C. Card**, T.A. Castoe, & B. Chang. **2018**. Shifts in selective pressures on snake phototransduction genes associated with photoreceptor transmutation and dim-light ancestry. ***Molecular Biology & Evolution*** *35(6)*: 1376-1389. doi: 10.1093/molbev/msy025.

22. Adams, R.H, D.R. Schield, **D.C. Card**, A.B. Corbin, & T.A. Castoe. **2017**. ThetaMater: Bayesian estimation of population size parameter θ from genomic data. ***Bioinformatics*** *34(6)*: 1072-1073. doi: 10.1093/bioinformatics/btx733.

21. Hales, N.R., D.R. Schield, A.L. Andrew, **D.C. Card**, M.R. Walsh, & T.A. Castoe. **2017**. Contrasting gene expression programs underlie predator-induced phenotypic plasticity within the across generations in *Daphnia*. ***Molecular Ecology*** *26(19)*: 5003-5015. doi:10.1111/mec.14213.

20. Gamble, T., T.A. Castoe, S.V. Nielsen, J.L. Banks, **D.C. Card**, D.R. Schield, G.W. Schuett, & W. Booth. **2017**. The discovery of XY sex chromosomes in a *Boa* and *Python*. ***Current Biology*** *27(14)*: 2148-2153. doi:10.1016/j.cub.2017.06.010.

19. Lotterhos, K., **D.C. Card**, S. Schaal, L. Wang, C. Collins, & R. Verity. **2017**. Composite measures of selection can improve the signal-to-noise ratio in genome scans. ***Methods in Ecology and Evolution*** *8(6)*: 717-727. doi:10.1111/2041-210X.12774.

18. Schield, D.R., R.H. Adams, **D.C. Card**, B.W. Perry, T. Jezkova, A.L. Andrew, G.I.M. Pasquesi, C.L. Spencer, E.E. Sanchez, S.P. Mackessy, & T.A. Castoe. **2017**. Genomic patterns of divergence and admixture in a widely distributed rattlesnake provide insight into speciation with gene flow. ***Ecology and Evolution*** *7(11)*: 3951-3966. doi:10.1002/ece3.2996.

17. Andrew, A.L., B.W Perry, **D.C. Card**, D.R. Schield, R.P. Ruggiero, S.E. McGaugh, A. Choudhary, S.M. Secor, & T.A. Castoe. **2017**. Growth and stress response mechanisms underlying post-feeding regenerative organ growth in the Burmese python. ***BMC Genomics*** *18*: 338. doi:10.1186/s12864-017-3743-1.

16. Schott, R.K., B. Panesar, **D.C. Card**, M. Preston, T.A. Castoe, & B. Chang. **2017**. Targeted hybrid enrichment of complete coding regions across divergent species. ***Genome Biology & Evolution*** *9(2)*: 398-414. doi:10.1093/gbe/evx005.

15. Cox, R.M., C.L. Cox, J.W. McGlothlin, **D.C. Card**, A.L. Andrew, & T.A. Castoe. **2017**. Genetic disintegration: Ontogenetic increases in sex-biased gene expression underlie the breakdown of between-sex genetic correlations. ***American Naturalist*** *189(3)*: 315-332. doi:10.1086/690105.

14. Shortt, J.A., **D.C. Card**, D.R. Schield, Y. Liu, B. Zhong, T.A. Castoe, E.J. Carlton, & D.D. Pollock. **2017**. Whole genome amplification and targeted genome sequencing of *Schistosoma japonicum* miricidia. ***PLOS Neglected Tropical Diseases*** *11(1)*: e0005292. doi:10.1371/journal.pntd.0005292.

12. Verity, R., C. Collins, **D.C. Card**, S.M. Schaal, L. Wang, & K.E. Lotterhos. **2017**. MINOTAUR: A platform for the analysis and visualization of multivariate results from genome scans with R Shiny. ***Molecular Ecology Resources*** *17(1)*: 33-43. doi:10.1111/1755-0998.12579.

13. Adams, R.H., D.R. Schield, **D.C. Card**, H. Blackmon, & T.A. Castoe. **2016**. GppFst: Genomic posterior predictive simulations of F_{ST} and d_{xy} for identifying outlier loci from population genomic data. ***Bioinformatics***. doi:10.1093/bioinformatics/btw795.

11. **Card, D.C.**, D.R. Schield, R.H. Adams, A.B. Corbin, A.L. Andrew, G.I.M. Pasquesi, B. Perry, T. Jezkova, S.M. Boback, W. Booth, & T.A. Castoe. **2016**. Phylogeographic and population genetic analyses reveal multiple species of *Boa* and independent origins of insular dwarfism. ***Molecular Phylogenetics & Evolution*** *102*: 104-116. doi:10.1016/j.ympev.2016.05.034.

10. Streicher, J.W., J.P. McEntee, L.C. Drzich*, **D.C. Card**, D.R. Schield, U. Smart, C.L. Parkinson, T. Jezkova, E.N. Smith, & T.A. Castoe. **2016**. Genetic surfing, not allopatric divergence, explains spatial sorting of mitochondrial haplotypes in venomous coralsnakes. ***Evolution***. doi:10.1111/evo.12967. *(Featured cover article.)*

9. Adams, R.H., H. Blackmon, J. Reyes-Velasco, **D.C. Card**, D.R. Schield, N. Waynewood*, A.L. Andrew, & T.A. Castoe. **2016**. Microsatellite landscape evolutionary dynamics across 450 million years of vertebrate genome evolution. ***Genome*** *59(5)*: 295-310. doi:10.1139/gen-2015-0124.
8. Schield, D.R., M.R. Walsh, **D.C. Card**, A.L. Andrew, R.A. Adams, & T.A. Castoe. **2016**. EpiRADseq: scalable analysis of genome-wide patterns of methylation using next-generation sequencing. ***Methods in Ecology & Evolution*** *7(1)*: 60-69. doi:10.1111/2041-210X.12435. *(Featured cover article.)*
7. Andrew, A.L., **D.C. Card**, R.P. Ruggiero, D.R. Schield, R.H. Adams, D.D. Pollock, S.M. Secor, & T.A. Castoe. **2015**. Rapid changes in gene expression direct rapid shifts in intestinal form and function in the Burmese python after feeding. ***Physiological Genomics*** *47(5)*: 147-157. doi:10.1152/physiolgenomics.00131.2014.
6. Schield, D.R., **D.C. Card**, J. Reyes-Velasco, T. Jezkova, F.N. Proctor, C.L. Spencer, H-W. Herrmann, S.P. Mackessy, & T.A. Castoe. **2015**. Incipient speciation with biased gene flow between two lineages of the Western Diamondback Rattlesnake (*Crotalus atrox*). ***Molecular Phylogenetics & Evolution*** *83*: 213-223. doi:10.1016/j.ympev.2014.12.006.
5. Reyes-Velasco, J., **D.C. Card**, A.L. Andrew, K.J. Shaney, R.H. Adams, D.R. Schield, N.R. Casewell, S.P. Mackessy, & T.A. Castoe. **2015**. Expression of venom gene homologs in diverse python tissues suggests a new model for the evolution of snake venom. ***Molecular Biology & Evolution*** *32(1)*: 173-183. doi:10.1093/molbev/msu294. *(Cover article.)*
4. Jezkova, T., B.R. Riddle, **D.C. Card**, D.R. Schield, M.E. Eckstut, & T.A. Castoe. **2014**. Genetic consequences of a post-glacial range expansion in two co-distributed rodents (genus *Dipodomys*) depends on ecology and genetic marker choice. ***Molecular Ecology*** *24(1)*: 83-97. doi:10.1111/mec.13012.
3. **Card, D.C.**, D.R. Schield, J. Reyes-Velasco, A.L. Andrew, M.K. Fujita, S.J. Oyler-McCance, J.A. Fike, D.F. Tomback, R.P. Ruggiero, & T.A. Castoe. **2014**. Two new low-coverage bird genome references and a comparison of reference-guided versus *de novo* assembly content and utility. ***PLOS ONE*** *9(9)*: e106649. doi:10.1371/journal.pone.0106649.
2. Gilbert, C., J.M. Meik, D. Dashevsky, **D.C. Card**, T.A. Castoe, & S. Schaack. **2014**. Endogenous hepadnaviruses, bornaviruses, and circoviruses in snakes. ***Proceedings of the Royal Society B*** *281(1791)*: 20141122. doi:10.1098/rspb.2014.1122.
1. Castoe. T.A., A.P.J. de Koning, K.T. Hall, **D.C. Card**, D.R. Schield, M.K. Fujita, R.P. Ruggiero, J.F. Degner, J.M. Daza, W. Gu, J. Reyes-Velasco, K.J. Shaney, J.M. Castoe, S.E. Fox, A.W. Poole, D. Polanco*, J. Dobry, M.W. Vandewege, Q. Li, R. Schott, A. Kapusta, P. Minx, C. Feschotte, P. Uetz, D.A. Ray, F.G. Hoffmann, R. Bogden, E.N. Smith, B.S.W. Chang, F. Vonk, N.R. Casewell, C.V. Henkel, M.K. Richardson, S.P. Mackessy, A.M. Bronikowski, M. Yandell, W.C. Warren, S.M. Secor, and D.D. Pollock. **2013**. The Burmese python genome reveals the molecular basis for extreme adaptation in snakes. ***Proceedings of the National Academy of Sciences****, USA 110(51)*: 20645-20650. doi:10.1073/pnas.1314475110. *(Analyzed RNAseq data to infer differential gene expression.)*

Book Sections

6. Schield, D.R., **D.C. Card**, J. Reyes-Velasco, A.L. Andrew, S.P. Mackessy, D.D. Pollock, T.A. Castoe. **2016**. A role for genomics in rattlesnake research - current knowledge and future potential. In: Schuett, G.W., L.W. Porras, & R.S. Reiserer (Eds.). ***Rattlesnakes of Arizona***. ECO Wear & Publishing, Rodeo, NM, USA.
5. Shaney, K.J., D.R. Schield, **D.C. Card**, R.P. Ruggiero, D.D. Pollock, S.P. Mackessy, T.A. Castoe. **2014**. Squamate reptile genomics and evolution. In: Gopalakrishnakone (Ed.). ***Handbook of Toxinology: Venom Genomics and Proteomics***. Springer Reference Press, New York, NY, USA.
4. Aguilar, B., **D. Card**, J. Chaudhuri, S. Domingues, D. Jangam, H. Liu, W. Mann, C. Marquez, M. Parihar, J. Reyes-Velasco, D. Sanchez, M. Steffenson, M. Walsh. **2013**. 1441: Cell and Molecular Biology Laboratory Manual. Beta Phi Chapter of Phi Sigma Society, Arlington, TX, USA.
3. **Card, D.C. 2013**. Aldabra Atoll. In Howarth, R.W. ***Biomes and Ecosystems: An Encyclopedia Vol. 2***. Salem Press. Ipswich, MA, USA. Pages 230-232.
2. **Card, D.C. 2013**. Sri Lanka rain forests. In Howarth, R.W. ***Biomes and Ecosystems: An Encyclopedia Vol. 4***. Salem Press. Ipswich, MA, USA. Pages 1171-1173.
1. **Card, D.C**. **2013**. Wakatobi Archipelago coral reefs. In Howarth, R.W. ***Biomes and Ecosystems: An Encyclopedia Vol. 4***. Salem Press. Ipswich, MA, USA. Pages 1283-1285.

RESEARCH FUNDING

Summary

~$90,000 research; ~$330,000 salary/education; & ~$12,000 travel support

2018. **Card, D.C.** *Evolutionary genomics of parallel limb and digit reduction in* Lerista *skinks*. National Science Foundation Postdoctoral Research Fellowship in Biology. **$162,000 salary; $45,000 research**.

2018. **Card D.C.** Summer 2018 Dissertation Fellowship. UTA Office of Graduate Studies. **$6,700**.

2018. **Card, D.C.** Travel support for the GSA PEQG. UTA Phi Sigma Graduate Society Travel Grant. **$750**.

2018. **Card, D.C.** Travel award. Phi Sigma National Graduate Society Travel Grant. **$500**.

2018. **Card, D.C.** Travel support for the GSA PEQG meeting. UTA Graduate Student Senate. **$500**.

2017. **Card, D.C.** William L. & Martha Hughes Scholarship. UTA Biology Department. **$2,000**.

2017. **Card, D.C.** Travel support for the Joint Evolution Meetings. UTA Phi Sigma Graduate Society Travel Grant. **$750**.

2017. **Card, D.C.** Travel award. Phi Sigma National Graduate Society Travel Grant. **$500**.

2017. **Card, D.C.** Travel support for the Joint Evolution Meetings. UTA Graduate Student Senate. **$500**.

2017. **Card, D.C.** Travel support for the Joint Evolution Meetings. UTA Institute for Sustainability & Global Impact Travel Grant. **$500**.

2016. **Card, D.C.** *Identifying candidate causal genomic variants underlying island dwarfism in Boa constrictor*. UTA Phi Sigma Graduate Society Large Research Grant. **$3,000**.

2016. **Card, D.C.** Startup Research Allocation. NSF XSEDE. 50,000 SUs. **$2,500**.

2016. **Card, D.C.** Travel support for field research work in Honduras. UTA Graduate Student Senate Research Travel Award. **$1,250**.

2016. **Card, D.C.** Travel support for the Joint Evolution Meetings. UTA Phi Sigma Graduate Society Travel Grant. **$750**.

2016. **Card, D.C.** UTA Graduate Studies Writing Group Award. UTA. **$200**.

2016. **Card, D.C.** UTA ACES Conference Sustainability Award. UTA. **$300**.

2016. **Card, D.C.** UTA ACES Conference Provost's Award. UTA. **$200**.

2015. **Card, D.C.** College of Science Dean's Excellence Scholarship, 2015-2016. UTA. **$5,000**.

2015. **Card, D.C.** *Genomic basis of convergent phenotypic evolution in island populations of Boa constrictor*. UTA Phi Sigma Graduate Society Large Research Grant. **$5,000**.

2015. **Card, D.C.** Travel support for the Society for Molecular Biology and Evolution Meeting. Institute of Population Genetics. Vienna, Austria. **$500**.

2015. **Card, D.C.** Travel support for the Society for Molecular Biology and Evolution Meeting. UTA Graduate Student Senate Conference Travel Award. **$750**.

2015. **Card, D.C.** Travel support for the Society for Molecular Biology and Evolution Meeting. UTA Phi Sigma Graduate Society Travel Grant. **$750**.

2015. Castoe, T.A. (P.I.) & **D.C. Card** (Co P.I.). *Genomic basis of convergent phenotypic evolution in island populations of boa constrictors*. National Science Foundation Doctoral Dissertation Improvement Grant. **$19,695**.

2015. **Card, D.C.** Full travel support for the NESCent Hackathon on Population Genetics in R. NESCent. Durham, NC. **$1,800**.

2015. **Card, D.C.** Travel support for the Genome10K meeting. Genome10K. Santa Cruz, CA. **$750**. Declined.

2014. **Card, D.C.** Travel support for the Ecological Genomics Symposium. UTA Phi Sigma Graduate Society Travel Grant. **$750**.

2014. **Card, D.C.** Travel support for the Ecological Genomics Symposium. American Genetics Association. Kansas City, MO. **$500**.

2014. **Card, D.C.** *Population structure and species evolution of Burmese pythons in Southeast Asia*. American Philosophical Society Lewis & Clark Fund for Exploration and Field Research. **$5,000**.

2014. **Card, D.C.** *Investigating the genomic basis of phenotypic convergence in dwarf insular populations of the Boa constrictor*. NSF Graduate Research Fellowship Program. **Honorable Mention**.

2014. **Card, D.C.** Travel support for the Joint Evolution Meetings. UTA Phi Sigma Graduate Society Travel Grant. **$750**.

2014. **Card, D.C.** Travel support for the Phylogenomics Symposium & Software School. University of Texas & Society for Systematic Biology. 2014 Joint Evolution Meetings. Raleigh, NC. **$250**.

2014. **Card, D.C.** *Sample sequencing of amphibian genomes to establish estimates of repetitive content and genome structure*. UTA Phi Sigma Graduate Society Large Research Grant. **$5,000**.

2013. **Card, D.C.** Travel support for the Joint Evolution Meetings. UTA Phi Sigma Graduate Society Travel Grant. **$750**.

2013. **Card, D.C.** *Population genomics, origins, and adaptation of invasive Burmese pythons in Florida*. Society for the Study of Evolution Rosemary Grant Award 2013. **$2,250**.

2013. **Card, D.C.** Travel support for the Mechanisms of Protein Evolution II meeting. SMBE. Denver, CO. **$500**.

2012 – 2017. Enhanced Graduate Teaching Assistantship. UTA. **$150,000**.

MEDIA COVERAGE

2018 – UTA College of Science highlighted my NSF Postdoctoral Fellowship award and project.

2018 – Popular press article on a high profile publication on independent dwarfism in humans from the island of Flores that includes a solicited comment from me about the impact of the research.

2017 – Particle, a new science news website based on Western Australia, ran an article on island dwarfism, which featured some of my work on island dwarf boas.

2017 – The National Science Foundation was nice enough to advertise our research on their Twitter feed, and included a couple pictures of the dwarf *Boa* I've researched during my Ph.D.

2017 – **Texas Advanced Computing Center** wrote an article featuring our work, which has utilized the high-performance computing environment at TACC extensively. Aricle was also picked up by EurekAlert, Science Daily, Motherboard/Vice, and other news outlets.

2015 – **UTA College of Science Maverick Science Magazine** featured cover article on work conducted in our laboratory, focusing on understanding regenerative organ growth in Burmese pythons.

2015 – Press coverage by the American Society of Physiologists of our work on python intestinal regenerative growth (Andrew et al., 2015, *Physiological Genomics*), published in the quarterly **APS Newsletter**, and also covered by **UTA College of Science Newsletter**.

2015 – **UTA COS MavWire** featured story congratulating me on receiving a NSF Doctoral Dissertation Improvement Grant.

2015 – Featured by **UTA Inquiry Magazine** for our work on snake genomics and physiological organ remodeling in snakes.

2014 – Popular press coverage of our work on the evolution of venom systems in snakes (Reyes-Velasco et al., 2015, *Molecular Biology and Evolution*) by **UTA** (official press release), **Science Daily**, **Nature World News**, **RedOrbit**, **Digital Journal, Science Codex, Science World Report, French Tribune, Planet Earth, Design and Trend**, and **Phys.Org**, as well as **UTA COS MavWire**.

2013 – Five-page in-print editorial coverage of our work on snake genomics in: **Science** 342:1159-1167.

2013 – Radio interview with Todd Castoe discussing our research on the Burmese python on: **National Public Radio – Dallas KERA**.

2013 – Extensive editorial coverage of our work on the analysis and publication of the first snake genomes, by popular news media (only selected examples included): **NBC News, The Daily News, Huffington Post, Christian Science Monitor, ScienceNow, Denver News, New Scientist, American Free Press, EurekAlert, GenomeWeb, Headlines & Global News, RedOrbit, University Herald, Science Recorder, Nature World News, Mother Nature Network, ScienceDaily, LiveScience, International Business Times, Latino Post, Radio Canada, French Tribune, Tehran Times**, and **News Tonight Africa.**

PUBLISHED ABSTRACTS

Summary

59 Oral; 17 Poster; 12 Presented by me

Legend

†Presenting author; *Undergraduate author; (O)=Oral Presentation; (P)=Poster

2018 (O) Castoe, T.A.†, D.R. Schield, N.R. Hales, **D.C. Card**, B.W. Perry, G.I.M. Pasquesi, R.H. Adams, J.M. Meik, and S.P. Mackessy. Genome-Scale Perspectives on the Mechanisms Regulating Snake Venom Gene Specificity. Gordon Research Conference on Venom Evolution, Function, and Biomedical Applications. West Dover, VT.

2018 (P) Schield, D.R.†, **D.C. Card**, N.R. Hales, B.W. Perry, G.I.M. Pasquesi, R.H. Adams, H. Blackmon, C. Smith, J.M. Meik, S.P. Mackessy, and T.A. Castoe. Snake venom gene evolution is linked to unique structural and functional properties of snake genomes. Gordon Research Conference on Venom Evolution, Function, and Biomedical Applications. West Dover, VT.

2018 (P) **Card, D.C.**†, R.H. Adams, D.R. Schield, G.I.M. Pasquesi, B.W. Perry, A.B. Corbin, K. Row*, J.M. Daza, W. Booth, C.E. Montgomery, S.M. Boback, & T.A. Castoe. Genomic basis of adaptive island dwarfism in Boa constrictor snakes. Genetics Society of America – Population, Evolutionary, and Quantitative Genetics Meeting. Madison, WI.

2018 (P) Hales, N.R.†, T.A. Castoe, M.R. Walsh, D.R. Schield, **D.C. Card**, & A.L. Andrew. Predator-induced transgenerational plasticity is mediated by underlying changes in gene expression and methylation. Genetics Society of America – Population, Evolutionary, and Quantitative Genetics Meeting. Madison, WI.

2018 (P) Pinto, B.J.†, **D.C. Card**, T.A. Castoe, R. Diaz, S. Nielsen, P. Trainor, & T. Gamble. De novo transcriptome assembly and annotation of an emerging model lizard species, the Veiled Chameleon (*Chamaeleo calyptratus*). Joint Meeting of Ichthyologists and Herpetologists. Rochester, NY.

2018 (O) Corbin, A.B.†, D.R. Schield, **D.C. Card**, M. Moseley, A. Gluesenkamp, T.A. Castoe, & P.T. Chippindale. Genomic approaches provide insights into conservation of Texas cave and spring salamanders (*Eurycea*). North American Congress for Conservation Biology 2018. Toronto, ON, Canada.

2018 (O) Adams, R.H.†, **D.C. Card**, A.B. Corbin, G.I.M. Pasquesi, P.T. Chippindale, & T.A. Castoe. Piecing together 300 million years of wet-skin and slime: Low-coverage sampling of amphibian genomes provides insight into ancestral tetrapod genome structure and evolution. **Texas Genetics Society Annual Meeting**. College Station, TX.

2018 (O) Hales, N.R.†, D.R. Schield, **D.C. Card**, B.W. Perry, R.H. Adams, H. Blackmon, J.M. Meik, S.P. Mackessy, & T.A. Castoe. Hi-C and RNAseq analysis in the venom gland of a rattlesnake illustrate the unique structure and function of microchromosomes and coordinated interaction of chromatin and specific transcription factors in regulation of venom expression. **Texas Genetics Society Annual Meeting**. College Station, TX.

2018 (O) Perry, B.W.†, A.L. Andrew, A.H.M. Kamal, **D.C. Card**, D.R. Schield, G.I.M. Pasquesi, R.P. Ruggiero, S. Chowdhury, S.M. Secor, & T.A. Castoe. Transcriptional comparisons of intestinal regenerative growth in multiple snake species provide a new perspective on conserved vertebrate stress and growth pathways that may direct intestinal regeneration. **Texas Genetics Society Annual Meeting**. College Station, TX.

2017 (O) **Card, D.C.**†, B.W. Perry, R.H. Adams, A.L. Andrew, D.R. Schield, A. Young*, T. Jezkova, M. Rochford, F. Mazzotti, K. Hart, M. Hunter, & T.A. Castoe. Genome-wide evidence of evolution and adaptation in the invasive Florida python population. **Joint Evolution Meetings 2017**. Portland, OR.

2017 (O) Perry, B.W.†, A.L. Andrew, **D.C. Card**, D.R. Schield, G.I.M. Pasquesi, A.H.K. Kamal, R. Ruggiero, S. Chowdhury, & T.A. Castoe. An evolutionary framework for understanding and dissecting regenerative intestine growth in snakes. **Joint Evolution Meetings 2017**. Portland, OR.

2017 (O) Schield, D.R.†, **D.C. Card**, R.H. Adams, G.I.M. Pasquesi, B.W. Perry, N.R. Hales, A.L. Andrew, A.B. Corbin, S.P. Mackessy, & T.A. Castoe. Repeated patterns of adaptation along the speciation continuum: insight from studies of North American rattlesnakes. **Joint Evolution Meetings 2017**. Portland, OR.

2017 (O) Adams, R.H.†, D.R., Schield, **D.C. Card**, & T.A. Castoe. Leveraging low coverage whole genome data to study selection, demography, and phylogeny. **Joint Evolution Meetings 2017**. Portland, OR.

2017 (O) Hales, N.R.†, D.R. Schield, A.L. Andrew, **D.C. Card**, M.R. Walsh, & T.A. Castoe. Contacting gene expression programs correspond with predator-induced phenotypic plasticity within and across generations in Daphnia. **Joint Evolution Meetings 2017**. Portland, OR.

2017 (O) Andrew, A.L.†, B.W. Perry, **D.C. Card**, D.R. Schield, R.P. Ruggiero, S. McGaugh, A. Choudhary, S.M. Secor, & T.A. Castoe. Evolutionary variation in growth and stress responses underlying kidney regenerative growth from snakes to human organoids. **Joint Evolution Meetings 2017**. Portland, OR.

2017 (O) Corbin, A.B.†, M. Moseley, G.I.M. Pasquesi, D.R. Schield, R.H. Adams, **D.C. Card**, T.A. Castoe, & P.T. Chippindale. Population genomics and genome architecture of central Texas cave and spring salamanders (*Eurycea*). **Joint Evolution Meetings 2017**. Portland, OR.

2017 (P) Schott, R.†, A. Van Nynatten, **D.C. Card**, T.A. Castoe, & B. Chang. Transcriptome sequencing reveals divergent selective pressures on snake visual transduction genes associated with rod-cone transmutation. **Joint Evolution Meetings 2017**. Portland, OR.

2017 (O) Hunter, M.E.†, R.M. Dorazio, G. Meigs-Friend, B.J. Smith, **D.C. Card**, & K.M. Hart. Genetic and genomic population structure and environmental DNA monitoring of Buremese pythons in the Greater Everglades Ecosystem. **Greater Everglades Ecosystem Restoration**. Coral Springs, FL.

2016 (O) **Card, D.C.**†, D.R. Schield, R.H. Adams, A.L. Andrew, B.W. Perry, F. Mazzotti, M.E. Hunter, K. Hart, & T.A. Castoe. Genome-wide evidence of evolution and adaptation in the invasive Florida python population. **Joint Evolution Meetings 2016**. Austin, TX.

2016 (O) Schield, D.R.†, R.H. Adams, **D.C. Card**, B.W. Perry, T. Jezkova, A.L. Andrew, G.I. Pasquesi, S. Mackessy, & T.A. Castoe. Patterns of speciation and delimitations of populations, species, and genomic adaptations across widely-distributed North American rattlesnake lineages. **Joint Evolution Meetings 2016**. Austin, TX.

2016 (O) Streicher, J.W.†, J. McEntee, L. Drzich*, **D.C. Card**, D.R. Schield, U. Smart, C. Parkinson, T. Jezkova, E.N. Smith, & T.A. Castoe. Genetic surfing, not allopatric divergence, explains spatial sorting of mitochondrial haplotypes in venomous coralsnakes. **Joint Evolution Meetings 2016**. Austin, TX.

2016 (O) Lotterhos, K.E.†, **D.C. Card**, C. Collins, S.M. Schaal, L. Wang, & R. Verity. Multivariate outliers improve the signal-to-noise ratio in genome scans. **Joint Evolution Meetings 2016**. Austin, TX.

2016 (O) Adams, R.H.†, D.R. Schield, **D.C. Card**, & T.A. Castoe. Friend or foe: Investigating the impacts of positive selection on multispecies coalescent inferences. **Joint Evolution Meetings 2016**. Austin, TX.

2016 (O) Jezkova, T.†, T.A. Castoe, M. Leal, **D.C. Card**, D.R. Schield, D. Elzinga, & J. Rodriguez-Robles. A peculiar case of hybridization with advantageous mtDNA introgression and lack of nuclear introgression in Caribbean anoles. **Joint Evolution Meetings 2016**. Austin, TX.

2016 (O) Perry, B.W.†, A.L. Andrew, **D.C. Card**, S. Secor, & T.A. Castoe. Inststinal regeneration in the garden of eatin': Comparative genomic analysis of extreme intestinal regenerative growth in snakes paves the path for translational research in human systems. **Joint Evolution Meetings 2016**. Austin, TX.

2016 (O) Cox, C.†, N.B. Pollock, H. John-Alder, A.L. Andrew, **D.C. Card**, T.A. Castoe, & R. Cox. Evolutionary lability in the modulation of sex-biased gene expression by testosterone. **Joint Evolution Meetings 2016**. Austin, TX.

2016 (O) Pasquesi, G.I.†, **D.C. Card**, R.H. Adams, A.B. Corbin, D.R. Schield, & T.A. Castoe. Evolutionary dynamics of genomic repeat element landscapes across 200 million years of squamate evolution. **Joint Evolution Meetings 2016**. Austin, TX.

2016 (Software Demo) Verity, R., C. Collins, **D.C. Card**†, S.M. Schaal, L. Wang, & K.E. Lotterhos. MINOTAUR. **iEvoBio Meeting at Evolution 2016**. Austin, TX.

2016 (P) Castoe, T.A.†, Pasquesi, G.I.M., R.H. Adams, **D.C. Card**, & D.R. Schield. Sample sequencing 68 squamate genomes reveals extensive genomic repeat landscape dynamics. **International Congress on Transposable Elements**. Saint Malo, France.

2016 (O) **Card, D.C.**†, D.R. Schield, R.H. Adams, M. Hunter, K. Hart, and T.A. Castoe. Genome-wide evidence of evolution and adaptation in the invasive Florida python population. **Annual Celebration of Excellence by Students (UTA-ACES)**. Arlington, TX.

2016 (O) Adams, R.H.†, D.R. Schield, **D.C. Card**, & T.A. Castoe. Natural selection and multispecies coalescent models: Investigating the impacts of directional selection on phylogenetic inferences of recently-diverged species complexes. **Annual Celebration of Excellence by Students (UTA-ACES)**. Arlington, TX.

2016 (O) Andrew, A.L.†, **D.C. Card**, D.R. Schield, B.W. Perry, R.H. Adams, R.P. Ruggiero, D.D. Pollock, S.M. Secor, & T.A. Castoe. Dynamics of gene expression and mechanisms of growth throughout post-prandial organ regeneration in the Burmese python. **Annual Celebration of Excellence by Students (UTA-ACES)**. Arlington, TX.

2016 (O) Pasquesi, G.I.M.†, **D.C. Card**, R.H. Adams, D.R. Schield, A.B. Corbin, B.W. Perry, A.L. Andrew, & T.A. Castoe. Sample sequencing 68 squamate genomes reveals extensive evolutionary dynamics of genomics repeat element landscapes. **Annual Celebration of Excellence by Students (UTA-ACES)**. Arlington, TX.

2016 (O) Cox, C.L.†, N.B. Pollock, H. John-Alder, A.L. Andrew, **D.C. Card**, T.A. Castoe, & R.M. Cox. Sex hormones and the evolution of sexual size dimorphism: the impact of testosterone on sex-biased gene expression and growth-regulatory networks. **Society for Integrative and Comparative Biology Meeting**. Portland, OR.

2015 (O) Reyes-Velasco, J.†, **D.C. Card**, A.L. Andrew, K.J. Shaney, R.H. Adams, D.R. Schield, N.R. Casewell, S.P. Mackessy, & T.A. Castoe. Expression of venom gene homologs in diverse python tissues: a new model for the evolution of snake venom and a re-assessment of transcriptome-based definitions of venoms. **International Society on Toxinology, 18th World Congress**. Oxford, England.

2015 (P) Row, K.W.†*, **D.C. Card**, & T.A. Castoe. Identifying the genetic architecture of insular dwarfism in *Boa constrictor* through examination of protein coding regions of the NEK4 gene. **UT System LSAMP Student Research Conference.** El Paso, TX.

2015 (P) Lapp, H.† & **Participants of the Population Genetics in R Hackathon**. Towards an interoperating ecosystem of tools and resources for population genetics in R. **International Conference on Intelligent Systems for Molecular Biology/European Conference on Computational Biology Meeting**. Dublin, Ireland. doi:10.7490/f1000research.1000223.1.

2015 (O) **Card, D.C.†**, D.R. Schield, R.H. Adams, W. Booth, S. Boback, & T.A. Castoe. Mitochondrial and nuclear SNP evidence for population genetic structure, independent island dwarfism, and genes putatively underlying dwarfism traits in *Boa constrictor*. **Society for the Study of Amphibians and Reptiles Meeting**. Lawrence, KS.

2015 (O) Castoe, T.A.†, **D.C. Card**, D.R. Schield, J. Reyes-Velasco, A. Andrew, R.H. Adams, & G.M. Pasquesi. Ancient, recent, and ongoing patterns of genome evolution underlying adaptation and innovation in snakes. **Society for the Study of Amphibians and Reptiles Meeting**. Lawrence, KS.

2015 (O) Andrew, A.L.†, **D.C. Card**, R.P. Ruggiero, D.R. Schield, R.H. Adams, D.D. Pollock, S.M. Secor, & T.A. Castoe. Patterns of gene expression underlying extreme physiological remodeling in snakes. **Society for the Study of Amphibians and Reptiles Meeting**. Lawrence, KS.

2015 (O) Schield, D.R.†, G.M. Pasquesi, R.H. Adams, **D.C. Card**, & T.A. Castoe. Patterns of selection and introgression following isolation and secondary contact in a widely-distributed rattlesnake species (*Crotalus atrox*). **Society for the Study of Amphibians and Reptiles Meeting**. Lawrence, KS.

2015 (O) Adams, R.H.†, D.R. Schield, **D.C. Card**, S.P. Mackessy, & T.A. Castoe. How does natural selection influence species trees and species delimintation using genome-scale datasets – a case study in rattlesnakes. **Society for the Study of Amphibians and Reptiles Meeting**. Lawrence, KS.

2015 (P) **Card, D.C.**†, D.R. Schield, K. Hart, M.E. Hunter, & T.A. Castoe. Evolution and putative adaptation in the invasive Florida Burmese python population inferred using genome-wide RADseq data. **Society for Molecular Biology and Evolution Meeting 2015**. Vienna, Austria.

2015 (O) **Card, D.C.**†, D.R. Schield, R.H. Adams, W. Booth, S.M. Boback, & T.A. Castoe. Genomic basis of adaptive island dwarfism in *Boa constrictor*. **Annual Celebration of Excellence by Students (UTA-ACES)**. Arlington, TX.

2015 (O) Schield, D.R.†, M.R. Walsh, **D.C. Card**, A.L. Andrew, R.H. Adams, & T.A. Castoe. EpiRADseq: a novel technique for the examination of genome-wide epigenetic patterns. **Annual Celebration of Excellence by Students (UTA-ACES)**. Arlington, TX.

2015 (O) Adams, R.H.†, **D.C. Card**, J. Reyes-Velasco, D.R. Schield, A.L. Andrew, & T.A. Castoe. Sample sequencing 46 squamate reptiles reveals extensive evolutionary dynamics of genomic repeat landscapes. **Annual Celebration of Excellence by Students (UTA-ACES)**. Arlington, TX.

2015 (O) Andrew, A.L.†, **D.C. Card**, R.P. Ruggiero, D.R. Schield, R.H. Adams, D.D. Pollock, S.M. Secor, E. La, & T.A. Castoe. Patterns of gene expression underlying extreme physiological remodeling in snakes. **Annual Celebration of Excellence by Students (UTA-ACES).** Arlington, TX.

2015 (O) Cox, C.L.†, **D.C. Card**, A.L. Andrew, T.A. Castoe, & R.M. Cox. Sexual concordance in phenotypic and transcriptomic responses to testosterone in brown anoles. **Society for Integrative and Comparative Biology Meeting**. West Palm Beach, FL.

2014 (P) **Card, D.C.**†, D.R. Schield, M.E. Hunter, K.M. Hart, & T.A. Castoe. Evolution and putative adaptation in the Florida python population inferred using genome-wide RADseq data. **Ecological Genomics Symposium 2014**. Kansas City, MO.

2014 (P) Schield, D.R.†, **D.C. Card**, S.P. Mackessey, & T.A. Castoe. Delineation of populations, species, and genomic adaptations across a widely distributed venomous snake species complex. **Ecological Genomics Symposium 2014**. Kansas City, MO.

2014 (P) Castoe, T.A.†, A.P.J. de Koning. **D.C. Card**, D.R. Schield, J. Reyes-Velasco, A. Andrew, R. Adams, & D.D. Pollock. Snake genomes reveal insight into the evolution of extreme adaptive phenotypes in vertebrates. **Ecological Genomics Symposium 2014**. Kansas City, MO.

2014 (O) **Card, D.C.**†, D.R. Schield, K. Hart, M.E. Hunter, & T.A. Castoe. Genome-wide evidence of evolution and adaptation in the invasive Florida python population. **Joint Evolution Meetings 2014**. Raleigh, NC.

2014 (O) Castoe, T.C.†, J. deKoning, **D.C. Card**, D.R. Schield, J. Reyes-Velasco, A.L. Andrew, R.H. Adams, & D.D. Pollock. Snake genomes provide insight into the molecular evolutionary origins of a phenotypically distinct vertebrate clade. **Joint Evolution Meetings 2014**. Raleigh, NC.

2014 (O) Cox, C.L.†, **D.C. Card**, A.L. Andrew, T.A. Castoe, & R. Cox. Congruent phenotypic and transcriptomic responses to testosterone in both sexes: implications for the evolution of endocrine-mediated sexual dimorphism. **Joint Evolution Meetings 2014**. Raleigh, NC.

2014 (O) Reyes-Velasco, J.†, **D.C. Card**, K.J. Shaney, D.R. Schield, A.L. Andrew, C. Modahl, N. Casewell, S. Mackessy, & T.A. Castoe. Expression of venom homologs in the python suggest a model for venom gene recruitment and questions the definition of a venom toxin. **Joint Evolution Meetings 2014**. Raleigh, NC.

2014 (O) Adams, R.H.†, **D.C. Card**, J. Reyes-Velasco, D.R. Schield, & T.A. Castoe. Sample sequencing of 40 squamate reptile genomes reveals extensive evolutionary dynamics of genomic repeat element landscapes. **Joint Evolution Meetings 2014**. Raleigh, NC.

2014 (O) Andrew, A.L.†, **D.C. Card**, D.R. Schield, E. La*, S.M. Secor, & T.A. Castoe. Patterns of gene expression underlying the extreme physiological remodeling of the Burmese python intestine upon feeding. **Joint Evolution Meetings 2014**. Raleigh, NC.

2014 (O) Schield, D.R.†, **D.C. Card**, J. Reyes-Velasco, T. Jezkova, C. Spencer, & T.A. Castoe. Using genome-wide single nucleotide polymorphisms to estimate patterns of gene flow and population structure in Crotalus atrox. **Joint Evolution Meetings 2014**. Raleigh, NC.

2014 (O) Schaack, S.†, C. Gilbert, J.M. Meik, **D.C. Card**, & T.A. Castoe. Endogenous hepadnaviruses, bornaviruses, and circoviruses in snakes. **Joint Evolution Meetings 2014**. Raleigh, NC.

2014 (O) Reyes-Velasco, J.†, K.J. Shaney, **D.C. Card**, D.R. Schield, A. Andrew, C. Modal, N. Casewell, S.P. Mackessy, & T.A. Castoe. Leveraging the Burmese python genome to investigate the origin and evolution of snake venom gene families and to understand what a reasonable definition of 'a venom' might be. **Biology of the Pitvipers 2**. Tulsa, OK.

2014 (O) **Card. D.C.**†, D.R. Schield, J. Reyes-Velasco, R.H. Adams, S.P. Mackessy, & T.A. Castoe. The genome of the Prairie Rattlesnake (*Crotalus viridis viridis*). **Biology of the Pitvipers 2**. Tulsa, OK.

2014 (O) Schield, D.R.†, **D.C. Card**, J. Reyes-Velasco, F.N. Proctor, T. Jezkova, C.L. Spencer, H-W. Herrmann, S.P. Mackessy, & T.A. Castoe. Using genome-wide single nucleotide polymorphisms to estimate patterns of gene flow and population structure in *Crotalus atrox*. **Biology of the Pitvipers 2**. Tulsa, OK.

2014 (O) La, E.†*, A.L. Andrew, **D.C. Card**, & T.A. Castoe. Meta-analysis of positively selected genes in the Burmese python. **UTA Honors Undergraduate Research and Creative Activity Symposium**. Arlington, TX.

2014 (O) **Card, D.C.**†, D.R. Schield, M.E. Hunter, & T.A. Castoe. Genome-wide evidence of evolution in the invasive Florida python population. **Annual Celebration of Excellence by Students (UTA-ACES)**. Arlington, TX.

2014 (O) Schield, D.R.†, **D.C. Card**, J. Reyes-Velasco, C.L. Spencer, & T.A. Castoe. Using genome-wide single nucleotide polymorphisms to estimate patterns of gene flow and population structure in *Crotalus atrox*. **Annual Celebration of Excellence by Students (UTA-ACES)**. Arlington, TX.

2014 (P) Hales, N.R.†*, D.R. Schield, J. Reyes-Velasco, **D.C. Card**, C.L. Spencer, & T.A. Castoe. Phylogeography of the Mojave Rattlesnake (*Crotalus scutulatus*) in the U.S. and Mexico. **Annual Celebration of Excellence by Students (UTA-ACES)**. Arlington, TX.

2014 (O) Adams, R.H.†, L. Drzich*, **D.C. Card**, J. Reyes-Velasco, & T.A. Castoe. Unprecedented variation in the genomic repeat landscape within a major amniote lineage. **Annual Celebration of Excellence by Students (UTA-ACES)**. Arlington, TX.

2014 (O) Andrew, A.L.†, **D.C. Card**, D.R. Schield, E. La*, S.M. Secor, & T.A. Castoe. Differential gene expression underlying the extreme physiological remodeling of the Burmese python intestive upon feeding. **Annual Celebration of Excellence by Students (UTA-ACES)**. Arlington, TX.

2013 (O) **Card, D.C.**† Using evolutionary genomics to gain insight into vertebrate diversity and adaptation. **Genome Biology Group Seminar**. UT-Arlington.

2013 (O) **Card, D.C.**†, F.N. Proctor*, K.J. Shaney, D.R. Schield, W. Booth, S. Boback, & T.A. Castoe. Evolution and population genomics of Boa constrictor, and comparisons between island and mainland population pairs. **Joint Evolution Meetings 2013**. Snowbird, UT.

2013 (O) Riddle, B.R.†, T. Jenkova, D.R. Schield, **D.C. Card**, & T.A. Castoe. Genetic consequences of a range expansion in two congeneric rodents (genus Dipodemys). **Annual Meetings of the American Society of Mammalogists**. Philadelphia, PA.

2013 (O) Schield, D.R.†, F.N. Proctor*, K.J. Shaney, J. Reyes-Valasco, **D.C. Card**, S.P. Mackessy, & T.A. Castoe. Using genome-wide SNPs to test mtDNA-based hypotheses of gene flow and population structure in Western Diamondback Rattlesnakes (*Crotalus atrox*). **Joint Evolution Meetings 2013**. Snowbird, UT.

2013 (O) Shaney, K.J.†, D.R. Schield, **D.C. Card**, J. Reyes-Valasco, S.P. Mackessy, & T.A. Castoe. Gene expression in Burmese Pythons sheds light on the evolution of venom gene families. **Joint Evolution Meetings 2013**. Snowbird, UT.

2013 (P) **Card, D.C.**, A. Lawrence†*, C. Langworthy*, T. Zembryski*, J. Haight, W. Gall, & J.M. Crisman. A survey of mosquito populations for evidence of lateral gene transfer. **Community College Undergraduate Research Initiative**. Washington, DC.

2013 (P) Schield, D.R.†, **D.C. Card**, K.J. Shaney, Q. Li, M. Yandell, S.P. Mackessy, & T.A. Castoe. Differential expansion of select gene families in squamate genomes. **Mechanisms of Protein Evolution II**. Denver, CO.

2013 (P) **Card, D.C.**†, K.J. Shaney†, D.R. Schield, Q. Li, M. Yandell, D. Pollock, & T.A. Castoe. Evolutionary dynamics of protein domains across snake and lizard genomes. **Mechanisms of Protein Evolution II**. Denver, CO.

TEACHING EXPERIENCE

Graduate Teaching Assistant

University of Texas at Arlington, Arlington, TX
Zoology Laboratory – Fall 2012/2014/2015/2016/2017
Spring 2013/2014/2015/2016/2017/2018
Summer 2013/2014/2015/2016
Human Anatomy Laboratory – Fall 2013
Approximately 750 students taught in total

Instructor

Software Carpentry/Data Carpentry
Experience Teaching: SWC Unix Shell, Git/GitHub, R, & Python; DC Genomics
8 Workshops Taught: UTA – Jan./Apr./Oct. 2016; Feb./Nov. 2017; Feb. 2018
UC San Francisco – Dec. 2016
SUNY Upstate – May 2017
Co-founder of Software/Data Carpentry Core Instructor Group at UTA. Submitted successful proposal for instructor training with group of 10 instructors at UTA, which was 1 of 2 funded in the United States (out of 25 applications). Since instructor training was completed in 2015, this group has successfully run 6 two-day, intensive workshops (see above) training over 250 learners. Funding to facilitate these workshops has been generously provided by the UTA Library and there is also ongoing work to build a broader data science training program at UTA, with our group and the SWC/DC curriculum serving as a foundation.

Tutor

University of Texas at Arlington, Arlington, TX
Genetics – Fall 2013 – Present

Undergraduate Teaching Assistant

SUNY College of Environmental Science and Forestry (ESF), Syracuse, NY
General Biology I Laboratory – Fall 2010
General Biology II Laboratory – Spring 2011
Introduction to Conservation Biology – Spring 2011

ACADEMIC AWARDS

Texas Public Educational Grants **($12,000 total**) – UTA
Chautauqua Region Community Foundation Scholarships **($15,000 total**) – JCC, ESF, UTA

SERVICE

Undergraduate Mentoring

Acacia Young*	LSAMP Scholar	Florida python population genetics & adaptation
Kristopher Rowe*	LSAMP Scholar	*Boa constrictor* candidate gene screening
Laura Drzich	McNair Scholar	Squamate genomics
Elizabeth Nguyen	Honors Research	Transcriptomics of snake physiological remodeling
Frances N. Proctor	Research	*Boa constrictor* phylogenetics
Zachary Rodriguez*	McNair Scholar	*Ahaetulla* phylogeography
Jessica Stephens*	Research	*Daphnia* evolution
Nicole Hales*	Research	*Crotalus* rattlesnake population genetics
Timothy Witter	Teaching	Human Anatomy laboratory

* Undergraduate research assistants who have pursued research-based graduate degrees.

Ad hoc Reviewer

Journal of Biogeography; Biological Journal of the Linnean Society; Ecology & Evolution; Genetica; Genome Biology & Evolution; Journal of Molecular Evolution; Molecular Ecology; Molecular Ecology Resources; PLOS ONE; Proceedings of the Royal Society B; Zoological Journal of the Linnean Society

Workshop, Meeting, or Symposia Organization

2015. Organizer of Software Carpentry workshop at UT-Arlington. Sponsored by Phi Sigma Biology Graduate Honor Society, Department of Biology, College of Science, & Office of Graduate Studies. Organized a two-day Software Carpentry workshop for 80 graduate level participants from UTA and other Dallas-Fort Worth universities. This workshop provided introductory, hands-on instruction in valuable data analysis software, including manipulating data with the Unix shell, version control with Git/GitHub, and statistical analysis and figure generation with R.

Working Group Participation

2015. Population Genetics in R Hackathon. Sponsored and hosted by the National Evolutionary Synthesis Center (NESCent).

Extracurricular

Biology Graduate Student Phi Sigma Society, UTA
Present: Member Past: President, Secretary, Manual Sales Coordinator

Graduate Student Advisory Council, Society for the Study of Evolution
Present: 2-year term

Professional Societies

American Association for the Advancement of Science
Society for the Study of Evolution
Society for Molecular Biology and Evolution
Genetics Society of America
American Genetics Association
Consortium for Snake Genomics