

Dr. Allison Miller

CURRICULUM VITAE

Associate Professor, Department of Biology, Saint Louis University
Associate Professor, Center for Sustainability, Saint Louis University
Research Associate, Missouri Botanical Garden
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Positions held

2013 - present Associate Professor, Center for Sustainability, Saint Louis University
2012 – present Associate Professor, Department of Biology (primary appt.), Saint Louis University
2006 – present Research Associate, Missouri Botanical Garden
2006 – 2012 Assistant Professor, Department of Biology, Saint Louis University
2005 Instructor, Department of Ecology and Evolutionary Biology, University of Colorado
2004 –present Associate Curator of Botany, University of Colorado Museum
2004 –2006 Postdoctoral Research Associate, University of Colorado Museum
1998 – 2004 Graduate Research Fellow, Washington University in St. Louis
1998 – 2004 Graduate Researcher, Missouri Botanical Garden
1997 – 1998 Plant Collector, Colorado State University
1997 – 1998 Herbarium Assistant, Colorado State University
1996 – 1998 Teaching Assistant, Colorado State University
1995 Research Fellow, Howard Hughes Medical Institute Summer Research Internship,
Miami University, Oxford, OH.
1994 Range Technician Assistant, USDA Forest Service, Bitterroot National Forest, Sula,
MT.

Education

2004 Ph.D. Evolution, Ecology, and Population Biology, Washington University and the Missouri Botanical Garden Graduate Program, St. Louis, MO.
Dissertation title: “Origin and domestication of a Mesoamerican fruit tree, *Spondias purpurea* L. (Anacardiaceae).”
Advisors: Dr. Peter Raven and Dr. Barbara Schaal
2005 M.S. Botany, Colorado State University, Fort Collins, CO.
Thesis title: “A phylogenetic analysis of *Rhus* and its close relatives (Anacardiaceae).”
Advisor: Dr. Jun Wen
1996 B.S. Botany, Miami University of Ohio, Oxford, OH.
Advisors: Dr. Hardy Eshbaugh and Dr. Michael Vincent

Additional training

2013 Sabbatical Scholar, Center for Genome Sciences and Systems Biology, Washington University, St. Louis, MO (September – December, 2013).
2013 R Basics Workshop, Missouri Botanical Garden, St. Louis, MO
2012 Cold Spring Harbor Laboratory Genome Access Course, Cold Spring Harbor, NY

- 2010 GIS in Biology Workshop, Saint Louis University
 2007 Summer Institute for Statistical Genetics, University of Washington, Seattle, WA
 2005 NSF Science Environment for Ecological Knowledge Early Career Faculty and Postdoctoral Training Ecoinformatics Workshop, Albuquerque, NM
 2000 Organization for Tropical Studies Tropical Plant Systematics Course, Costa Rica

Research interests

Plant evolutionary biology; population genomics and comparative transcriptomics focusing on perennial crops and their wild relatives (perennial grains and legumes, grapes, pecan, horseradish), as well as other economically and ecologically important perennials (big bluestem, kudzu); understanding the genomic basis of phenotypic variation in domesticated systems and natural populations; integration of morphological, ionomic, phenological, genomic data with GIS databases to understand geographic patterns of variation, hybridization, mating system evolution, and origin and maintenance of ploidy level variation; the role of botanical gardens in food security.

GRANTS AND AWARDS

External Grants (*PI unless otherwise noted*)

- Pending “RESEARCH-PGRP: Adapting perennial crops for climate change: Graft transmissible effects of rootstocks on grapevine shoots.” **PI: Allison Miller**; Co-PIs: Dan Chitwood (Danforth Plant Science Center), Anne Fennell (South Dakota State University); Misha Kwasniewski (University of Missouri); Jason Londo (United States Department of Agriculture – Agricultural Research Unit, Grape Genetics Research Unit, Geneva, NY). **National Science Foundation Plant Genome Research Program on May 27, 2015. Under Review.**
- 2016 – 2017 “Geography, variation, and hybridization in North American grapevines (*Vitis* spp.)” **PI: Allison Miller**, Co-PIs: Laszlo Kovacs (Missouri State University), Laura Klein (Saint Louis University). **National Geographic Society \$18,295.**
- 2016 – 2021 “Philip and Sima K. Needleman Endowed Doctoral Fellowship in Plant Conservation Genetics.” Five year PhD fellowship for a student co-advised by Christy Edwards, Conservation Geneticist at the Missouri Botanical Garden, and Allison Miller. Student stipend and health benefits provided by a generous gift to the Missouri Botanical Garden from Philip and Sima K. Needleman to support training of a doctoral student working the field of plant conservation genetics/genomics. Full tuition scholarship provided by Saint Louis University. **Philip and Sima K. Needleman Endowed Doctoral Fellowship in Plant Conservation Genetics Five year PhD fellowship ~\$140,000.**
- 2015 – 2018 “Global inventory and systematic evaluation of perennial grain, legume, and oilseed species for pre-breeding and domestication.” PI: Allison Miller (Saint Louis University); Wendy Applequist, Co-Principal Investigator (Missouri Botanical Garden William L. Brown Center); The Land Institute (Wes Jackson, Timothy Crews, Lee DeHaan, David Van Tassel); Matthew Albrecht, Quinn Long (Missouri Botanical Garden Center for Conservation and Sustainable Development). **Perennial Agriculture Project in conjunction with the Malone Family Land Preservation Foundation and The Land Institute. \$268,396.**

- 2014 - 2017 “Genetics and conservation in the persimmon and ebony genus: Master’s degree student stipend.” **Missouri Botanical Garden stipend support** of MS student Alex Linan, co-advised by A.J. Miller and Christine Edwards (MBG). **\$49,192.**
- 2015 – 2016 “Getting to the roots of phenotypic plasticity: the role of rootstock in leaf shape, ion concentration, and gene expression.” **Missouri Grape and Wine Institute. \$15,000.**
- 2015 - 2016 “Geographic patterns of genetic variation in threatened Mascarene *Diospyros* (Ebenaceae).” PI: Christine Edwards (Missouri Botanical Garden); Co-PIs Allison Miller (Saint Louis University), George Schatz (Missouri Botanical Garden), and Alexander Linan (Saint Louis University). **National Geographic Society Committee on Research and Exploration. \$20,000.**
- 2014 - 2015 “Getting to the roots of phenotypic plasticity: the role of rootstocks in leaf shape, ion concentration and gene expression” **Missouri Grape and Wine Institute. \$20,103.**
- 2013 “Speaking of food: connecting basic and applied science” symposium to be held at the Botany meetings in New Orleans, LA July 2013. **Torrey Botanical Society symposium grant program (with Toby Kellogg). \$1,000.**
- 2010 - 2011 “Conservation genetics of *Geocarpon minimum*, a federally threatened plant endemic to Midwest glades.” (M. A. Albrecht Project Officer (PO), A.J. Miller Co-PO) Grant Agreement No. 401819GJ521. **United States Fish and Wildlife Service \$15,728.**
- 2009 - 2011 “Defining our production region.” PI: Joe Wilson, Sub-contract to A.J. Miller. **United States Department of Agriculture (USDA) North Central Region, Sustainable Agriculture Research and Education (SARE) Farmer/Rancher Grant Program. \$14,900.**
- 2008 - 2010 “Geographic origins and evolutionary history of Horseradish (*Armoracia rusticana*) and its close relatives.” **National Geographic Society. \$19,966.**
- 2008 - 2009 “Evolutionary history and population genetics of pecan populations in the central United States.” **Northern Nut Growers Association. \$4,250.**
- 2007 - 2009 “Assessing genetic variability in northern pecan populations.” **University of Missouri Center for Agroforestry. \$12,626.**
- 2007 **Botanical Society of America** Genetics Section Symposium Support Award (with Susan Pell) to support “Evolution and diversification in the Sapindales” **Torrey Botanical Society Symposium Support Award (PI, Susan Pell) \$1000.**
- 2001 - 2004 “Dissertation Research: Domestication in a Tropical Fruit Tree.” National Science Foundation Division of Environmental Biology Population Dynamics. \$15,000. PI – Barbara Schaal, Co-PI Allison Miller.
- 2001 Organization for Tropical Studies Graduate Research Fellowship
- 2001 Karling Graduate Student Award, Botanical Society of America

- 2000 “Domestication in a Mesoamerican fruit tree, *Spondias purpurea*.” Organization for Tropical Studies, Post-Course Research Award.
- 1997 Graduate Research Award, American Society of Plant Taxonomists
- 1995 Student Research Award, Miami University Academic Challenge

Internal Grants (*PI unless otherwise noted*)

- 2015 – 2018 “Towards a more sustainable agricultural system: global inventory and systematic evaluation of perennial grain, legume, and oilseed species for pre-breeding and domestication.” PI: Allison Miller. Co-Principal Investigators Wes Jackson, Timothy Crews, Lee DeHaan, David Van Tassel (The Land Institute), Wendy Applequist and Matthew Albrecht (Missouri Botanical Garden). **Saint Louis University Center for Sustainability Research Innovation Fund. \$100,000.**
- 2015 – 2016 “Diversity and diversification in North American grapevines (*Vitis riparia* and *V. rupestris*).” **PI Allison Miller**, Co-PI Laura Klein. **Saint Louis University Presidential Research Fund. \$24,995.**
- 2014 - 2015 “Getting to the roots of adaptation: the role of hybridization in shaping morphological and genetic variation in native North American grapevines (*Vitis* spp.)” **Saint Louis University Beaumont Faculty Development Fund. \$4,904.**
- 2012 - 2014 “Sustainable agriculture in a changing climate: a multi-disciplinary approach to preservation and comparative genomics of grapevines at the SLU Urban Farm.” **Saint Louis University Sustainability Research Fund (PI, with Wasit Wulamu). \$85,704.**
- 2011 - 2013 “A genetic mechanism underlying sterility in clonally propagated crops.” **Saint Louis University Presidential Research Fund, \$24,684.**
- 2007 “Population genetics of pecan (*Carya illinoensis*) and its wild relatives.” **Saint Louis University Summer Research Award. \$8750.**
- 2005 - 2006 “Geography of Domesticated Mesoamerican Trees and their wild relatives.” **University of Colorado Museum Research Fund \$5000.**
- 2001 Washington University Danforth Plant Sciences Fund (to support undergraduate participation in field research)

Fellowships and awards

- 2015 Selected as “Most Impactful Person” by graduating senior at Saint Louis University.
- 2006 Best Talk, Economic Botany Section of Botanical Society of America
- 2006 Residence Life Academic Teaching Award, University of Colorado
- 2005 Invited participant, NSF Science Environment for Ecological Knowledge Early Career Faculty and Postdoctoral Ecoinformatics Workshop, Albuquerque, NM
- 2003 Dean’s Award for Teaching Excellence, Washington University
- 1998 - 2004 Washington University Graduate Fellowship
- 1996 - 1998 Colorado State University Graduate Student Teaching Assistantship

- 1996 Young Botanist Recognition Award, Botanical Society of America
 1995 Howard Hughes Medical Institute Summer Research Internship
 1995 Arthur T. and Anna H. Evans Scholarship, Miami University

**Grants, awards, and fellowships awarded to graduate students in my lab
to support co-authored work**

- 2015 American Society of Plant Taxonomists Graduate Student Research Award (Alex Linan; \$800)
 2015 Saint Louis University Dissertation Fellowship (Steven Callen)
 2014 Botanical Society of America Congressional Visits Fellow (Steven Callen)
 2014 Saint Louis University Brennan Award (Laura Klein) (\$2000)
 2013 NSF East Asian Pacific Summer Institute Fellowship (Steven Callen) (\$5000)
 2013 Kunming Institute of Botany (Kunming, China) Research Award (Steven Callen) (\$13,333)
 2013 First Place Poster in Biological Sciences, 19th Annual Saint Louis University Graduate Student Association Research Symposium, St. Louis, MO (Steven Callen)
 2013 Botanical Society of America Travel Awards (Laura Klein, Chrissy McAllister)
 2013 Principia Faculty Development Award (Chrissy McAllister) (\$7,000)
 2013 Saint Louis University Brennan Award to support research (Steven Callen) (\$2000)
 2013 Saint Louis University Reis Biological Field Station Research Award (Laura Klein) (\$400)
 2012 Best Poster Award, Botanical Society of America Genetics Section (Chrissy McAllister)
 2012 NSF Grape Research Coordination Network Research Award (Laura Klein) (\$6000)
 2012 Mickey Scudder Scholarship, Webster Groves Nature Society (Steven Callen) (\$1000)
 2012 NSF Graduate Research Fellowship Honorable Mention (Steven Callen)
 2011 NSF Graduate Research Fellowship Honorable Mention (Steven Callen)
 2011 Best Poster Award, Botanical Society of America Ecology Section (Steven Callen)

PUBLICATIONS AND PRESENTATIONS

(Saint Louis University *mentored Graduate student, **mentored Undergraduate student)

Published and in press articles

32. Callen*, S. T., L. L. Klein*, and **A. J. Miller**. Climatic niche characterization of 13 North American *Vitis* species. *In Press, American Journal of Enology and Viticulture*.
31. DeHaan, L. VanTassel, D., Anderson, J., Asselin, S. Barnes, R., Baute G., Cattani, G., Culman, S., Dorn, K., Hulke, B. Kantar, M., Larson, S., Marks, M., **Miller, A.**, Poland, J., Ravetta, D., Rude, E., Ryan, M., Wyse, D., and Zhang X. A pipeline strategy for crop domestication. *In Press, Crop Science*.
30. Warschefsky, E., L. Klein*, E. von Wettberg, D. Chitwood, M. Frank, J. Londo, and **A.J. Miller**. Rootstocks: diversity, domestication, and impacts on shoot phenotypes. *In Press, Trends in Plant Science*.
29. Maimaitiyiming*, M., **A.J. Miller**, and A. Wulamu. Discriminating spectral signatures among and within two closely related grapevine species. *In Press, Photogrammetric Engineering and Remote Sensing*.

28. Chitwood, D.H., L.L. Klein*, R O'Hanlon**, S. Chacko**, M. Greg**, C. Kitchen**, **A.J. Miller** and J. P. Londo. 2015 Leaves as composites of latent developmental and evolutionary shapes. *New Phytologist*. doi:10.1111/nph.13754.
27. Pap, D. J. Londo, **A.J. Miller**, and L. Kovacs. Population structure of *Vitis rupestris*, an important but vanishing resource for grape breeding. *American Journal of Viticulture and Enology* epub ahead of print June 19, 2015 doi:10.5344/ajev.2015.15012.
26. Pell, S.K., J.D. Mitchell, and **A.J. Miller**. Anacardiaceae. *In* Flora of North America. *Accepted*.
25. **Miller, A.J.**, Novy, A., Glover, J., Maul J., Kellogg E.A., Raven, P. and P. Wyse Jackson. 2015. Expanding the role of botanical gardens in the future of food. *Nature Plants* 1(6): 15078.
- **Covered in Nature Plants editorial: *More than naming of parts***
<http://www.nature.com/articles/nplants201586>.
24. Callen*, S.T. and **A. J. Miller**. Signatures of niche conservatism and niche shift in the North American kudzu (*Pueraria montana*) invasion. *Diversity and Distributions* 21(8): 853-863. DOI: 10.1111/ddi.12341.
23. McAllister*, C., R Blaine, P. Kron, B. Bennett, H. Garrett, J. Kidson, B. Matzenbacher, A. Glotzbach, and **A.J. Miller**. 2015. Environmental correlates of cytotype distribution in *Andropogon gerardii*. *American Journal of Botany* 102(1): 92 – 102.
22. Gross, B., Kellogg E.A., and **A.J. Miller**. 2014. Speaking of food: connecting basic and applied plant science. *American Journal of Botany* 101: 1597 – 1600.
- **Covered in Current Biology Feature:** Gross M. (2014) Plant science called up to provide food security 24(23) R1105 – R1108.
<http://www.sciencedirect.com/science/article/pii/S0960982214014924>
 - **Covered in EurekaAlert!** October 14, 2015: Building a bridge from basic botany to applied agriculture. http://www.eurekaalert.org/pub_releases/2014-10/ajob-bab101414.php.
21. Hancock, J. and **Miller, A.J.** 2014. Crop Plants: Evolution. *Encyclopedia of Life Sciences*. John Wiley and Sons. DOI: 10.1002/9780470015902.a0003360.pub2.
20. Gross, B. L. and **A. J. Miller**. 2014. From field to table: perspectives and potential for perennial fruit domestication. Proceedings from the Perennial Crop Workshop, Food and Agriculture Organization. <http://www.fao.org/3/a-i3495e.pdf>
19. Albrecht, M. A., L.A. Broecker**, C. Romero-Hernandez*, and **A. J. Miller**. 2014. Conservation genetics of edaphic endemics in naturally isolated habitats: a case study with *Geocarpon minimum* (Caryophyllaceae). *Journal of the Torrey Botanical Society*. 141(1): 1-13. 2014.
18. **Miller, A.J.**, N. Matasci, H. Schwaninger, M. Aradhya, B. Prins, G.-Y. Zhong, C. Simon, E. Buckler, and S. Myles. 2013. *Vitis* phylogenomics: hybridization intensities from a SNP array outperform genotype calls. *PLoS One* 8(11): e78680.
17. **Miller, A. J.** 2012. Out of the cold- how big and how old? Genetic fingerprinting reveals how long-lived individuals withstand climatic oscillations in the arctic-alpine. *Molecular Ecology* 21(5): 1036-7.

16. **Miller, A.J.** and B.L. Gross. 2011. Forest to Field: Perennial fruit crop domestication. *American Journal of Botany* 98(9): 1389-1414.
15. Grauke, L.J., M. A. Mendoza-Herrera, **A.J. Miller**, and B. W. Wood. 2011. Geographic patterns of genetic variation in native pecan populations (*Carya illinoensis*). *Tree Genetics and Genomes* 7:917-932.
14. **Miller, A.J.** 2011. Wealth of Crop Relatives: Genomic and Breeding Resources. *Spondias purpurea* and its sympatric wild relatives in Mesoamerica. Chittaranjan Kole, Editor. Springer-Verlag, Berlin, Germany.
13. Pell, S., J.D. Mitchell, **A.J. Miller** and Tatyana A. Lobova. 2011. Anacardiaceae. The Families and Genera of Vascular Plants. K. Kubitzki, ed. Springer-Verlag, Heidelberg, Germany.
12. Gunn, B.F., M. Aradhya, J. Salick, **A. Miller**, Y. Yongping, L. Lin, and H. Xian. 2010. Genetic variation in walnuts (*Juglans sigillata* Dode and *J. regia* L., Juglandaceae): species distinctions, human impacts, and agrobiodiversity conservation in Yunnan, China. *American Journal of Botany* 97(4): 660-671.
11. Sampliner, D.S*. and **A.J. Miller**. 2009. Ethnobotany of horseradish: reproductive biology and local uses of *Armoracia* species (Brassicaceae) in their native ranges. *Economic Botany* 63(3): 303-313.
10. **Miller, A.J.** 2008. Characterization of the *Spondias purpurea* lineage in Mesoamerica based on nuclear and chloroplast sequence data. *Journal of the Torrey Botanical Society*. 135(4): 463-474.
9. **Miller, A.J.** Crop Plants: Evolution. 2007. *Encyclopedia of Life Sciences*. John Wiley and Sons.
8. Yi, T., **A.J. Miller**, and J. Wen. 2007. The phylogeny of *Rhus* (Anacardiaceae) based on sequences of nuclear *NIA-i3* intron and chloroplast *trnC-D* suggests reticulate evolution. *Systematic Botany* 32(2): 379-391.
7. **Miller, A.J.** and J.H. Knouft. 2006. GIS-based characterization of the wild and cultivated niches of a Mesoamerican fruit tree, *Spondias purpurea* (Anacardiaceae). *American Journal of Botany* 93(12): 1757-1767.
6. **Miller, A.J.** and B.A. Schaal. 2006. Domestication and the distribution of genetic variation in wild and cultivated populations of the Mesoamerican fruit tree *Spondias purpurea* L. (Anacardiaceae). *Molecular Ecology* 15: 1467-1480.
5. **Miller, A.J.** and B.A. Schaal. 2005. Domestication of a Mesoamerican cultivated fruit tree. *Proceedings of the National Academy of Science* 102 (36): 12801-12806.
4. Yi, T., **A. J. Miller** and J. Wen. 2004. Phylogenetic and biogeographic diversification of *Rhus* (Anacardiaceae) in the Northern Hemisphere. *Molecular Phylogenetics and Evolution* 33 (3): 861-879.
3. **Miller, A.J.**, J. Wen, and D.A. Young. 2001. Systematics of *Rhus*: Phylogenetic and biogeographic inferences based on ITS sequence data. *International Journal of Plant Sciences* 162(6): 1401-1407.

2. Kiss, J.Z., M.M. Guisinger, **A.J. Miller**. 1997. What is the threshold amount of starch necessary for full gravitropic sensitivity? *Advances in Space Research* 21: 1197-1202.
1. Kiss, J.Z., M.M. Guisinger, **A.J. Miller**, and K. S. Stackhouse. 1997. Reduced gravitropism in hypocotyls of starch-deficient mutants of *Arabidopsis*. *Plant and Cell Physiology* 38(5): 518-525.

Manuscripts submitted, in review, or in revision

- McAllister*, C.A. and **A. J. Miller**. SNP discovery via genotyping-by-sequencing for assessment of population genetic structure and recurrent polyploidization in big bluestem (*Andropogon gerardii*). *Submitted to the American Journal of Botany April 2, 2016*.
- Migicovsky, Z., J. Sawler, D. Money, R. Eibach, **A. J. Miller**, J. J. Luby, W. Wührer, J. Warner, S. von Kintzel, H. Schwaninger, G.-Y. Zhong, P.J. Brown, and S. Myles. Genomic ancestry estimation quantifies use of wild species in grape breeding. *Submitted to BMC Genomics March 7, 2016*.
- Miller, A.J.** and B.L. Gross International Plant and Animal Genome Meeting. Invited Letter to the Editor for *American Journal of Botany*. *Submitted March 30, 2016*.

Manuscripts in preparation

- Callen*, S.T., J. Zweck*, Z. – X. Ren, T. Zander**, R. O’Hanlon**, M. Greg**, W. Zhou, H. Wang, P. Bernhardt, and **A.J. Miller**. Pollination biology and breeding system of kudu (*Pueraria montana*) in native and invasive populations. *Draft available*.
- Grauke, L.J., Azucena, M. Waninger** S., Romero-Hernandez* C., Bertram** T., Viswanath*, O., and **A.J. Miller**. Geographic and taxonomic patterns of chloroplast sequence and SSR variation in North American *Carya*. *In preparation*.
- Klein*, L., Caito**, M., Chapnick**, C., Kitchen**, C., O’Hanlon**, R., Chitwood, D., and **A. Miller**. Digital morphometrics of two North American grapevines: assessing leaf variation within and among individuals, and among species (Vitaceae). *In preparation for Frontiers in Plant Science*. *Draft available*.
- Walters, S.A., P. Bernhardt, M. Joseph**, and **A. J. Miller**. Compatible and Self-Incompatible Flowering Systems in Horseradish. *Draft available*.

Non-peer reviewed publications

- Miller, A.J.** 2007. Book Review: “Darwin’s Harvest. New Approaches to the Origins, Evolution, and Conservation of Crops.” Edited by Timothy J. Motley, Nyree Zerega, and Hugh Cross. Columbia University Press, 61 W. 62nd Street, New York, NY 10023. 2006. ISBN 0-231-13316-2. *Brittonia*.
- Miller, A.J.** and H.M.C. Sevensen. 2005. Identifying and correcting gender imbalance. A Success Story. *Association for Women in Science Magazine* 34(2): 21-23.

Published abstracts

(Saint Louis University *mentored Graduate student, **mentored Undergraduate student)

30. Klein*, L. R. O'Hanlon**, M. Caito**, D. Chitwood, **A. Miller**. 2015. Digital morphometrics of two North American grapevines: assessing leaf variation within and among individuals and among species (Vitaceae). Botany 2015 (Botanical Society of America Annual Meeting), Edmonton, Alberta, Canada.
29. **Miller, A. J.** 2015. Comparative transcriptomics in two grapevine species. Botany 2015 (Botanical Society of America Annual Meeting), Edmonton, Alberta, Canada.
28. **Miller, A.J.** 2015. Comparative transcriptomics in two grapevine species. Plant and Animal Genome Meeting, Grape Genomics Workshop. San Diego, CA.
27. **Miller, A.J.** and S. T. Callen*. 2014. Comparative transcriptome and ionome analysis in two closely related North American grapevines (*Vitis riparia* and *V. rupestris*) in a common garden. Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). Boise, ID.
26. Kitchen, C.**., L. Klein*, D. Chitwood, D. Bogler, and **A.J. Miller**. 2014. Digital morphometric analysis of North American *Vitis* growing in a common garden. Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). Boise, ID.
25. **Miller, A.J.** 2014. Comparative transcriptomics analysis of abiotic stress response in two closely related grapevine species. Plant and Animal Genome XXII Conference, San Diego, California. January 10 – 15, 2014.
24. Sarmiento, S**., P. Bernhardt, M. Joseph**, C. McAllister*, J. Timmer**, and **A. Miller**. 2013. Mate limitation and reduced fertility in a clonally propagated perennial crop. Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). New Orleans, LA.
22. Callen, S*, J. Zweck*, T. Zander**, **A. Miller**, and P. Bernhardt. 2013. Sexual reproduction and self-compatibility of the invasive vine kudzu (*Pueraria montana*) in Missouri roadside3populations. Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). New Orleans, LA.
22. Greg, M.**., L. Klein*, D. Bogler, I. Jiménez, and **A. Miller**. 2013. Morphometric analysis of leaf variation in three North American grape species (*Vitis acerifolia*, *V. riparia*, and *V. rupestris*). Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). New Orleans, LA.
21. **Miller, A.** and E.A. Kellogg. 2013. Speaking of food: connecting basic and applied science. Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). New Orleans, LA.
20. McAllister, C.*., R. Blaine, P. Kron, B. Bennett, A. Glotzbach, J. Kidson, H. Garrett, B. Matzenbacher, and **A. Miller**. 2013. Environmental correlates of cytotype diversity in Big Bluestem (*Andropogon gerardii*). Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). New Orleans, LA.
19. McAllister, C., P. Kron, R. Blaine, and **A. Miller**. 2012. Environmental determinants of cytotype diversity in big bluestem (*Andropogon gerardii*). Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). Columbus, OH.
 - **Awarded best student poster in the Genetics section of the Botanical Society of America.**
18. Callen, S., I. Jiménez, J. Knouft, and **A. Miller**. 2012. Climatic niche shift in kudzu, *Pueraria montana* var. *lobata*, upon invasion into North America. Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). Columbus, OH.
17. Callen, S.*, J. Knouft, and **A. J. Miller**. 2011 Assessing the environmental niches of native and

introduced *Pueraria montana* (kudzu) Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). St. Louis, MO.

- **Awarded best student poster in the Ecology section of the Botanical Society of America.**

16. Broecker, L.**, M. A. Albrecht, C. Romero-Hernandez*, and **A. J. Miller**. 2011. Conservation genetics of *Geocarpon minimum*. Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). St. Louis, MO.
15. **Miller, A.J.**, D.S. Sampliner*, I. Al-Shehbaz, C. Romero-Hernandez*, C. McAllister*, T. Bertram** and S. Waninger**. 2010. Phylogenetic approaches to understanding sterility in crop species: origin and evolution of horseradish (*Armoracia rusticana*, Brassicaceae). Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). Providence, RI.
14. **Miller, A.J.**, T. Bertram**, C. Romero-Hernandez*, D. Sampliner*, C. Dillman, A. Mendoza-Herrera, and L.J. Grauke. 2009. Chloroplast haplotype sharing across morphologically distinct taxa within North American *Carya* (pecans, hickories). Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). Snowbird, UT.
13. **Miller, A.J.**, J. Knouft, and K. Hunt. 2009. Decoupling phenological events in temperate tree taxa: local climate influences timing of budbreak and flower initiation, but not nut maturity, in *Carya illinoensis* grown in a common garden. Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). Snowbird, UT.
12. **Miller, A.J.** 2008. Genotypic diversity in the University of Missouri Center for Agroforestry Pecan Collection. Northern Nut Growers Association Annual Meeting, College Station, TX.
11. **Miller, A.J.** 2007. Origin and Evolution of *Spondias purpurea*. Association for Tropical Biology and Conservation Annual Meetings. Morelia, Michoacan, Mexico.
10. **Miller, A.J.** and J. Knouft. 2006. GIS-based characterization of the ecological niches of wild and cultivated populations of the Mesoamerican fruit tree *Spondias purpurea* (Anacardiaceae)” with Jason Knouft. Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). Chico, CA.
9. **Miller, A.J.** 2005. Domestication and the distribution of genetic variation in cultivated and wild populations of the Mesoamerican fruit tree *Spondias purpurea* (Anacardiaceae). Evolution meetings, Fairbanks, AK.
8. **Miller, A.J.** 2005. Domestication and the distribution of genetic variation in cultivated and wild populations of the Mesoamerican fruit tree *Spondias purpurea* (Anacardiaceae). Society of Economic Botany Annual Meeting, Fort Worth, TX.
7. **Miller, A.J.** and B.A. Schaal. 2003. Examining the origins of jocotes: phylogeographic evidence from the chloroplast region *trnG-trnS*.” Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). 2003, Mobile, AL.
6. **Miller, A.J.** and B. A. Schaal. 2003. Evolution of a Mesoamerican fruit tree (*Spondias purpurea* L.) based on chloroplast sequence data. Evolution Annual Meetings, Chico, CA.
5. **Miller, A.J.** and B. A. Schaal. 2002. Genetic variation in a Central American fruit tree (*Spondias purpurea* L., Anacardiaceae) based on DNA sequence data. Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). Madison, WI.
4. **Miller, A.J.**, D. Young, and J. Wen. 1998. Phylogenetic analysis of *Rhus* (Anacardiaceae) with David Young and Jun Wen. Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). Baltimore, MD.
3. **Miller, A.J.** and J. Wen. 1997. “Taxonomic history of the sumac genus (*Rhus*, Anacardiaceae). Annual meetings of the Botanical Society of America and the American Society of Plant Taxonomists (Botany meetings). Montreal, Quebec.
2. Kiss, J.A., T. Caspar, J. Wright, and **A. J. Miller**. 1995. Gravitropism in roots of intermediate-starch mutants of *Arabidopsis*. American Society of Plant Physiologists Plant Physiology 108(s): 24.

1. Kiss, J.Z., M.M. Guisinger, **A.J. Miller** and J.B. Wright. 1995. "The response to gravity is correlated to the amount of starch in *Arabidopsis*. Gravitational and Space Biology Meetings 1995, Arlington, Virginia. ASGSB Bulletin 9:38.

Invited presentations

- 2016 Miami University Department of Biology. Oxford, OH
- 2016 Danforth Plant Science Center Research Symposium "New Space to Speed the Pace: Advances in Plant Science by the Danforth Center and Partner Institutions," St. Louis, MO
- 2016 Missouri Grape and Wine Research Symposium, Columbia, MO
- 2015 "Building a botanical foundation for perennial polyculture" Prairie Festival at The Land Institute, Salina, KS
- 2015 "Feeding the Movement" panel presentation and discussion at American Public Gardens Association (APGA), Minneapolis, MN
- 2015 Missouri Botanical Garden NSF REU Summer Seminar Series, St. Louis, MO
- 2015 Lund University Foundation/The Land Institute joint presentation as part of "Rooted in Soil" exhibit at the DePaul Art Museum, Chicago, IL
- 2015 Washington University, Evolution, Ecology, and Population Biology Program Seminar Series, St. Louis, MO
- 2015 University of Illinois – Urbana Champaign Plant Molecular and Physiological Biology seminar series. Champaign, IL
- 2014 Missouri Grape and Wine Institute, Columbia, MO
- 2014 Lindenwood University – Belleville, IL
- 2014 Southern Illinois University – Edwardsville, Edwardsville, IL
- 2014 Saint Louis University, Department of Biology, St. Louis, MO
- 2014 NSF RCN Human Dimensions of Natural History "Crop Domestication" on the web
- 2014 2nd Plant Genomics Congress USA, St. Louis, MO
- 2014 Missouri Botanical Garden NSF REU Summer Seminar Series, St. Louis, MO
- 2014 University of Minnesota – Duluth Department of Biology, Duluth MN
- 2014 Harvard University Arnold Arboretum, Boston MA
- 2014 Plant-Soil-Water Summit, Washington University, St. Louis, MO
- 2014 Oklahoma State University Department of Botany, Stillwater, OK
- 2014 University of Missouri Division of Plant Sciences, Columbia, MO
- 2014 Plant and Animal Genome Meeting, San Diego, CA
- 2013 University of Missouri – St. Louis, (x2), St. Louis, MO
- 2013 Food and Agriculture Organization United Nations, Rome, Italy
- 2013 Torrey Botanical Society and New York Nut Growers Association, Hamden CT
- 2013 John Dwyer Public Lecture in Biology, Missouri Botanical Garden, St. Louis, MO
- 2013 Missouri Botanical Symposium, Rolla, MO
- 2013 National Science Foundation Research Experiences for Undergraduates (NSF-REU) from Missouri Botanical Garden and Danforth Plant Science Center, St. Louis, MO
- 2013 Saint Louis University Tri Beta Society, St. Louis, MO
- 2012 2nd Annual Missouri Grape and Wine Symposium, Columbia, MO
- 2012 European Molecular Biology Laboratory/European Bioinformatics Institute at the Wellcome Trust Sanger Institute Genome Campus, Hinxton, United Kingdom
- 2012 Missouri Viticulture and Enology Research Alliance Symposium, Mountain Grove, MO
- 2012 Botanical Society of America Legacy Society, St. Louis, MO
- 2012 Rutgers University Dept. of Botany and Plant Pathology, New Brunswick, NJ
- 2011 Missouri Botanical Garden Systematics Symposium, St. Louis, MO
- 2011 Saint Louis University Department of Biology, St. Louis, MO
- 2011 Chicago Plant Science Symposium, Chicago, IL

- 2010 Missouri University of Science and Technology, Rolla, MO
 2010 Smithsonian Botanical Symposium, National Museum of Natural History, Washington DC
 2010 St. Louis Science Center, St. Louis, MO
 2010 Northwestern University, Evanston, IL
 2009 Horseradish Growers School, Collinsville, IL (two separate presentations)
 2007 Botanical Society of America Colloquium in “Spatial and Ecological Data in Evolutionary Studies”, Chicago, IL
 2007 Botanical Society of America Colloquium in “Evolution and Diversification in the Sapindales”, Chicago IL
 2007 Tyson Research Station, Washington University, St. Louis, MO
 2007 University of Missouri – Columbia. Missouri Life Sciences Week, Panelist for Domestication Workshop, Colombia, MO
 2006 University of Missouri – St. Louis, St. Louis, MO
 2006 Miami University Botany Centennial Alumni Symposium, Oxford, OH
 2006 New York Botanical Garden Science Department, New York, NY
 2006 Saint Louis University Beta Beta Beta
 2006 Saint Louis University Department of Biology, St. Louis, MO
 2006 Missouri Botanical Garden GIS Working Group, St. Louis, MO
 2005 University of Colorado Department of Ecology and Evolutionary Biology, Boulder, CO
 2005 Torrey Botanical Society, New York Botanical Garden, New York, NY
 2005 Meetings of the Society of Economic Botany (SEB), Fort Worth, TX. Invited speaker for SEB Symposium “Economic Importance of the Anacardiaceae”
 2005 Universidad de Guadalajara, Departamento de Ecología y el Cuerpo Académico Cambios Globales en Zonas Semiáridas. Guadalajara, México (presented in Spanish)
 2004 Chicago Botanic Garden, Education Department, Glencoe, IL
 2004 Northwestern University, Program of Biological Sciences, Evanston, IL
 2003 The Morton Arboretum, Science Department, Lisle, IL
 2003 New York Botanical Garden, Department of Science, New York, NY
 2002 Universidad de Guadalajara. Comité Sociedad de Alumnus Biología, Guadalajara, México. (presented in Spanish)
 2002 Universidad Nacional Autónoma de México. Instituto de Biología, Ciudad México (D.F.), México. (presented in Spanish)
 2001 Universidad del Valle de Guatemala. El Instituto de Investigaciones de la Universidad del Valle de Guatemala, Guatemala City, Guatemala

Other contributed presentations

20. Herron *, S. Ciotir C., Miller A.J. 2016. Identifying and phenotyping wild perennial herbaceous legumes for pre-breeding and domestication. 22nd Annual Saint Louis University Graduate Research Symposium. St. Louis, MO. April 22, 2016.
 19. Klein*, L., Chitwood D., Kitchen**, C., O’Hanlon**, R. Caito**, M., Bogler, D., **Miller, A.J.** 2015. Quantifying leaf shape: morphometric analysis of two North American *Vitis* species in a common garden. 21st Annual Saint Louis University Graduate Research Symposium. St. Louis, MO. April 24, 2015.
 18. Klein*, L.L., Kitchen** C., O’Hanlon**, R., Caito**, M., Chapnick**, C., Chitwood, D. and **Miller, A.J.** 2015. Digital morphometrics of two North American grapevines: assessing leaf variation within and among individuals, and between species (Vitaceae). Annual Saint Louis Ecology, Evolution, and Conservation Retreat. St. Louis, MO. September 26, 2015.
 17. O’Hanlon**, R., Caito**, M., L. Klein* and **A. J. Miller.** 2015. Using herbarium specimens to quantify leaf shape: morphometric analysis of two North American *Vitis* species from natural populations. Saint Louis University Undergraduate Research Symposium. St. Louis, MO.

16. Klein*, L., C. Chitwood, C. Kitchen**, R. O'Hanlon**, M. Caito**, D. Bogler, and **A. J. Miller**. 2014. Quantifying leaf shape: morphometric analysis of two North American *Vitis* species in a common garden. Missouri Botanical Garden: World Exploration: Behind the Science with Garden Botanists. St. Louis, MO.
15. Callen* S. T. and **A. J. Miller**. 2014. Signatures of niche shift following the introduction of kudzu (*Pueraria montana*) into North America. Fourth Annual Saint Louis Ecology, Evolution, and Conservation Retreat. Edwardsville, IL.
14. Kitchen, C.**, L. Klein*, D. Chitwood, D. Bogler, and **A.J. Miller**. 2014. Digital morphometric analysis of North American *Vitis* growing in a common garden. Research Experience of Undergraduates Missouri Botanical Garden symposium, St. Louis, MO.
13. Klein*, L.L., D. Pap, L. Kovács, K. Hyma, J. Londo, and **A.J. Miller**. 2014. Genotyping by sequencing reveals distinct genomic features of North American *Vitis* species used for grape rootstock cultivation. Saint Louis University Graduate Research Symposium, St. Louis, MO. April 11, 2014. *Poster presentation*.
12. Maimaitiyiming, M.*, **Miller A**, and A. Ghulam. 2014. Sustainable agriculture under changing climate: chemometric modeling of plant ion concentration. Saint Louis University Earthday Symposium.
11. **Miller, A.J.** 2013. Research update: Grapevine research and public outreach in St. Louis. Missouri Grape and Wine Research Board Meeting. Columbia, MO.
- 8 – 10. Greg, M.**, L. Klein*, D. Bogler, I. Jiménez, and **A. Miller**. 2013. Morphometric analysis of leaf variation in three North American grape species (*Vitis acerifolia*, *V. riparia*, and *V. rupestris*). Poster presentations at
 - Research Experience of Undergraduates Missouri Botanical Garden symposium, St. Louis, MO.
 - Third Annual Saint Louis Ecology, Evolution, and Conservation retreat, St. Louis, MO.
 - 60th Annual Systematics Symposium of the Missouri Botanical Garden, St. Louis, MO
- 5 – 7. Klein, L.L., D. Pap, L. Kovacs, K. Hyma, J. Londo, and **A. Miller**. 2013. Population genetics of sympatric and allopatric populations of *V. riparia* and *V. rupestris*. Poster presentations at
 - NSF Grape Research Coordination Network Annual Meeting. Davis, California.
 - Third Annual Saint Louis Ecology, Evolution, and Conservation retreat, St. Louis, MO. September 28 2013
 - 60th Annual Systematics Symposium of the Missouri Botanical Garden, St. Louis, MO. October 12 2013.
4. Callen, S.T., L.L. Klein, and **A.J. Miller**. 2013. Comparative analysis of the climatic niches of nine native North American grape (Vitaceae) species. Missouri Viticulture and Enology Research Alliance Symposium, Saint Louis, MO.
- 2 – 3. Broecker, L.**, M. A. Albrecht, C. Romero-Hernandez*, and **A. J. Miller**. 2011. Conservation genetics of *Geocarpon minimum*.
 - Center for Plant Conservation National Meeting, Denver, CO.
 - Saint Louis University Biology Department Undergraduate Research Symposium.
1. **Miller, A.J.** 2011. Genetic characterization of the [University of Missouri Horticulture and Agroforestry Research Center] HARC pecan collection. University of Missouri Center for Agroforestry Annual Meetings, Columbia, MO.

Field work

2009 – ongoing	United States (Missouri, Illinois)
2008	Austria, Bulgaria, Romania, Russia
2007	United States (Illinois, Kentucky, Missouri)
2005	Mexico (Jalisco, Nayarit)

2002	Mexico (Chiapas, Colima, Guerrero, Jalisco, Nayarit, Oaxaca, Veracruz, Yucatan)
2001	Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Puerto Rico
2000	Costa Rica, Nicaragua
1999	Spain (Canary Islands)
1997	United States (Arizona, California, Colorado, New Mexico)

TEACHING

Courses and curriculum development

Undergraduate courses taught:

Principles of Biology II (BIOL 106). Four credit hour lecture/lab required course for Biology majors. 200 – 280 students per semester. Co-taught in various years with Gerardo Camilo, Lindzy Dodson, Jason Knouft, and Shawn Nordell. Saint Louis University, **Spring 2008, 2009, 2010, 2011, 2012.**

Evolutionary Biology (BIOL 301). Three credit hour required course for Biology majors. 35 – 50 students per semester. Saint Louis University, **Fall 2006, 2008, 2015.**

Biology of Plants and Fungi (BIOL 326). Four credit hour lecture/lab course. 24 – 50 students per semester. Saint Louis University, **Spring 2013, 2014, 2015, 2016.**

Applied Population Genetics (BIOL 454). Three credit hour lecture/lab course. 3 – 15 students per semester. Saint Louis University, **Fall 2007, 2010, 2012.**

Plants and Society (EBIO 2590) Four credit hour lecture/lab course for non-majors. 24 students. University of Colorado, **Fall 2005.**

Evolución y Domesticación. Three-day course offered at the Universidad de Guadalajara in Spanish in **2002 and 2005.**

Plant Science Internship (BIOL 4912). Variable credit (1-2 hours) where students work in some aspect of botanical science. Students participated as interns at the Botanical Society of America working as part of the BSA's Planting Science program. **Fall 2015 – present.**

Graduate courses taught:

Applied Population Genetics (BIOL 554). Three credit hour lecture/lab course. 3 – 15 students per semester. Saint Louis University, **Fall 2007, 2010, 2012.**

Advanced Evolution (BIOL 556). Three credit hour lecture/discussion course. 8 students. Saint Louis University, **Fall 2014.**

Graduate Seminar in Ecology, Evolution, and Systematics (BIOL 5840). Two credit-hour discussion course. 9 students. **Fall 2009, 2011, 2013, 2015.**

- *Ecology and Evolution* (BIOL 5840). 9 students.
- *RNA-seq: practice and application* (BIOL 584 – Graduate seminar). Two credit-hour discussion course. 9 students. Spring 2013, with J. Kennell.
- *Evolutionary responses to global change* (BIOL 584 – Graduate seminar). Two credit-hour discussion course. 8 students. Fall 2011.

- *Evolution, ecology, and the spatial distribution of organisms* (BIOL 584 – Graduate seminar). Two credit-hour discussion course. 8 students. Fall 2009, with J. Knouft.

Plant evolutionary biology (BIOL 698-33 – Graduate reading course). Two credit hour course. **Fall 2010**. 2 students.

Courses for which I served as a teaching assistant:

Introductory Plant Biology Laboratory. Colorado State Univ. Lab Instructor, Spring 1998.

Plant Identification Laboratory. Colorado State Univ. Lab Instructor, Fall 1997.

Processes in Biology Laboratory. Colorado State Univ. Lab Instructor, Spring 1997.

Attributes of Living Systems Laboratory. Colorado State Univ. Lab Instructor, Fall 1996.

Plants and Civilization. Washington Univ. Teaching Assistant, Spring 2002.

Biology. Washington Univ. Teaching Assistant, Fall 2001.

Ecology. Washington Univ. Spring, 1999.

Plants, Humanity, and the Environment. Miami Univ. Undergraduate Teaching Assistant, Spring 1996).

Introductory Botany Laboratory. Miami Univ. Undergraduate Teaching Assistant, Spring 1995.

STUDENTS, MENTORING, AND ADVISING

Postdoctoral advisees

current Dr. Claudia Ciotir (Global Inventory of Perennial Grains and Legumes).

2008 Dr. Casey Dillman (*Carya* phylogenetics).

Graduate students advised

current Sterling Herron, M.S. student, Saint Louis University 2015 – present.

current Alex Linan, M.S. student, Saint Louis University 2014 – present. Co-advised with Christine Edwards, Center for Conservation and Sustainable Development, Missouri Botanical Garden. Stipend provided by Missouri Botanical Garden. “Genetics and conservation in the persimmon and ebony genus.”

current Laura Klein, Ph.D. Candidate, Saint Louis University, 2012 – present. “Morphological and genomic impacts of interspecific hybridization in North American *Vitis*.”

current Steven Callen, Ph.D. Candidate, Saint Louis University, 2010 – present. Dissertation research: “Evolution of mating systems in clonally reproducing perennial plants: a case study of the invasive species kudzu (*Pueraria montana*).”

2014 Dr. Chrissy McAllister, Ph.D. Biology *with distinction* Saint Louis University (2009 – 2014). Dissertation title: “The Origin, Evolution, and Ecology of Cytotype Diversity in Big Bluestem (*Andropogon gerardii*).” Chrissy’s tuition and stipend were covered in its entirety by Principia College.

Current position: Associate Professor and Science Unit Head, Principia College, Elsah, IL).

2011 Carolina Romero, M.S. Biology, Saint Louis University (2009 – 2011).

Current position: Research Specialist, Missouri Botanical Garden Research Division.

2009 Danielle Sampliner, M.S. Biology, Saint Louis University (2007 – 2009). Thesis title:

“Ethnobotany and evolutionary history of horseradish (*Armoracia rusticana*, Brassicaceae).”

Current position: Outreach Instructor, Cleveland Natural History Museum, Cleveland, OH.

Graduate student committees

- Current Courtney Dvorsky, M.S. Biology student, Saint Louis University. Advisor: Dr. Peter Bernhardt.
Asclepias pollination biology.
- Current Elliot Gardener, Ph.D. Candidate, Northwestern University. Advisor: Dr. Nyree Zerega.
Artocarpus reproductive biology and evolution.
- Current Downen Jocson, M.S. Biology student, Saint Louis University. Advisor: Dr. Kasey Fowler-Finn.
Evolutionary ecology of communication in invertebrates.
- Current Paige Muñoz, M.S. Biology student, Saint Louis University. Advisor: Dr. Gerardo Camilo.
Urban ecology of bees in St. Louis.
- Current Allison Robson, M.S. Biology student, Saint Louis University. Advisor: Dr. Zhengo Lin.
Saccharomyces evolution.
- Current Justin Zweck, Ph.D. Biology Candidate, Saint Louis University. Advisor: Dr. Peter Bernhardt.
Dalea pollination biology.
- 2015 Maria Pil, Ph.D. Candidate, University of Missouri - St. Louis. Advisor: Dr. Bob Ricklefs.
“Comparative phylogeography of Caribbean birds.”
- 2014 Daniel Pap, M.S. Biology, Missouri State University. Advisor: Dr. Laszlo Kovacs. “Population genetics of *Vitis rupestris* on the Ozarks.” Awarded Missouri State University Distinguished Thesis Award.
- 2012 Mary Agnew, Ph.D. Biology, Saint Louis University. Advisor: Dr. Rick Mayden. Dissertation title: “The role of olfaction in mate choice in guppies (*Poecilia reticulata*) and implications for reproductive isolation.”
- 2012 Ginger Allington, Ph.D. Biology Saint Louis University. Advisor: Dr. Tom Valone.
Dissertation title: “A new model for reversal of desertification: Long-term livestock removal affects soil and vegetation dynamics.”
- 2012 Mauricio Diazgranados, Ph.D. Biology Saint Louis University. Advisor: Dr. Jan Barber.
Dissertation title: “Phylogenetic and biogeographic relationships of frailejones (*Espeletiinae*, *Compositae*): an ongoing radiation in the tropical Andes.”
- 2012 Alejandra Domic, Ph.D. Biology, Saint Louis University. Advisor: Dr. Gerardo Camilo.
Dissertation title: “Effects of anthropogenic disturbances on the regeneration of an Andean tree species.”
- 2012 Colby Witherup, M.S. Biology, Northwestern University. Advisor: Dr. Nyree Zerega. Thesis title: “Jackfruit diversity and genetic structure in Bangladesh under changing propagation methods
- 2012 Cynthia Hong-Wa, Ph.D. Biology, University of Missouri - St. Louis. Advisors: Dr. Toby Kellogg and Dr. Peter Stevens. Dissertation title: “Diversification and coexistence in the Madagascar olive (*Noronhia*, *Oleaceae*).”
- 2010 Rosa Ortiz Gentry, Ph.D. Biology, University of Missouri - St. Louis. Advisors: Dr. Toby Kellogg and Dr. Peter Stevens. Dissertation title: “Phylogeny, classification, and morphological diversification in *Menispermaceae*.”

Undergraduate students mentored in my lab since 2006

30. Danielle Hopkins (Fall 2015 – present)
29. Christian Kingeter (Fall 2015 – present)
28. Erin Knight (Fall 2015 – present)
27. Chad Chapnick (Spring 2015 – Fall 2015)
26. Brooke Micke (Spring 2015 – present)
- Related work: Brooke is conducting an internship in botany at the Natural History Museum in London under the direction of S. Knapp (Fall 2015).
25. Chelsea Pretz (Harris Stowe State University student): Fall 2014 – current

- Related work: Chelsea was awarded an NSF REU fellowship at the Danforth Plant Science Center, Summer 2015.
24. Madeleine Caito (Fall 2014 – Spring 2015)
 23. Regan O’Hanlon (Summer 2014 – Spring 2015)
 22. Cassandra Kitchen (2014).
 - Related work: Cassandra was awarded a NSF REU Fellowship at the Missouri Botanical Garden, Summer 2014
 21. Steve Chacko BA Biology SLU (Spring 2014).
 20. Mathew Greg (Fall 2012 – present).
 - Matthew was awarded a NSF REU Fellowship at the Missouri Botanical Garden, Summer 2013. He conducted an internship at the Madrid Botanic Garden while studying abroad in Fall 2014.
 19. Courtney Sciarata (Fall 2012).
 18. Jacob Timmer BA Biology, SLU (Summer 2011 – 2013).
 17. Daniela Rey Ardila (Fall 2010).
 16. Huawei Wang, BA Biology SLU 2011 (2010 – 2011).
 15. Tracy Zander, BA Biology SLU 2013 (Fall 2010 – 2013).
 14. Shawn Sarmiento, BA Biology SLU 2013 (2010 – 2013).
 13. Rory Arrigo, BA Biology SLU 2012 (2009 – 2012).
 12. Kyle Blacker, BA Biology SLU 2012 (2009 – 2012).
 11. Lauren Broecker, BS Environmental Science SLU 2011 (2010 – 2011).
 10. Michael Indergaard BA Biology SLU 2011 (2008 – 2011).
 9. Taylour Carlisle SLU (2008).
 8. Michael Joseph, BA Biology 2010 (2008 – 2010).
 6. Luke Gatta, BS Nutrition and Dietics/BA Philosophy SLU 2013 (Summer 2010).
 5. Sarah Waninger, BA Biology 2010 (2008 – ‘10); currently med student at Indiana Univ.
 4. Omar Viswanath, BA Biology 2009 (2008 – ‘09); currently med student at Creighton Univ.
 3. Tracey Bertram, BA Biology 2009 (2007 – ‘09); currently med student at Saint Louis Univ.
 2. Wendy Swetzig, BA Biology 2008 (2008); currently graduate student at SUNY Buffalo.
 1. Theresa Knoblock, BA Biology 2007 (2007).

Academic mentoring of undergraduates

I serve as the academic mentor for ~30 Biology majors and minors per semester.

High school students mentored

1. Sanchita Sen (Summer, 2015)

SERVICE

Appointments and service at Saint Louis University

Service to the Biology Department at Saint Louis University:

- | | |
|----------------|--|
| 2014 – present | Member, Infrastructure committee |
| 2014 – present | Organizer and Member, Diversity in STEM task force, Department of Biology |
| 2014 - present | Member, Faculty Mentoring Committee for Dr. Kasey Fowler – Finn |
| 2014 | Contributing participant, Sophomore mentoring night Plant Science representative |
| 2014 | Contributing participant, SLU 101 |
| 2013 | Contributing participant, SLU 101 |
| 2011 | Member, Biology Department Ecological/Evolutionary Genetics Search Committee |
| 2010 | Member, Biology Department Physiologist Search Committee |

- 2010 -2014 Member, Biology Department Web Committee
- 2009 Member, Biology Department “degree program tracks” committee
- 2008 Member, Biology Department Proactive Pedagogy committee
- 2007 Organizer and participant, Biology Department Plant Group organizer
- 2007 -2012 Chair, Biology Department Library committee
- 2007 -present Biology Department Liaison to the Missouri Botanical Garden

Service to Saint Louis University's College of Arts and Sciences and the University at large

- 2016 Member, Faculty Senate ad hoc Committee for a University Workload Policy
- 2015 - present Member, Quantitative Committee Co-Chair, Gender Equity Task Force
- 2015 Participant, Office of Graduate Education New Graduate Assistantship Orientation (August 2015)
- 2015 Presenter, Invited presentation to the Saint Louis University Board of Trustees Academic Affairs Committee on research program
- 2015 Reviewer, Saint Louis University Summer Research Awards in the Humanities
- 2015 Presenter, “Conversations on Climate Change” panelist for Atlas week (April 2015)
- 2014 Organizer/host, Wes Jackson The Land Institute visit to Saint Louis University
- 2014 Participant, Office of Graduate Education New Graduate Assistantship Orientation (August 2014)
- 2014 - Member, Center for Sustainability Rank & Tenure Committee
- 2014 Participant, Office of Graduate Education New Graduate Assistantship Orientation (August 2013)
- 2014 Panelist, “Conversations on Climate Change” Atlas week presentation (April 2014)
- 2013 Panelist, Saint Louis University Women’s Commission program on work-life balance
- 2013 Office of Graduate Education New Graduate Assistantship Orientation (January, August)
- 2012 Budget Bootcamp panelist, Office of Research Development, October 2012
- 2012 New Graduate Student Orientation Panelist (August 2012)
- 2011 SLU Urban Farm committee
- 2010 – 2012 College of Arts and Sciences Technology Committee, Biology Representative
- 2010 - present Campus Tree Advisory Committee
- 2010 College of Arts and Sciences Graduate Student Research Symposium Judge
- 2009 - present SLU 101 participant, Biology Department representative
- 2008 College of Arts and Sciences Technology Committee, Biology Representative

Service to societies and institutions

- 2015 - **Elected member, Botanical Society of America Board of Directors**
- 2015 - **Botanical Society of America At-Large Director for Education (elected position)**
- 2015 – 2017 Botanical Society of America Publications Committee
- 2014 **Invited Participant**, U.S. Botanic Garden and Agriculture Education: Visioning for the Future. July 7-8, 2014, Washington DC.
- 2014 Botanical Society of America Strategic Planning Meeting participant, Boise ID.
- 2014 Promotion committee, Dr. Matthew Albrecht, Center for Conservation and Sustainable , Missouri Botanical Garden
- 2014 Missouri Botanical Garden NSF Summer REU Mentor (to Cassandra Kitchen)
- 2013 - 2014 Development of educational signage for the Kemper Center for Home Gardening, Missouri Botanical Garden
- 2013 - 2014 Missouri Botanical Garden 2014 Research Poster Committee
- 2013 Missouri Botanical Garden NSF Summer REU Mentor (to Matthew Greg)
- 2013 Conservation Geneticist Search Committee, Missouri Botanical Garden
- 2012 Botanical Society of America Awards Committee

- 2012 Panelist, Expanding Your Horizons In Mathematics and Science, Conference for 7th through 10th grade young women and interested adults. Mathematics-Science Network of Greater Saint Louis. St. Louis Community College, Florissant Valley.
- 2011 – present Botanical Society of America Advisory Council
- 2011 - 2015 Botanical Society of America, Chair, Economic Botany Section (**elected position**).
- 2011 Association for Women in Science (AWIS) Panel Discussion Organizer and Host. “Healthy babies, happy moms.”
- 2011 Botanical Society of America, Local Host, Botany 2011 Meetings
- 2011 American Society of Plant Taxonomists Awards Committee
- 2010 - 2011 American Society of Plant Taxonomists Cooley Award Judge, Annual Meetings
- 2009 - 2012 American Society of Plant Taxonomists Executive Council Member (**elected position**)
- 2006 Association for Women in Science (AWIS) Panel Discussion Organizer and Host “Secrets of Her Success.”
- 2006 University of Missouri, Columbia Life Sciences Week. Domestication panelist.

Scientific Advisory boards

- 2014 – present Member, Scientific Advisory Board for William L. Brown Center for Economic Botany Advisory Committee, Missouri Botanical Garden, St. Louis, MO.
- 2013 – present Member, Scientific Advisory Board for Ensembl Genomes, European Molecular Biology Laboratory/European Bioinformatics Institute, Wellcome Trust Genome Campus, Hinxton, United Kingdom
- 2013 – present Member, Scientific Advisory Board for Saint Louis Science Center “Grow” Agriculture Exhibit, St. Louis, MO
- 2011 – present Member, Scientific Advisory Board for Whitney R. Harris World Ecology Center, St. Louis, MO

Symposia and colloquia organized

- 2016 Co-organizer, “Domestication Genomics” at International Plant and Animal Genome Meeting (with Briana Gross), San Diego, CA. January 2016.
- 2015 Co-organizer, “Underutilized Crops for Secure and Green Futures” at the Botanical Society of America Meeting (with Nyree Zerega and Rachel Meyer). July 2015, Edmonton, Alberta.
- 2015 Co-organizer, “Domestication Genomics” at International Plant and Animal Genome Meeting (with Briana Gross), San Diego, CA. January 2015.
- 2014 Co-organizer, “Domestication Genomics” at International Plant and Animal Genome Meeting (with Briana Gross), San Diego, CA. January 2014.
- 2013 Co-organizer, “Speaking of Food: connecting basic and applied science” at Botanical Society of America meeting (with Toby Kellogg), New Orleans, LA. July 2013.
- 2013 Co-organizer, “Missouri Grape and Wine Research Alliance” at Missouri Botanical Garden (with Ingolf Gruen), St. Louis, MO June 2013.
- 2013 Co-organizer, “Domestication Genomics” at Plant and Animal Genome Meeting (with Briana Gross), San Diego, CA. January 2013.
- 2012 - present Co-organizer, Saint Louis Ecology, Evolution, and Conservation retreat (with Peter Hoch, Bob Ricklefs, Bob Marquis, and Chrissy McAllister), Elsah, IL
- 2012 Co-organizer, Saint Louis Inter-Institution Council for Ecology, Evolution, and Conservation. Inaugural meeting held April 11, 2012 (organizer and presenter), St. Louis, MO
- 2007 Co-organizer, “Evolution and diversification in the Sapindales” at Botanical Society of America meeting, Chicago, IL

Editorial experience

- 2013 - 2014 Co-editor, Special Issue of *American Journal of Botany* “Speaking of Food: Connecting Basic and Applied Plant Science (with Briana Gross and Toby Kellogg). Published October 2014.
- 2013 - 2014 Co-editor for Science, Exploring Nature with Children. Brooklyn Botanic Garden Press.

Review services

- 2016 Reviewer for Chatham Fellowship, Graduate student research award offered by the Garden Club of America. Reviewed 15 graduate student proposals.
- 2015 Reviewer for Chatham Fellowship, Graduate student research award offered by the Garden Club of America. Reviewed 15 graduate student proposals.
- 2008 – present Grant proposal review: National Science Foundation (ad-hoc reviews, Phylobiogeography Panel; Plant Genome Research Program panel); National Geographic Society (ad-hoc reviews); National Environment Research Council of the United Kingdom (2015); University of Missouri Research Board (2015), Saint Louis University Presidential Research Fund (ongoing), Saint Louis University Summer Institute in the Humanities.
- 2006 – present Manuscript reviews for 34 different journals: *Academica Sinica*, *American Journal of Botany*, *Australian Journal of Grape and Wine Research*, *Biological Conservation*, *Biotropica*, *BMC Research Notes*, *Bothalia*, *Brittonia*, *Evolution*, *Evolutionary Applications*, *Genetica*, *Global Change Biology Bioenergy*, *Heredity*, *International Journal of Molecular Sciences*, *Israel Journal of Ecology and Evolution*, *Journal of Experimental Botany*, *Journal of Systematics and Evolution*, *Journal of the Torrey Botanical Society*, *Journal of Tropical Biology*, *Molecular Ecology*, *Molecular Phylogenetics and Evolution*, *New Phytologist*, *Nordic Journal of Botany*, *Plant Genetic Resources*, *Perspectives in Agriculture, Veterinary Science, Nutrition, and Natural Resources*, *Plant Molecular Biology (PMB) Reporter*, *Plant Systematics and Evolution*, *PLOS Genetics*, *PLOS One*, *Proceedings of the National Academy of Sciences*, *Proceedings of the Royal Society B Biological Sciences*, *Systematic Botany*, *Trends in Genetics*, *Trends in Plant Sciences*.
- 2012 – present Book reviews: Nature Education Principles of Science, Pearson Biology, University of Arizona Press.
- 2014 Midwestern Association of Graduate School. Review for Distinguished Master’s Thesis Award.

Professional societies

Association of Women in Science
 American Society of Plant Taxonomists
 Botanical Society of America
 Society for the Study of Evolution

Media coverage of my work

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