

REGINA S. BAUCOM, PH.D.
CURRICULUM VITAE

Associate Professor
 Department of Ecology and Evolutionary Biology
 University of Michigan

Educational Background:

2001-2006 Ph.D., Genetics, University of Georgia
 1999 B.S., Ecology and Evolutionary Biology, University of Tennessee, Knoxville

Employment History:

2020- Associate Chair for Graduate Studies, Department of Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, MI
 2019- Associate Professor, Department of Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, MI
 2013-2019 Assistant Professor, Department of Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, MI
 2010-2013 Assistant Professor, Biological Sciences Dept, University of Cincinnati
 2006-2009 Postdoctoral Research Associate, Department of Genetics, University of Georgia, Athens, GA

Teaching Experience:

At Michigan

F 2022	BIO 305: Genetics	412 students
W2022	EEB 800: Graduate professional skills course	16 students
F 2021	BIO 305: Genetics	445 students
W2021	EEB 800: Graduate professional skills course	17 students
F 2020	BIO 305: Genetics	415 students
W2020	BIO 305: Genetics	290 students
W2018	BIO 305: Genetics	327 students
F 2017	EEB 416: Introduction to Bioinformatics	8 students
W2017	BIO 305: Genetics	391 students
W2016	BIO 305: Genetics	352 students
F 2015	EEB 416: Introduction to Bioinformatics	9 students
W2015	BIO 305: Genetics	360 students
F 2014	EEB 401: Introduction to Bioinformatics	6 students
W2014	EEB 401: Introduction to Bioinformatics	18 students

At Cincinnati

W2013	BIO 400: Introduction to Bioinformatics	12 students
F 2011	BIO 302: Genetics	320 students
W2011	BIO 500: Genes and Adaptation, Graduate Seminar	15 students

Publications:

Publication statistics: [Google Scholar](#): 8421 citations; i-10 = 42; h-index = 26; October 2022
ORCID ID: <https://orcid.org/0000-0001-7960-498X>

Notes

Baucom lab students/postdocs/technicians are indicated *in italics*

Baucom lab undergraduates are indicated by underlining

Baucom or Baucom lab member corresponding author*

In Review, In Revision, or In Press

57. *N Johnson*, S Johnson, *G Zhang*, *A Soble*, and **RS Baucom***. 2022. The consequences of synthetic auxin herbicide on plant-herbivore interactions. *In Review*. Manuscript available via EcoEvoRxiv. doi: <https://doi.org/10.32942/X2KW2M>
56. *N Johnson*, *G Zhang*, *A Soble*, and **RS Baucom***. 2022. Dicamba drift alters patterns of chewing herbivory in three common agricultural weeds. *In Review*. Manuscript available via bioRxiv. doi: <https://doi.org/10.1101/2022.08.21.504705>
55. *SGD Bishop**, S-M Chang, and **RS Baucom**. 2022. Not just flowering time: A resurrection approach shows floral attraction traits are changing over time. *In Revision*, **Evolution Letters**. Manuscript available via bioRxiv. doi: <https://doi.org/10.1101/2022.08.18.504321>
54. *S Gupta*, *A Harkess*, *A Soble*, *ML Van Etten*, *J Leebens-Mack*, **RS Baucom***. 2022. Inter-chromosomal linkage disequilibrium and linked fitness cost loci associated with selection for herbicide resistance. *In Revision*, **New Phytologist**. Manuscript available via bioRxiv. doi: <https://doi.org/10.1101/2021.04.04.438381>
53. *V Iriart*, **RS Baucom**, and *T-L Ashman*. 2022. Interspecific variation in resistance and tolerance to herbicide drift has consequences for co-flowering interactions and community structure. *In Press*, **Annals of Botany**.

In Print

52. *N Johnson** and **RS Baucom**. 2022. Dicamba drift alters plant-herbivore interactions at the agro-ecological interface. **Ecosphere**. 13(11): e4274. <https://doi.org/10.1002/ecs2.4274>
Manuscript available via bioRxiv.
doi: <https://doi.org/10.1101/2021.07.13.452219>
51. **RS Baucom***, *V Iriart*, *JM Kreiner*, and *S Yakimowski*. 2021. Resistance evolution, from genetic mechanism to ecological context. **Molecular Ecology**. 30: 5299-5302.
Introduction to the resistance evolution special feature, led by RS Baucom. doi: <https://onlinelibrary.wiley.com/doi/10.1111/mec.16224>
50. *EB Josephs*, *ML Van Etten*, *A Harkess*, *A Platts*, **RS Baucom***. 2021. Adaptive and maladaptive expression plasticity underlying herbicide resistance in an agricultural weed. **Evolution Letters**. 50: 432-440. doi: [10.1002/evl3.241](https://doi.org/10.1002/evl3.241) Manuscript available via bioRxiv.
doi: <https://www.biorxiv.org/content/10.1101/2020.09.25.313650v1>
49. *ML Van Etten*, *AS Soble*, and **RS Baucom***. 2021. Variable inbreeding depression may explain associations between the mating system and herbicide resistance in the common morning glory. **Molecular Ecology**. 30: 5422-5437. *Resistance evolution special feature*. Manuscript available via bioRxiv.
doi: <https://www.biorxiv.org/content/10.1101/2020.09.25.313940v1> or via <https://onlinelibrary.wiley.com/doi/abs/10.1111/mec.15852>
48. *E Marden*, *RJ Abbott*, *F Austerlitz*, *D Ortiz-Barrientos*, **RS Baucom**, *P Bongaerts*, *A Bonin*, *C Bonneaud*, *L Browne*, *CA Buerkle*, *AL Caicedo*, *MB Cruzan*, *A Davison*, *JA DeWoody*, *AJ Dumbrell*, *BC Emerson*, *NM Fountain-Jones*, *R Gillespie*, *T Giraud*, *MM Hansen*, *KA*

- Hodgins, M Heuertz, S Hirase, R Hooper, P Hohenlohe, NC Kane, JL Kelley, AP Kinziger, VJ McKenzie, CS Moreau, AG Nazareno, TA Pelletier, JM Pemberton, Y Qu, S Renaut, C Riginos, N Rodríguez-Ezpeleta, SM Rogers, JA Russell, SD Schoville, S Shi, M Smith, VL Sork, GN Stone, P Taberlet, E Videvall, L Waits, E Warschefsky, RK Wayne, A Whibley, J Willoughby, JB Yoder, L Zinger, B Sibbett, S Narum, LH Rieseberg. 2020. Sharing and reporting benefits from biodiversity research. 2021. **Molecular Ecology**. 30(5): 1103-1107. *Editorial*.
47. CA Rushworth, **RS Baucom**, BK Blackman, M Neiman, ME Orive, A Sethuraman, J Ware, and DR Matute. 2021. Who are we now? A demographic assessment of the evolution societies. **Evolution**. 75: 208-218. *Invited Perspective*. doi: <https://onlinelibrary.wiley.com/doi/full/10.1111/evo.14168>
 46. SM Colom* and **RS Baucom**. 2021. Belowground competition favors character convergence but not character displacement in root traits. **New Phytologist**. 229: 3195-3207. doi: <https://doi.org/10.1111/nph.17100>
 45. V Iriart, **RS Baucom**, and T-L Ashman. 2020. Herbicides as anthropogenic drivers of eco-evo feedbacks in plant communities at the agro-ecological interface. **Molecular Ecology**. 00:1–16. doi: <https://doi.org/10.1111/mec.15510>
 44. **RS Baucom***, KD Heath, and SM Chambers. 2020. Plant–environment interactions from the lens of plant stress, reproduction, and mutualisms. **The American Journal of Botany**. 107(2): 175– 178. doi: <https://doi.org/10.1002/ajb2.1437> *Introduction for the “Plant-Environment Interactions: Integrating Across Levels and Scales” cross-journal special feature led by RS Baucom.*
 43. L Chaney* and **RS Baucom**. 2020. The soil microbial community alters patterns of selection on plant growth and fitness related traits. **The American Journal of Botany**. 107(2):186-194. *Special Issue associated with the “Plant-Environment Interactions: Integrating Across Levels and Scales” symposium.* doi: <https://doi.org/10.1002/ajb2.1426>. Manuscript available via bioRxiv. doi: <https://doi.org/10.1101/67269>
 42. ML Van Etten*, S-M Chang, KL Lee, and **RS Baucom**. 2020. Parallel and nonparallel genomic responses contribute to herbicide resistance in *Ipomoea purpurea*, a common agricultural weed. **PLoS Genetics** 16: e1008593. doi: <https://doi.org/10.1371/journal.pgen.1008593>. Manuscript available via bioRxiv. doi: <https://doi.org/10.1101/647164>
 41. SM Colom* and **RS Baucom**. 2020. Belowground competition can influence the evolution of root traits. **The American Naturalist** 195: 577-590. doi: <https://www.journals.uchicago.edu/doi/10.1086/707597> Manuscript available via bioRxiv. doi: <https://doi.org/10.1101/553115>
 40. S Gupta*, DM Rosenthal, JR Stinchcombe, and **RS Baucom**. 2020. The remarkable morphological diversity of leaf shape in sweet potato (*Ipomoea batatas*): the influence of genetics, environment, and G×E. **New Phytologist** 225: 2183-2195. <https://doi.org/10.1111/nph.16286>. Manuscript available via bioRxiv. doi: <https://doi.org/10.1101/520650>
 39. **RS Baucom***, AM Gerales, and LH Rieseberg. 2019. Some perspective on *Molecular Ecology* perspectives: Are women being left out? **Molecular Ecology** 28: 2451-2455. doi: <http://doi.org/10.1111/mec.15063>
 38. One Thousand Plant Transcriptomes Initiative. 2019. A phylogenomic view of evolutionary complexity in green plants. **Nature** 574: 679–685. doi: <https://doi.org/10.1038/s41586-019-1693-2>
 37. **RS Baucom***, and R Busi. 2019. Evolutionary epidemiology in the field: a proactive approach for identifying herbicide resistance in problematic crop weeds. **New Phytologist** 223: 1056-1058. doi: <http://doi.org/10.1111/nph.15959> *Invited Commentary*.

36. **RS Baucom*** 2019. Evolutionary and ecological insights from herbicide-resistant weeds: what have we learned about plant adaptation, and what is left to uncover? **New Phytologist** 223: 68-82. doi: <http://doi.org/10.1111/nph.15723>
35. *DF Alvarado-Serrano**, *ML Van Etten*, S-M Chang, and **RS Baucom**. 2019. The relative contribution of natural landscapes and human-mediated factors on the connectivity of a noxious invasive weed. **Heredity** 122:29-40. doi: <https://doi.org/10.1038/s41437-018-0106-x>
34. J Vandermeer, A Aniket, J Allgeier, C Badgley, **RS Baucom**, J Blesh, LF Shapiro, AD Jones, L Hoey, M Jain, I Perfecto, ML Wilson. 2018. Feeding Prometheus: an interdisciplinary approach for solving the global food crisis. **Frontiers in Sustainable Agriculture** 2: Article 39.
33. P Neve, J Barney, Y Buckley, R Cousens, S Graham, NR Jordan, A Lawton-Rauh, M Liebman, M Mesgaran, M Shut, J Shaw, J Storkey, B Baraibar, **RS Baucom**, M Chalak, D Child, S Christensen, H Eizenberg, C Fernández-Quintanilla, K French, M Harsch, S Heijting, L Harrison, D Ioddo, M Macel, R Maczey, A Merotto Jr., D Mortensen, J Necajeva, D Peltzer, J Recasens, M Renton, M Riemens, M Sønderskov, M Williams. 2018. Research priorities in weed ecology, evolution and management: A horizon scan. **Weed Research** 58, 250–258.
32. *DF Alvarado-Serrano**, S-M Chang, and **RS Baucom**. 2018. Natural and anthropogenic influences on the mating system of the common morning glory. **Journal of Heredity** 109(2): 126-137. *Special Issue associated with the “Genomics of Adaptation to Human Contexts” symposium.*
31. A Stahl, **RS Baucom**, T Cook, E Bushbeck. 2017. A complex lens for a complex eye. **Integrative and Comparative Biology** 57(5): 1071–1081
30. *ML Van Etten**, S-M Chang, JK Conner, and **RS Baucom**. 2017. Not all weeds are created equal: a database approach uncovers differences in the sexual system of native and introduced weeds. **Ecology and Evolution** 7 (8), 2636-2642
29. *A Kuester*, *E. Fall*, S-M Chang, and **RS Baucom***. 2017. Shifts in outcrossing rates and changes to floral traits are associated with the evolution of herbicide resistance in the common morning glory. *Ecology Letters* 20: 41–49.
28. *ML Van Etten**, *A Kuester*, S-M Chang, and **RS Baucom**. 2016. Fitness costs of herbicide resistance across natural populations of the common morning glory, *Ipomoea purpurea*. **Evolution** 70 (10): 2199–2210.
27. *A Kuester**, *A Wilson*, S-M Chang, and **RS Baucom**. 2016. A resurrection experiment finds evidence of both reduced genetic diversity and adaptive evolution in the agricultural weed *Ipomoea purpurea*. **Molecular Ecology** 25: 4508–4520.
26. **RS Baucom***. 2016. The remarkable repeated evolution of herbicide resistance. *Invited perspective to American Journal of Botany’s “On the Nature of Things,”* **American Journal of Botany** 103 (2): 1-3.
25. *CL Debban*, S Okum, *KE Pieper*, *A Wilson*, and **RS Baucom***. 2015. An examination of fitness costs of glyphosate resistance in the common morning glory, *Ipomoea purpurea*. **Ecology and Evolution** 5: 5284-5294.
24. *A Kuester**, SM Chang, and **RS Baucom**. 2015. The geographic mosaic of herbicide resistance evolution: Evidence for resistance hotspots and low genetic differentiation across the landscape. **Evolutionary Applications** 8: 821-833.
23. NJ Wickett, S Mirarab, NP Nguyen, T Warnow, E Carpenter, N Matasci, S Ayyampalayam..et al..GKS Wong and J Leebens-Mack. 2014. A phylotranscriptomics analysis of the origin and early diversification of land plants.** **Proceedings of the National Academy of Sciences** 111(45): E4859-E4868.
22. N Matasci, LH Hung, Z Yan, EJ Carpenter, NJ Wickett..et al... GKS Wong and J Leebens-Mack. 2014. Data access for the 1000 plants(1kp) pilot. **GigaScience** 3:17

21. T Leslie* and **RS Baucom**. 2014. *De novo* assembly and annotation of the transcriptome of the agricultural weed *Ipomoea purpurea* uncovers gene expression changes associated with herbicide resistance. **G3: Genes, Genomes, Genetics**. DOI: 10.1534/g3.114.013508
20. L Chaney* and **RS Baucom**. 2014. The costs and benefits of tolerance to competition in *Ipomoea purpurea*, the common morning glory. **Evolution**: 68: 1698–1709 DOI: 10.1111/evo.12383
19. A Kuester*, JK Conner, T Culley, and **RS Baucom**. 2014. How weeds emerge: a taxonomic and trait-based examination using United States data. **New Phytologist**: 202: 1055–1068. DOI: 10.1111/nph.12698.
18. M Meriweather, S Matthews, R Rio and **RS Baucom***. 2013. A 454 survey of the community composition and core microbiome of the common bed bug, *Cimex lectularius*, reveals significant microbial community structure across an urban landscape. **PLoS ONE**. <http://dx.plos.org/10.1371/journal.pone.0061465>
17. A Kuester*, BR Foltz, G Lor, S-M Chang, JL Bennetzen and **RS Baucom**. 2012. Development and characterization of simple sequence repeat loci for the common morning glory, *Ipomoea purpurea* (Convolvulaceae). **Molecular Ecology Resources** 13(2): 341-343.
16. L Chaney* and **RS Baucom**. 2012. The evolutionary potential of Baker's weediness traits in the common morning glory, *Ipomoea purpurea*. **American Journal of Botany** (99)9, 1524-1530. doi:10.3732/ajb.1200096.
15. **RS Baucom***, S-M Chang, JM Kniskern, MD Rausher and JR Stinchcombe. 2011. Morning glory as a powerful model in ecological genomics: tracing adaptation through both natural and artificial selection. **Heredity** 107: 377-385.
14. **RS Baucom*** and J deRoode. 2011. Ecological immunology and tolerance in plants and animals. **Functional Ecology** 25(1): 18-28.
13. **RS Baucom*** and R Mauricio. 2010. Defense to the herbicide RoundUp® predates its wide spread use. **Evolutionary Ecology Research** 12(1): 131-141.
12. **RS Baucom*** and JS Holt. 2009. Weeds of agricultural importance: Bridging the gap between evolutionary biology and crop and weed science. **New Phytologist** 184(4): 741-743.
11. **RS Baucom**, JC Estill, C Chapparro, N Upshaw, A Jogi, JM Deragon, RP Westerman, PJ SanMiguel, JL Bennetzen. 2009. Exceptional diversity, non-random distribution and rapid evolution of retroelements in the B73 maize genome. **PLoS Genetics** 5(11): e1000732.
10. PS Schnable & *The Maize Genome Sequencing Consortium*. 2009. The B73 maize genome: complexity, diversity and dynamics. **Science** 326(5956): 1112-1115.
9. F Wei, J Stein, C Liang, J Zhang, RS Fulton, **RS Baucom**, E DePaoli, S Zhou, L Yang, Y Han, S Pasternak, A Narechania, L Zhang, C-T Yeh, K Ying, DH Nagel, K Collura, D Kudrna, J Currie, J Lin, H Kim, A Angelove, G Scara, M Wissotski, W Golser, L Courtney, S Kruchowski, T Graves, S Rock, S Adams, L Fulton, C Fronick, W Courtney, M Kramer, L Spiegel, L Nascimento, A Kalyanaraman, C Chaparro, J-M Deragon, P SanMiguel, N Jiang, SR Wessler, PJ Green, Y Yu, DC Schwartz, BC Meyers, JL Bennetzen, R Matienssen, WR McCombie, S Aluru, SW Clifton, PS Schnable, D Ware, RK Wilson, RA Wing. 2009. Detailed analysis of a contiguous 22-MB region of the maize genome. **PLoS Genetics** 5(11): e1000728.
8. **RS Baucom**, JC Estill, J Leebans-Mack and JL Bennetzen. 2009. Natural selection on gene function drives the evolution of LTR retrotransposon families in the rice genome. **Genome Research** 19(2): 243-254.
7. **RS Baucom***. 2009. An herbicide defense trait that is distinct from resistance: The evolutionary ecology and genomics of herbicide tolerance. Book chapter, *Weedy and*

Invasive Plant Genomics. Edited by CN Stewart Jr., Blackwell Publishing. DOI: 10.1002/9780813806198.

6. **RS Baucom*** and R Mauricio. 2008. Constraints on the evolution of tolerance to herbicide in the common morning glory: Resistance and tolerance are mutually exclusive. **Evolution** 62(11): 2842-2854.
5. **RS Baucom***, R Mauricio and S-M Chang. 2008. Glyphosate induces transient male sterility in *Ipomoea purpurea*. **Botany** 86(6): 587-594.
4. **RS Baucom*** and R Mauricio. 2008. The evolution of novel herbicide tolerance in a noxious weed: the geographic mosaic of selection. **Evolutionary Ecology** 22: 85-101.
3. **RS Baucom***, JC Estill and MB Cruzan. 2005. The effect of deforestation on the genetic diversity and structure in *Acer saccharum* (Marsh): Evidence for the loss and restructuring of genetic variation in a natural system. **Conservation Genetics** 6: 39-50.
2. **RS Baucom*** and R Mauricio. 2004. Fitness costs of novel herbicide tolerance in a noxious weed. **Proceedings of the National Academy of Sciences** 101(36): 13386-13390.
1. Morris, AB, **RS Baucom** and MB Cruzan. 2002. Stratified analysis of the soil seed bank in the cedar glade endemic, *Astragalus bibullatus*: Evidence for historical changes in genetic structure. **American Journal of Botany** 89(1): 29-36.

Coverage in Popular Press & Commentary:

**Publication name in italics, hyperlinks to select news articles or blog commentaries are active*

*Not all weeds are created equal: a database approach uncovers differences in the sexual system of native and introduced weeds in **Ecology and Evolution***

- [Different ways to have sex, yet still be a weed](#)

*Shifts in outcrossing rates and changes to floral traits are associated with the evolution of herbicide resistance in the common morning glory in **Ecology Letters***

- [Shifts in mating strategies help herbicide-resistant 'superweeds' persist](#)
- [Humans, selection, evolution and ecological timescales ... a potent cocktail](#)
*A resurrection experiment finds evidence of both reduced genetic diversity and adaptive evolution in the agricultural weed *Ipomoea purpurea* in **Molecular Ecology***
- [A harvest of weeds yields insight into a case of contemporary evolution](#)

*The relative contribution of natural landscapes and human-mediated factors on the connectivity of a noxious invasive weed in **Heredity***

- [Disentangling the connectivity of an invasive weed](#), a *Heredity* podcast featuring first author Diego Alvarado Serrano.

*A phylotranscriptomics analysis of the origin and early diversification of land plants, in **PNAS***

- [DNA sequences used to look back in time at key events in plant evolution](#), ScienceDaily

*A 454 survey of the community composition and core microbiome of the common bed bug, *Cimex lectularius*, reveals significant microbial community structure across an urban landscape*

- [Fighting bed bugs on a molecular level](#), interview on WVXU, Cincinnati public radio
- Exceptional diversity, non-random distribution and rapid evolution of retroelements in the B73 maize genome in **Plos Genetics***

- [PLoS Genetics 2009 maize genome collection](#), ScienceDaily

The B73 maize genome: complexity, diversity and dynamics

- [Maize looks set to amaze](#), Nature Research Highlights

Fitness costs of novel herbicide tolerance in a noxious weed

- [Morning, not so glory?](#), New York Times
- [Rounding up the costs and benefits of herbicide use](#), PNAS commentary

Grants & Other Funding:

Federal grants

- NSF-IOS: Collaborative Research: EDGE FGT: Development of genetic and functional genomics resources for *Ipomoea* (morning glory). (*Baucom, PI & James Leebens-Mack, Wayne Parrott, Co-PIs*). 2022-2026. Total award: \$1,900,00; Baucom portion: \$1,095,056.
- NSF-DEB: Capturing initial eco-evolutionary dynamics of a novel chemical invader. (*Baucom, PI & Tia-Lynn Ashman, Co-PI*). 2021-5/2022 supplement, \$53,800.
- NSF-DEB: Capturing initial eco-evolutionary dynamics of a novel chemical invader. (*Baucom, PI & Tia-Lynn Ashman, Co-PI*). 2018-2021, \$200,000.
- USDA-AFRI: Does increased use of an herbicide lead to indirect negative impacts on beneficial pollinating insects? (*Baucom, PI & Tia-Lynn Ashman, Co-PI*). 2018-2020, \$100,000.
- USDA-AFRI: Genetic and ecological mechanisms underlying the evolution of herbicide resistance in the common morning glory, *Ipomoea purpurea*. (*Baucom, PI & Shu-mei Chang, Co-PI*). 2015-2019, \$500,000.
- USDA-AFRI: Toward a cohesive understanding of glyphosate resistance evolution in the common morning glory: The mating system, gene flow, and fitness. (*Baucom, PI & Shu-mei Chang, Co-PI*). 2012-2016, \$500,000.
- NSF-DEB, Doctoral Dissertation Improvement Grant, "The evolution of herbicide tolerance in a noxious weed," 2003-2005. \$8,100.

Industry partnerships

- Ford Motor Company, Alliance Grant: Nanoparticle reinforcement of natural fibers (*Baucom, PI*). 2018-2019, \$50,000

Conference funding

- Elizabeth Caroline Crosby award, UM ADVANCE Program, "Plant-environment interactions across scales," 2nd annual Green Life Sciences Symposium, 2018, \$7,500. (Awarded to RS Baucom, C MacAlister, and S Smith).
- University of Georgia, Office of the Provost conference funding, "Agricultural weeds: Bridging the gap between evolutionary ecology and crop science," 2008.

Academic and Professional Honors:

- 2021 Student invited speaker, Ecology and Evolutionary Biology, Brown University – *via* Zoom
- 2019 Max Planck Institute/Tübingen distinguished speaker seminar, Tuebingen, Germany
- 2019 University of Texas at Arlington, TX (**Student invited speaker**)
- 2018 Mountain Lake Biological Station, **Walton lecturer**
- 2016 Student invited "**Superspeaker**," Dept of Biology, Duke University, Raleigh, NC
- 2006 Dissertation Completion Fellowship from the UGA Graduate School
- 2004 NIH Training Grant, Pre-doctoral Research Fellowship
- 2000 NSF/USDA Training Grant, Pre-doctoral Research Fellowship
- 1999 HHMI Threshold Honors Program in Biology, Undergraduate Research Fellow

Presentations:

Symposiums

- 2018 “Plant-environment interactions across scales,” Green Life Sciences Symposium, University of Michigan, Ann Arbor, MI
- 2018 “Celebrating 10 years of Evolutionary Applications and a look to the future,” Evolution meetings, Montpellier, France
- 2017 “Evolutionary Genomics in Urban Ecosystems,” Evolution meetings, Portland OR
- 2017 “Weedy and Invasive Plant Genomics,” Symposium at the Plant & Animal Genome conference, San Diego, CA
- 2017 “Modeling: Statistical analysis of multivariate data,” Symposium at the Phenome conference (American Society of Plant Biologists), Phoenix, AZ
- 2016 “Genomics of Adaptation to Human Contexts,” Conference at Colorado State University, Fort Collins, *Keynote Speaker*
- 2016 “Ecological Genomics,” Symposium at the Plant & Animal Genome conference, San Diego, CA
- 2015 “Evolution of Plant Phenotypes, from Genomes to Traits,” Symposium hosted by B-Debate, an initiative of the Catalan Government, La Caixa & NSF, Barcelona, Spain.
- 2013 “Rocking your connected world: The importance of insect microbiomes,” Symposium at the Entomological Society of America meetings, Austin, TX.
- 2008 “Agricultural weeds: Bridging the gap between evolutionary ecology and crop science,” Agricultural Weeds Conference, GA. (Speaker and Co-Organizer).

Professional Meetings

- 2014 Oral presentation, Society for the Study of Evolution meetings, Raleigh, NC.
- 2014 Oral presentation, Controlling Weedy and Invasive Plants, Project Director meeting at the Weed Science Society of America meetings, Vancouver, CA.
- 2012 Oral presentation, Society for the Study of Evolution meetings, Ottawa, ON.
- 2008 Oral presentation, Society for the Study of Evolution meetings, MN.
- 2008 Poster presentation, Maize Genetics meetings, DC.
- 2007 Oral presentation, Southeastern Population Ecology and Genetics Group meetings, NC.
- 2007 Poster presentation, Maize Genetics meetings, IL.
- 2006 Oral presentation, Society for the Study of Evolution meetings, NY.
- 2004 Oral presentation, Society for the Study of Evolution meetings, CO.
- 2004 Oral presentation, Southeastern Ecology and Evolution meetings, GA.
- 2003 Poster presentation, Society for the Study of Evolution meetings, CA.
- 2002 Poster presentation, Southeastern Population Ecology and Genetics Group meetings, NC.
- 2000 Poster presentation, Society for the Study of Evolution meetings, IN.
- 2000 Oral presentation, Southeastern Population Ecology and Genetics Group meetings, NC.
- 1999 Poster presentation, Southeastern Population Ecology and Genetics Group meetings, VA.

Invited seminars

- 2021 Plant Center Fall Symposium, University of Georgia, Athens, GA – *via Zoom*
- 2021 Ecology and Evolutionary Biology, Princeton University – *via Zoom*
- 2021 Ecology and Evolutionary Biology, University of Michigan – *via Zoom*
- 2021 Department of Evolution, Ecology, and Behavior, University of Illinois, IL – *via Zoom*
- 2020 Plant Center Spring Symposium, University of Georgia, Athens, GA – canceled
- 2020 Dept of Integrative Biology, University of Guelph, Guelph, Ontario CA – canceled
- 2019 Dept of Plant Biology, University of California, Davis, Davis, CA
- 2019 Dept of Plant Biology, Pennsylvania State University, University Park, PA
- 2019 Biological and Environmental Sciences, University of Stirling, Scotland, UK

2019 Phenome conference, Tucson, AZ
 2018 Kellogg Biological Station, Michigan State University, Hickory Corners, MI
 2018 Dept of Botany, University of Minnesota, Minneapolis, MN
 2018 Langebio: Laboratorio nacional de genómica para la biodiversidad, Guanajuato, México
 2018 Botany and Plant Pathology, Purdue University, IN
 2017 Biological Sciences, University of Rhode Island, RI
 2017 Ecology and Evolutionary Biology Dept, University of Toronto, ON CA
 2017 Dept of Biology, Indiana University, Bloomington, IN
 2017 Dept of Biology, Michigan State University, East Lansing, MI
 2016 Dept of Biology, Puget Sound University, Tacoma, WA
 2016 School of Plant Sciences, University of Arizona, Tucson, AZ
 2015 European Society for the Study of Evolutionary Biology, Lausanne, Switzerland.
 2015 Biological Sciences Dept, Bowling Green State University, Bowling Green, OH
 2015 Bioagricultural Sciences and Pest Management Dept, Colorado State, Fort Collins, CO
 2014 Herbicide resistance working group, European Weed Research, Frankfurt, Germany.
 2013 Dept of Biology, West Virginia University, Morgantown, WV.
 2013 Dept of Botany, Miami University, Oxford, OH.
 2013 Dept of Plant and Soil Sciences, University of Kentucky, Lexington, KY.
 2012 Ecology and Evolutionary Biology Dept, University of Michigan, Ann Arbor, MI.
 2012 Dept of Plant Sciences, University of Tennessee, Knoxville, TN.
 2012 School of Biological Sciences, Washington State University, Pullman, WA.
 2012 Dept of Ecology, Evolution, and Organismal Biology, Iowa State University, Ames, IA.
 2012 Dept of Horticulture and Crop Science, Ohio State University, Columbus, OH.
 2012 Ohio Plant Biotechnology Consortium, Ohio State University, Columbus, OH.
 2011 Dept of Biological Sciences, University of Pittsburgh, Pittsburgh, PA.
 2010 Plant and Animal Genome Meetings, CA. Maize (2nd author on talk).
 2010 Plant and Animal Genome Meetings, CA. Weedy and Invasive Plant Genomics Workshop.
 2009 Biological Sciences Dept, University of Cincinnati, Cincinnati, OH.
 2009 Division of Integrative Biology, University of South Florida, Tampa, FL.
 2004 Sigma-Xi, UGA chapter, GA.

Contributed research presentations

Baucom Lab postdocs (past/present) are indicated *in italics*

Baucom Lab graduate students are indicated with asterisks*

- 2022 N Johnson* & **RS Baucom**. Adaptations to agricultural practices: Using invasive weedy species to predict responses to global change. Society for Integrative and Comparative Biology meetings, *online via Zoom*.
- 2021 N Johnson* & **RS Baucom**. Herbicide drift alters plant-herbivore interactions at the agro-eco interface, Society of the Study of Evolution, *online via Zoom*.
- 2021 S Gupta* & **RS Baucom**. Inter-chromosomal linkage disequilibrium and linked fitness cost loci associated with selection for herbicide resistance. Society of the Study of Evolution, *online via Zoom*.
- 2021 S Bishop* & **RS Baucom**. Evolution of floral traits in the common morning glory, *Ipomoea purpurea*: An adaptive response to anthropogenic climate change?
- 2019 SM Colom* & **RS Baucom**. Testing character displacement as a potential driver in the evolution of root traits. Society of the Study of Evolution, Providence RI.
- 2018 SM Colom* & **RS Baucom**. Testing character displacement as a potential driver in the evolution of root traits. *Poster presentation*, UM Green Life Science Symposium Ann Arbor, MI.

- 2018 S Gupta* & **RS Baucom**. Uncovering the genetic basis of leaf shape in *Ipomoea trifida*, *Poster presentation*, UM Green Life Science Symposium Ann Arbor, MI.
- 2018 S Gupta* & **RS Baucom**. Uncovering the genetic basis of leaf shape in *Ipomoea trifida*, *Poster presentation*, Population, Evolutionary and Quantitative Genetics Conference, Madison, WI.
- 2017 SM Colom* & **RS Baucom**. Testing character displacement as a potential driver in the evolution of root traits. UM Green Life Science Symposium Ann Arbor, MI.
- 2017 SM Colom* & **RS Baucom**. Testing character displacement as a potential driver in the evolution of root traits. Society of the Study of Evolution. Portland, OR.
- 2017 SM Colom* & **RS Baucom**. Testing character displacement as a potential driver in the evolution of root traits. *Poster presentation*, Phenome Conference, Tucson, AZ.
- 2017 *ML Van Etten* & **RS Baucom**. The transcriptomic basis of inbreeding depression in the common morning glory. Society of the Study of Evolution. Portland, OR.
- 2017 *DF Alvarado-Serrano*, *ML Van Etten*, S-M Chang, **RS Baucom**. Natural and anthropogenic influences on the mating system of the common morning glory. Society of the Study of Evolution. Portland, OR.
- 2016 *DF Alvarado-Serrano*, *ML Van Etten*, S-M Chang, **RS Baucom**. Landscape connectivity of a noxious crop weed: human-aided or natural dispersal? Society of the Study of Evolution. Austin, TX.
- 2014 *A Kuester*, & **RS Baucom**. Shifts in outcrossing rates and changes to floral traits are associated with the evolution of herbicide resistance in the common morning glory. Society of the Study of Evolution. Raleigh, NC.
- 2014 L Chaney*, & **RS Baucom**. Plants that persist: Are highly tolerant plants also the most fit? Society of the Study of Evolution. Raleigh, NC.
- 2014 L Chaney*, & **RS Baucom**. "The costs and benefits of tolerance: a look across multiple systems and stressors. *Poster presentation*, Invasion Genetics: The Baker and Stebbins Legacy Symposium. Asilomar, CA.
- 2013 L Chaney*, & **RS Baucom**. Baker's General Purpose Genotype: Are highly tolerant weeds also the most fit? Midwest Ecology and Evolution Conference. Dayton, OH.
- 2013 L Chaney*, & **RS Baucom**. The evolution of tolerance to competition in the common morning glory, *Ipomoea purpurea*. Society of the Study of Evolution. Snowbird, UT.
- 2012 L Chaney*, & **RS Baucom**. The evolutionary potential of weediness traits in the common morning glory, *Ipomoea purpurea*. *Poster presentation*, Midwest Ecology of Evolution Conference. Cincinnati, OH.

Mentoring:

Current graduate students, main advisor

Nia Johnson	Ph.D. candidate (2017-present)
Grace Zhang	Ph.D. candidate (2020-present)
Sasha Bishop	Ph.D. candidate (2020-present)
Anah Soble	Master's student (2022-present)

Current postdoctoral research associates, main advisor

Stephen Johnson	Ph.D., Fordham University
Joanna Rifkin	Ph.D., Duke University

Past graduate students, main advisor

Sonal Gupta	Ph.D. (2016-2022) <i>Currently: Postdoc at NYU</i>
Whitney White	Frontier's Masters student (2019-2021)

Sara Colom	<i>Currently: UM SEAS professional program</i> Ph.D. (2014-2020)
Lindsay Chaney	<i>Currently: Data scientist at UCSF</i> Ph.D. University of Cincinnati (2010-2014)
Trent Leslie	<i>Currently: Associate Professor & Interim Assistant Provost, Snow College</i> MS, University of Cincinnati (2011-2013)
Anneka Jankowiak	<i>Currently: Bioinformatician at EMD Serano, Inc</i> MS, University of Michigan (2012-2014)

Postdoctoral research associates supervised, past

Adam Kuester	Ph.D., Iowa State University <i>Currently: Small business owner and data analyst</i>
Megan Van Etten	Ph.D., University of Georgia <i>Currently: Assistant Professor at Penn State, Scranton</i>
Diego Alvarado-Serrano	Ph.D., University of Michigan <i>Currently: Assistant Professor, Ohio University</i>

Current graduate students, thesis committee member

Yan Zhu	Ph.D. student (MCDB), University of Michigan (2018-present)
Henry Ertl	Ph.D. student (EEB), University of Michigan (2018-present)
Etienne Herrick	Ph.D. student (SEAS), University of Michigan (2020-present)
Alden Dirks	Ph.D. student (EEB), University of Michigan (2020-present)
Carolyn Graham	Ph.D. student (PBio), Michigan State University (2022-present)
Vero Iriart	Ph.D. student (Biology), University of Pittsburgh (2019-present)

Past graduate students, thesis committee member

Kim Thompson	PhD student, University of Cincinnati (2010-2014)
Audra Huffmeyer	MS student, University of Michigan (2013-2015)
Robert Powers	MS student, University of Michigan (2013-2015)
Gregory Evans	Ph.D. student, University of Georgia (2015-2019)
Paul Glaum	Ph.D. student, University of Michigan (2013-2018)
Marcella Biaz	Ph.D. student, University of Michigan (2013-2018)
Zachery Taylor	Ph.D. student, University of Guelph (2015-2021)
Syeda Roop Fatima Jaffri	Ph.D. student, University of Michigan (2016-2021)

Undergraduate students who have performed research in my group

<u>Name</u>	<u>College, years in lab</u>
Raj Gautam	U. Michigan, 2019-2020
Jordan Herman	U. Michigan, 2019-2020
Kiara Liggett	U. Michigan, 2021-current
Shantrell Tremmel	U. Michigan, 2019-2020
Alanna Miyashiro	Doris Duke student, 2019
Zohaib Khan	U. Michigan, 2020-current
Maya Akhoury	U. Michigan, 2019-current
Clarice Hollenquest	Doris Duke student, 2019
Andrew Ghattas	U. Michigan, 2018-2019
Kamren Johnson	U. Michigan, 2018-2019
Don'aa Williams	U. Michigan, 2018-2019
Yoav Jacob	U. Michigan, 2018-2020
Thomas Repasky	U. Michigan, 2018-2019
Teresa Dorado	Doris Duke student, 2017
Lourdes A. Abreu Torres	Doris Duke student, 2017

Maria Ramirez	Doris Duke student, 2018
Jazlyn Marcos	Doris Duke student, 2018
Benjamin Lilleskov	U. Michigan, 2017-2018
Amirah Bin-Mahfouz	U. Michigan, 2017-2018
Maria Valencia	U. Michigan, 2015-2016
Melanie Florkowski	U. Michigan, 2014-2015
Tyler Marrs	U. Michigan, 2015-2017
Kendall Oldford	U. Michigan, 2015
Yan Du	U. Michigan, 2015-2016
Ariana Wilson	U. Michigan, 2013-2016
Sarah Thompson	U. Michigan, 2015-2016
Alexandra Teodorescu	U. Michigan, 2014
Steven Smitka	U. Michigan, 2013
Michelle Hwang	U. Michigan, 2014-2015
Aspen Hansen	U. Michigan, 2014-2015
Sara Sanchez	U. Michigan, 2014-2015
Nick Gabry	U. Michigan, 2014-2015
Ciera Crawford	U. Michigan, 2012-2015
Eva Fall	U. Michigan, 2012-2015
Alexander Wang	U. Cincinnati, 2011
Katie Pieper	Notre Dame, 2010-2012
Travis Theders	U. Cincinnati, 2010-2012
Tasiah Thomas	U. Cincinnati, 2010
Ali Zuchowski	U. Cincinnati, 2011
Nathan Schoonmaker	U. Cincinnati, 2011
Scott Curran	U. Cincinnati, 2012
Eric Cicconetti	U. Cincinnati, 2011
Deborah LeGendre	U. Cincinnati, 2010-2012
Laurie Elliot	U. Cincinnati, 2010-2012
Matt Merriweather	U. Cincinnati, 2011-2012
Zara Ahmed	U. Cincinnati, 2011
Alan Cone	U. Cincinnati, 2010
Sarah Hill	U. Cincinnati, 2010

Academic Service and Professional Activities:

Departmental service

University of Cincinnati

UC Field Station: Member of the oversight committee

UC Biological Science's Greenhouse Committee

Biological Sciences TT-faculty search committee, 2011-2012, two searches

UC Biological Sciences Seminar Series, 2010-2012: Co-chair

University of Michigan

Graduate admissions committee, 2015, 2016, 2017

Next Prof meetings, departmental organizer, 2017

Graduate Affairs Committee, 2018-2019
Green Life Symposium, organizer for 2018 meetings
Associate Chair for Graduate Studies, EEB, 2020-present

College (LSA) service

Search committee for Director of Matthaei-Nichols (MBGNA), 2019-2020

Editorial Service

Associate Editor, *Molecular Ecology*, Feb 2016-present
Guest Editor, *American Journal of Botany*, 'Plant-environment interactions across scales' a cross-journal special feature, along with *International Journal of Plant Sciences*, 2019-2020
Reviewing Editor, *eLife*, 2021-present

Professional Society Service

Offices and Committees

2022-2025 Council Member, The Society for the Study of Evolution (elected)
2019-2021 Council Member, The American Genetic Association (elected)
2019-2020 Diversity Committee, American Society of Naturalists, Member
2018 Diversity Committee, American Society of Naturalists, Chair
2018 Safe Evolution Code of Conduct Committee, American Society of Naturalists, Member

Grant-review Panel Service

2022 Proposal Review Panelist, NSF-IOS
2014 Proposal Review Panelist, USDA-NIFA
2013 Proposal Review Panelist, USDA-NIFA
2010 Proposal Review Panelist, NSF-DEB

Peer-Reviewing

Manuscript reviewer for: *American Naturalist*; *Heredity*; *Proceedings of the Royal Society of London B*; *Evolution*; *New Phytologist*; *Molecular Ecology*; *Evolution Letters*; *Genome Biology and Evolution*; *American Journal of Botany*; *Genetics*; *Current Biology*; *Ecology and Evolution*; *Evolutionary Applications*; *BMC-Evolutionary Biology*; *Biological Invasions*; *Pesticide Science*; *Molecular Biology & Evolution*, *Arthropod-Plant Interactions*, *BMC Genetics*, *Basic and Applied Ecology*, *Comparative and Functional Genomics*, *Genetics*, *Oecologia*, *Naturwissenschaften*, *Plant Science*, *PNAS*, *Weed Science*

Ad hoc grant proposal review for: NSF (DEB, IOS: 2009, 2010, 2012), USDA (2010), Ohio Plant Biotechnology Consortium (2014), European Research Council (2021)
External examiner for PhD dissertation at the University of Melbourne (student: Jefferson Paril)

Working groups

2014 Invited member of the Special International Workshop on Weeds and Invasive Plants, hosted by ANdiNA and the European Weed Research Society (EWRS), Spain.

Membership in Professional Societies

American Society of Naturalists
Society for the Study of Evolution
The Botanical Society of America
The American Genetic Association

Diversity, Equity & Inclusion work

- Co-creator (along with Meghan Duffy) and maintainer of '[DiversifyEEB](#)' a list of women and/or underrepresented minorities in the fields of Ecology and Evolution.
- Mentor, Society for the Study of Evolution Diversity Program, June 2001, 2008 & 2012
- Certified HHMI-Gilliam Trainer, 'HHMI Mentorship Skills Course', 2019/2020

Synergistic Activities:

Activities within University of Michigan

Sustainable Food Systems Initiative (SFSI), cluster hire

- Fast Food For Thought invited speaker, 2015 "[Herbicide resistance, current state and future prospects](#)"
- "Taste the Taters," an SFSI supported sweet potato tasting event that engaged scientists across campus, graduate and undergraduate students, and members of the general public interested in food system issues. [SFSI video](#) & [LSA Snap Chat](#)
- [SFSI faculty spotlight](#), December 2015

Green Life Sciences Symposium, Committee chair

- Responsible for organizing the 2nd annual UM Green Life Sciences Symposium "Plant-environment interactions across scales"
- Fund-raised to support the travel of 12 scientists of 30 presenting, along with travel support for early career researchers
- Symposium included seminars, speed talks, a poster session
- >80% of the invited speakers were women
- Organized a cross-journal special issue for 26 publications presented at the conference, which will be split between *American Journal of Botany*, *International Journal of Plant Sciences*, and *Applications in Plant Sciences*.

Activities outside University

- Tool developer and site maintainer, The Evolution Tree, <http://academictree.org/evolution/index.php>, 2010-2019

Media and Public Engagement

Media interviews (related to academia):

2022: Interview with Nature, [How lab leaders can support students' non-academic career plans](#)

2018: Interview with Earth Magazine, [Weedy seeds gathered in once-green Sahara](#)

2018: Featured scientist on the Taproot podcast, Season 2, Episode 5: [Evolving Approaches: Herbicide Resistance in Weeds and What Men Can Do to Fight Gender Discrimination in Science](#)

2009-present: Twitter account ([@gbaucom](#); >8000 followers); I regularly engage with members of the public and other scientists about science and life as a scientist

Science-community writing:

2015-present: Invited guest contributor to [Dynamic Ecology](#), distributed online; site has received over 3.5 million page views. My four posts at *Dynamic Ecology* have received, in aggregate, > **38,000** page views.