

# RYAN FOLK

Department of Biological Sciences, Mississippi State University  
 114 Harned Hall  
 295 E. Lee Blvd.  
 P.O. Box GY  
 Mississippi State, MS 39762

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## PROFESSIONAL APPOINTMENTS:

<i>Assistant professor and herbarium curator</i>	Mississippi State University	2019 –
<i>Postdoctoral associate</i>	University of Florida	2017 – 2019
<i>Postdoctoral fellow</i>	NSF (courtesy appt. at UF)	2015 – 2017

## COURTESY APPOINTMENTS:

<i>Courtesy faculty</i>	Florida Museum	2019 – 2028
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## EDUCATION:

*Ph.D.*, Evolution, Ecology, and Organismal Biology, The Ohio State University, 2010 – 2015. Dissertation: *Biosystematics of the Genus Heuchera (Saxifragaceae)*. 594 pp.  
*B.S.*, Biology, *Summa cum Laude*, University of Akron, 2006-2010. Minor, Chemistry.

## RESEARCH GRANTS:

*Career competitive funds: \$958,335 (counting only direct support and fiduciary responsibility, including fellowships). MSU competitive funds: \$759,003 (\$442,781 discounting collaborative funds). Student and postdoc competitive funds: \$20,642.*

2020 –	PI: DEB core (NSF DEB-1916632, \$749,003, \$432,781 less subaward). Origin and impact of nitrogen-fixing symbioses in a major clade of flowering plants.
2020,	PI: SRI Seed Grant (Mississippi State University, \$10,000).
2019 –	Sr. Pers: DBI (NSF DBI-1930007, \$880,172, \$0 to MSU). CIBR: Collaborative Research: Integrating data communities with BiotaPhy: A computational platform for data-intensive biodiversity research and training. <i>Pre-MSU</i>

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2017 –	Systems Biology Research to Advance Sustainable Bioenergy Crop Development (DOE DE-SC0018247, \$7,309,576; writing role and informal postdoc Sr. Pers, \$0 to MSU). Phylogenomic discovery and engineering of nitrogen fixation into the bioenergy woody crop poplar. Press release: <a href="http://blogs.ifas.ufl.edu/news/2017/10/02/uf-researchers-awarded-7m-grant-improve-plants-get-nitrogen-reduce-pollution/">http://blogs.ifas.ufl.edu/news/2017/10/02/uf-researchers-awarded-7m-grant-improve-plants-get-nitrogen-reduce-pollution/</a> . Project website: <a href="http://nitfix.org/">http://nitfix.org/</a> .
2017,	co-PI: Research Opportunity Fund (University of Florida, \$67,226, PI D. Soltis). Using the tree of life to develop novel approaches for public engagement in science.
2017,	PI, co-PI: Two XSEDE start-up allocations (50,000 Stampede system units ea., approx. \$1,739 equivalent value).

- 2017, co-PI (fiduciary responsibility): Biodiversity Institute Seed Grant (University of Florida, co-funded with the University of Florida Informatics Institute, \$40,000, PI D. Soltis). An integrative resource for trait-based evolutionary synthesis: Uncovering hidden enablers of nitrogen fixation in the rosids.
- 2016, co-PI: Genetics Institute Pilot Grant (University of Florida, \$49,727, PI R. Guralnick). Next Generation Bioinformatics—Tools for rapid mining and assembly from genomic repositories.
- 2015 – 2017, PI: Post-Doctoral Fellowship in Biology (NSF DBI-1523667, \$138,000). Niche biology in deep time: New methods for ancestral niche reconstruction applied to the Saxifragales.
- 2014 – 2016, co-PI (fiduciary responsibility): Doctoral Dissertation Improvement Grant (NSF DEB-1406721, \$15,502; PI J. Freudenstein). Investigating the impact of hybridization on diversification: A case study in the plant genus *Heuchera*.
- 2013, PI: American Society of Plant Taxonomists Research Grant (\$800)
- 2013, PI: AGGRS Alumni Grant (The Ohio State University, \$1,900)
- 2012, PI: R. L. Stuckey Endowment Fund (The Ohio State University, \$1,500)
- 2011, PI: Beatley Fund (The Ohio State University, \$1,200)
- 2008, 2009, PI: Dr. Paul Acquarone Award in Plant Sciences (University of Akron, \$450 each)

#### PUBLICATIONS:

*Career mean impact factor 5.04; MSU address impact factor 4.96. Symbology: accepted, in press, or published with year given as noted; myself and lab members **bold**; reverse order of acceptance within years; all listed publications were sent out for full standard peer-review; 2020 impact factor in square brackets; † graduate trainee, ‡ postdoc trainee, § undergraduate trainee, \* equal authorship.*

51. **Folk R.A.\***, M.L. Gaynor\*, **N.J. Engle-Wrye†**, B.C. O'Meara, P.S. Soltis, D.E. Soltis, R.P. Guralnick, S.A. Smith, C.J. Grady, and Y. Okuyama. Accepted. Identifying climatic drivers of hybridization with a new ancestral niche reconstruction method. *Systematic Biology*.
50. **Siniscalchi C.M.‡**, J.R. Ackerfield, **R.A. Folk**. Accepted. Diversification and biogeography of North American thistles (*Cirsium*: Carduoideae: Compositae): Drivers of a rapid continent-wide radiation. *International Journal of Plant Sciences*.
49. Naranjo A.A., **R.A. Folk**, M.A. Gitzendanner, D.E. Soltis, P.S. Soltis. Accepted. Ancestral area and divergence time analyses reveal Pleistocene-influenced biogeographic evolution in a clade of narrow coastal plain endemic plants. *Journal of Biogeography*.
48. Xiao-Gang, F.; S.Y. Liu, R. van Velzen, G. Stull, Q. Tian, **R.A. Folk**, R.P. Guralnick, H.R. Kates, J.-J. Jin, Z. Li, D.E. Soltis, P.S. Soltis, T.-S. Yi. Accepted. Phylogenomic analysis of the hemp family (Cannabaceae) reveals deep cyto-nuclear discordance and provides new insights into generic relationships. *Journal of Systematics and Evolution*.
47. Yu, X, Y.-Z. Jiang, **R.A. Folk**, J. Zhao, C. Fu, L. Fang, H. Peng, J.-B. Yang, S.-X. Yang. 2022. Species discrimination in *Schima* (Theaceae): Next-generation super-barcodes meet evolutionary complexity. *Molecular Ecology Resources* 22: 3161–3175. [6.185]
46. Doby, J.R.; D. Li, **R.A. Folk**, **C.M. Siniscalchi‡**, R.P. Guralnick. 2022. Aridity drives diversity of nitrogen fixing plants in North America. *Global Ecology and Biogeography* 31: 1630-1642. [7.144]
45. Pereira, W.J., S. Knaack, D. Conde, S. Chakraborty, **R.A. Folk**, P.M. Triozzi, K.M. Balmant, C. Dervinis, H.W. Schmidt, J.-M. Ané, S. Roy, M. Kirst. 2022. Functional

- and comparative genomics reveals conserved noncoding sequences in the nitrogen-fixing clade. *New Phytologist* 234: 634–649. [8.512]
44. Zhang, Q., L. Zhao, J.-L. Zhao, **R.A. Folk**, N. Zamora, P.S. Soltis, D.E. Soltis, S.-X. Yang, L.-M. Gao, H. Peng, X.-Q. Yu. 2022. Phylotranscriptomics of Theaceae: generic level relationships, reticulation and whole-genome duplication. *Annals of Botany* 129: 457–471. [4.357]
43. Gorneau J.A., W.I. Ausich, S. Bertolino, H. Bik, M. Daly, S. Demissew, D.A. Donoso, **R.A. Folk**, A. Freire-Fierro, S.A. Ghazanfar, O.M. Grace, A.-Q. Hu, S. Kulkarni, I.H. Lichter-Marck, L.G. Lohmann, J. Malumbres-Olarte, A.M. Muasya, A. Pérez-González, Yashica Singh, **C.M. Siniscalchi†**, C.D. Specht, A.L. Stigall, D.C. Tank, L.A. Walker, D.F. Wright, A. Zamani, L.A. Esposito. 2022. Framing the future for taxonomic monography: Improving recognition, support, and access. *Bulletin of the Society of Systematic Biologists* 1: 8328. [n/a; new journal for one of my societies] <https://doi.org/10.18061/bssb.v1i1.8328>
42. Figueroa, H., H. Marx, M.B. de Souza Cortez, C.J. Grady, **N.J. Engle-Wrye†**, J. Beach, A. Stewart, **R.A. Folk**, D.E. Soltis, P.S. Soltis, A. Stewart, and S.A. Smith. 2022. Contrasting patterns of phylogenetic diversity and alpine specialization across the alpine flora of the American mountain range system. *Alpine Botany* 132: 107–122. [2.094] <https://doi.org/10.1007/s00035-021-00261-y>
41. Guo, X., D. Fang, S.K. Sahu, S. Yang, X. Guang, **R.A. Folk**, S. Smith, A.S. Chanderbali, S. Chen, M. Liu, T. Yang, S. Zhang, X. Liu, X. Xu, P.S. Soltis, D.E. Soltis, H. Liu. 2021. *Chloranthus* genome provides insights into the early diversification of angiosperms. *Nature Communications* 12: 6930. [14.919]
40. Kates, H.R., J.R. Doby, **C.M. Siniscalchi†**, R. LaFrance, D.E. Soltis, P.S. Soltis, R.P. Guralnick, and **R.A. Folk**. 2021. The effects of herbarium specimen characteristics on short-read NGS sequencing success in nearly 8000 specimens: Old, degraded samples have lower DNA yields but consistent sequencing success. *Frontiers in Plant Science* 12: 669064. [5.753] <https://doi.org/10.3389/fpls.2021.669064>
39. **Folk, R.A., C.M. Siniscalchi†**. 2021. Biodiversity at the global scale: The synthesis continues. Invited review. *American Journal of Botany* 108: 912-924. [3.844] <https://doi.org/10.1002/ajb2.1694>
38. **Folk, R.A.\***, H.R. Kates\*, R. LaFrance, D.E. Soltis, P.S. Soltis, and R.P. Guralnick. 2021. High-throughput methods for efficiently building massive phylogenies from natural history collections. *Applications in Plant Sciences* 9: e11410. [1.936] <https://doi.org/10.1002/aps3.11410>
37. **Folk, R.A.**, R.L. Stubbs, **N.J. Engle-Wrye†**, D.E. Soltis, and Y. Okuyama. 2021. Biogeography and habitat evolution of Saxifragaceae, with a revision of generic limits and a new tribal system. *Taxon* 70: 263–285. [2.338] <https://doi.org/10.1002/tax.12450>
36. M.B. de Souza Cortez, **R.A. Folk**, C.J. Grady, J.P. Spoelhof, D.E. Soltis, S.A. Smith, and P.S. Soltis. 2021. Is the age of plant communities predicted by the age, stability, and soil composition of the underlying landscapes?: An investigation of Ocbils. *Biological Journal of the Linnean Society* 133: 297–316. [2.138] <https://doi.org/10.1093/biolinnean/blaa174> Part of a special issue, *OCBIL theory: A new science for old ecosystems*.
35. **Folk, R.A., C.M. Siniscalchi†**, and D.E. Soltis. 2020. Angiosperms at the edge: Extremity, diversity and phylogeny. Invited review. *Plant, Cell & Environment* 43: 2871–2893. [7.228] <https://doi.org/10.1111/pce.13887>

34. Stubbs, R.L., **R.A. Folk**, D.E. Soltis, N. Cellinese. 2020. Diversification in the arctic: Biogeography and systematics of the North American *Micranthes* (Saxifragaceae). *Systematic Botany* 45: 802–811. [1.101] <https://doi.org/10.1600/036364420X16033963649282>
33. **Folk, R.A.\***, N. Sewnath\*, C.-L. Xiang, B.T. Sinn, R.P. Guralnick. 2020. Degradation of key photosynthetic genes in the critically endangered semi-aquatic flowering plant *Saniculiphyllum guangxiense* (Saxifragaceae). *BMC Plant Biology* 20: 324. [4.215] <https://doi.org/10.1186/s12870-020-02533-x>
32. Sun, M.\*, **R.A. Folk\***, M.A. Gitzendanner, P.S. Soltis, Z. Chen, D.E. Soltis, and R.P. Guralnick. 2020. Recent, accelerated diversification in rosids occurred outside the tropics. *Nature Communications* 11: 3333. [14.919] <https://doi.org/10.1038/s41467-020-17116-5>
31. Liu, L., Y. Du, **R.A. Folk**, P. Li, D.E. Soltis, and C. Fu. 2020. Plastid genome evolution in Saxifragaceae and multiple plastid capture events involving *Heuchera* and *Tiarella*. *Frontiers in Plant Sciences* 11: 361. [5.753] <https://doi.org/10.3389/fpls.2020.00361>
30. Sun, M.\*, **R.A. Folk\***, M.A. Gitzendanner, P.S. Soltis, Z. Chen, D.E. Soltis, and R.P. Guralnick. 2020. Estimating rates and patterns of diversification with incomplete sampling: A case study in the rosids. *American Journal of Botany* 107: 895-909. [3.844] <https://doi.org/10.1002/ajb2.1479>
29. Valle, N., P. Antonenko, P.S. Soltis, D.E. Soltis, **R.A. Folk**, R.P. Guralnick, J.C. Oliverio, T.T. Difato, Z. Xu, and L. Cheng. 2020. Informal multimedia biodiversity awareness event as a digital ecology for promoting culture of science. *Education and Information Technologies* 25: 3275–3297. [2.917] <https://doi.org/10.1007/s10639-020-10121-7>
28. Jantzen J.R., A.P.P.R. Amarasinghe, **R.A. Folk**, M. Reginato, F.A. Michelangeli, D.E. Soltis, N. Cellinese, P.S. Soltis. 2020. A two-tier bioinformatic pipeline to develop probes for target capture of nuclear loci with applications in Melastomataceae. *Applications in Plant Sciences* 8(5): e11345. [1.936] <https://doi.org/10.1002/aps3.11345>
27. Stubbs, R.L., **R.A. Folk**, C.-L. Xiang S. Chen, D.E. Soltis, N. Cellinese. 2020. A phylogenomic perspective on evolution and discordance in the alpine-Arctic plant clade *Micranthes* (Saxifragaceae). *Frontiers in Plant Sciences* 10: 1773. [5.753] <https://doi.org/10.3389/fpls.2019.01773>
26. Oswald, J.A., J.M. Allen, M.J. LeFebvre, B.J. Stucky, **R.A. Folk**, N.A. Albury, R.P. Guralnick, G.S. Morgan, D.W. Steadman. 2020. Ancient DNA and high-resolution chronometry reveal a long-term human role in the historical diversity and biogeography of the Bahamian hutia. *Scientific Reports* 10: 1373. [4.379] <https://doi.org/10.1038/s41598-020-58224-y>
25. Barve, V., L. Brenskelle, D. Li, B. Stucky, N. Barve, M. Hantak, B. McLean, D. Paluh, J. Oswald, M. Belitz, **R.A. Folk**, and R.P. Guralnick. 2020. Methods for broad-scale plant phenology assessments using citizen scientists' photographs. *Applications in Plant Sciences* 8: e11315. [1.936] <https://doi.org/10.1002/aps3.11315>
24. Oswald, J.A., J.M. Allen, K.E. Witt, **R.A. Folk**, N.A. Albury, D.W. Steadman, and R.P. Guralnick. 2019. Ancient DNA from a 2,500-year-old Caribbean fossil places an extinct bird (*Caracara creightoni*) in a phylogenetic context. *Molecular Phylogenetics and Evolution* 140: 106576. [4.286] <https://doi.org/10.1016/j.ympev.2019.106576>

23. Yang, R., **R.A. Folk**, N. Zhang, X. Gong. 2019. Homoploid hybridization of plants in the Hengduan mountains region. *Ecology and Evolution* 9: 8399-8410. [2.91] <https://doi.org/10.1002/ece3.5393>
22. **Folk, R.A.**, R.L. Stubbs, M.E. Mort, N. Cellinese, J.M. Allen, P.S. Soltis, D.E. Soltis, and R.P. Guralnick. 2019. Rates of niche and phenotype evolution lag behind diversification in a temperate radiation. *Proceedings of the National Academy of Sciences* 116: 10874–10882. [11.205] <https://doi.org/10.1073/pnas.1817999116>  
Recommended by F1000: <https://f1000.com/prime/735754205>
21. Howard, C.C., **R.A. Folk**, J.M. Beaulieu, and N. Cellinese. 2019. The monocotyledonous underground: Global climatic and phylogenetic patterns of geophyte diversity. *American Journal of Botany* 106: 850–863. [3.844] <https://doi.org/10.1002/ajb2.1289>
20. Soltis, P.S., **R.A. Folk**, and D.E. Soltis. 2019. Darwin review: Angiosperm phylogeny and evolutionary radiations. Invited review. *Proceedings of the Royal Society B* 286: 20190099. [5.349] <https://doi.org/10.1098/rspb.2019.0099>
19. Allen, J.M.\*, **R.A. Folk**\*, P.S. Soltis, R.P. Guralnick, and D.E. Soltis. 2019. Space, traits, and history: Biodiversity synthesis in the green branches of the Tree of Life. Invited review. *Nature Plants* 5: 11–13. [15.793] <https://doi.org/10.1038/s41477-018-0322-7>
18. Zhang N.-N., Y.-P Ma., **R.A. Folk**, J.-J. Yu, Y.-Z. Pan, and X. Gong. 2018. Maintenance of species boundaries in three sympatric *Ligularia* (Senecioneae, Asteraceae) species. *Journal of Integrative Plant Biology* 60: 986–999. [7.061] <https://doi.org/10.1111/jipb.12674>
17. Allen, J.M., R. LaFrance, **R.A. Folk**, K. Johnson, and R.P. Guralnick. 2018. aTRAM 2.0: An improved, flexible locus assembler for NGS data. *Evolutionary Bioinformatics* 14: 1176934318774546. [1.018] <https://doi.org/10.1177/1176934318774546>
16. Schuette, S., **R.A. Folk**, J.T. Cantley, and C.T. Martine. 2018. The hidden *Heuchera*: How science Twitter uncovered a globally imperiled species in Pennsylvania, USA. *PhytoKeys* 96: 87–97. [1.635] <https://doi.org/10.3897/phytokeys.96.23667>
15. **Folk, R.A.**, C.J. Visger, D.E. Soltis, P.S. Soltis, and R.P. Guralnick. 2018. Geographic range dynamics drove ancient hybridization in a lineage of angiosperms. *American Naturalist* 192: 171–187. [3.926] <https://doi.org/10.1086/698120>
14. **Folk, R.A.**\*, J.C. Ginori\*, D.E. Soltis, and A.J. Floden. 2018. Integrative identification of incipient lineages in *Heuchera longiflora* (Saxifragaceae). *Botanical Journal of the Linnean Society* 187: 327–345. [2.911] <https://doi.org/10.1093/botlinnean/boy012>
13. Stubbs, R.L., **R.A. Folk**, C. Xiang, D.E. Soltis, and N. Cellinese. 2018. Pseudo-parallel patterns of disjunctions in an Arctic-alpine plant lineage. *Molecular Phylogenetics and Evolution*. 123: 88–100. [4.286] <https://doi.org/10.1016/j.ympev.2018.02.016>
12. **Folk, R.A.**, M. Sun, S.A. Smith, P.S. Soltis, R.P. Guralnick, and D.E. Soltis. 2018. Challenges of comprehensive taxon sampling in comparative biology: Wrestling with rosids. Invited review. *American Journal of Botany* 105: 433–444. [3.844] <https://doi.org/10.1002/ajb2.1059>
11. **Folk, R.A.**, P.S. Soltis, R.P. Guralnick, and D.E. Soltis, and R.P. Guralnick. 2018. New prospects in the detection and comparative analysis of hybridization. Invited review. *American Journal of Botany* 105: 363–374. [3.844] <https://doi.org/10.1002/ajb2.1018>
10. Zhang, R., X. Gong, and **R.A. Folk**. 2017. Evidence for continual hybridization rather than hybrid speciation between *Ligularia duciformis* and *L. paradoxa* (Asteraceae). *PeerJ* 5: e3884. [2.98] <https://doi.org/10.7717/peerj.3884>
9. García, N., **R.A Folk**, A.W. Meerow, S. Chamala, M.A. Gitzendanner, R.S de Oliveira, D.E. Soltis, and P.S. Soltis. 2017. Deep reticulation and incomplete lineage sorting



- obscure the diploid phylogeny of rain-lilies and allies (Amaryllidaceae tribe Hippeastreae). *Molecular Phylogenetics and Evolution*. 111: 231–247. [4.286]  
<https://doi.org/10.1016/j.ympev.2017.04.003>
8. Freudenstein, J.V., M.B. Broe\*, **R.A. Folk\***, and B.T. Sinn\*. 2017. Biodiversity and the species concept – Lineages are not enough. *Systematic Biology* 66(4): 644–656. [15.683]  
<https://doi.org/10.1093/sysbio/syw098>
  7. **Folk, R.A.**, J.R. Mandel, and J.V. Freudenstein. 2017. Ancestral gene flow and parallel organellar genome capture result in extreme phylogenomic discord in a lineage of angiosperms. *Systematic Biology* 66: 320–337. [15.683]  
<https://doi.org/10.1093/sysbio/syw083>
  6. **Folk R.A.** and P.J. Alexander. 2015. Two new species, *Heuchera soltisii* and *H. inconstans*, with further taxonomic notes for the western group of *Heuchera* section *Heuchera* (Saxifragaceae). *Systematic Botany* 40: 489–500. [1.101]
  5. **Folk, R.A.**, J.R. Mandel, and J.V. Freudenstein. 2015. A protocol for targeted enrichment of intron-containing sequence markers for recent radiations: A phylogenomic example with genomic resources from *Heuchera* (Saxifragaceae). *Applications in Plant Sciences* 3: 1500039. [1.936]
  4. **Folk, R.A.** and J.V. Freudenstein. 2015. "Sky islands" in the eastern U.S.A.? – Strong phylogenetic structure in the *Heuchera parviflora* group (Saxifragaceae). *Taxon* 64: 254–271. [2.338]
  3. **Folk, R.A.** and J.V. Freudenstein. 2014. Phylogenetic relationships and character evolution in the genus *Heuchera* L. (Saxifragaceae) on the basis of nuclear loci. *American Journal of Botany* 101: 1532–1550. [3.844]  
<https://doi.org/10.3732/ajb.1400290>
  2. **Folk, R.A.** and J.V. Freudenstein. 2014. Revision of *Heuchera* section *Rhodobeuhera* subsections *Hemsleyanae* and *Rosendahliae* subsect. nova (Saxifragaceae). *Systematic Botany* 39: 850–874. [1.101]
  1. **Folk, R.A.** 2013. *Heuchera lakelae* (Saxifragaceae), a new species from the Sierra La Marta and Sierra Coahuilón, Coahuila and Nuevo León, Mexico. *Phytotaxa* 124: 37–42. [1.171]

MANUSCRIPTS IN PROCESS:

52. Liu, S.-Y.; Y.-Y. Yang, Q. Tian, Z.-Y. Yang, H.R. Kates, **C.M. Siniscalchi**‡, R.P. Guralnick, D.E. Soltis, P.S. Soltis, Pamela, G. Stull, **R.A. Folk**, T.-S. Yi. In revision. Phylogenomic analyses reveal widespread gene flow during the early radiation of oaks and relatives (Fagaceae: Quercoideae).
53. Kates, H.R., B.C. O'Meara, R. LaFrance, G.W. Stull, E.K. James, S. Liu, Q. Tian, T. Yi, J.-M. Ané, D. Conde, M. Kirst, D.E. Soltis, R.P. Guralnick, P.S. Soltis, and **R.A. Folk**. Resubmitted. Two shifts in evolutionary lability underlie independent gains and losses of root-nodule symbiosis in a single clade of plants. Preprint available at: <https://doi.org/10.1101/2022.07.31.502231>
54. **Pantinople D.J.**†, **N.J. Engle-Wrye**†, and **R.A. Folk**. In review. *Heuchera tuckasegeensis* sp. nov. (Saxifragaceae), a new species from western North Carolina.
55. **Siniscalchi, C.M.**‡, H.R. Kates, P.S. Soltis, D.E. Soltis, R.P. Guralnick, and **R.A. Folk**. Submitted. Testing the evolutionary drivers of nitrogen-fixing symbioses in challenging soil environments. Preprint available at: <https://doi.org/10.1101/2022.09.27.509719>

55. Carruthers, T., M.S. Moerland, J. Ebersbach, A. Favre, **R.A. Folk**, J.A. Hawkins, A.N. Muellner-Riehl, M. Röser, D.E. Soltis, N. Tkach, W.J. Baker, J.M. de Vos, and W.L. Eiserhardt. Submitted. Rampant upslope biome shifting during late-Cenozoic climate cooling in a diverse alpine plant radiation.
56. **Dahal, S.†**, **C.M. Siniscalchi‡**, and **R.A. Folk**. In revision. Species delimitation in the *Symphotrichum subulatum* group (Asteraceae) reveals a new species in central Mexico.
57. **Siniscalchi, C.M.‡**, J. Correa-Narvaez, H.R. Kates, D.E. Soltis, P.S. Soltis, R.P. Guralnick, S.R. Manchester, **R.A. Folk**. Submitted. Fagalean phylogeny in a nutshell: Chronically the diversification history of Fagales. Preprint available at: <https://doi.org/10.1101/2023.03.06.531381>
58. Liu, L., M. Chen, **R.A. Folk**, M. Wang, T. Zhao, F. Shang, D.E. Soltis, P. Li. Submitted. Phylogenomic and syntenic data demonstrate complex evolutionary processes in early radiation of the rosids.
59. Xu, Z., **R.A. Folk**, M.A. Gitzendanner, G.-W. Hu, P.S. Soltis, D.E. Soltis, Q.-F. Wang. Submitted. Re-examining the placement of *Hydrostachys* using a large-scale phylogenetic approach.
60. **Folk, R.A.**, **C.M. Siniscalchi‡**, J. Doby, H.R. Kates, S.R. Manchester, P.S. Soltis, D.E. Soltis, R.P. Guralnick, M. Belitz. Submitted. Spatial phylogenetics of Fagales: Investigating the history of temperate forests. Preprint available at: <https://doi.org/10.1101/2023.04.17.537249>.

PREPRINTS:

- Figueroa, H., H. Marx, M.B. de Sousa Courtez, C.J. Grady, **N.J. Engle-Wrye**, J. Beach, A. Stewart, **R.A. Folk**, D.E. Soltis, P.S. Soltis, A. Stewart, S.A. Smith. 2021. Alpine, but not montane, seed plants constitute a biogeographically and climatically distinct species pool across the Americas. <https://doi.org/10.22541/au.161969728.82703460/v1>
- Sun, M., **R.A. Folk**, M.A. Gitzendanner, S.A. Smith, C. Germain-Aubrey, R.P. Guralnick, P.S. Soltis, Z. Chen, and D.E. Soltis. 2019. Exploring the phylogeny and diversification of rosids with a five-locus supermatrix. <https://doi.org/10.1101/694950>

BOOK CHAPTERS, POPULAR ARTICLES, AND OTHER NON-PEER-REVIEWED CONTRIBUTIONS:

- Kates, H.R., **R.A. Folk**, R.P. Guralnick, D.S. Soltis, and P.S. Soltis. A new resource for legume diversity and systematics: The Nit-Fix project. *The Beanbag* (this is a new resource note for a worldwide newsletter in legume science).
- Folk, R.A.** and R.L. Stubbs. [In press] Treatment of Saxifragaceae. In R.F.C. Naczi, *New Manual of Vascular Plants of the Northeastern United States and Adjacent Canada*. [Initially issued as digital fascicles; print edition to follow on series completion]

*Pre-MSU*

- Folk, R.A.** and A.S. Weakley. Treatment of *Heuchera*. In A.S. Weakley. *Flora of the Southern and Mid-Atlantic States*. [Online e-book with print editions at irregular intervals]
- Folk, R.A.** 2013. A summer of species descriptions. *OSU Museum of Biological Diversity Newsletter*.

INSTRUCTOR EXPERIENCE:

2021, *MSU*, Biogeography (graduate; BIO 8113, offered biennially)

2020 – 2023 MSU, Plant Biology (undergraduate; BIO 2113, offered annually)  
 2020 – 2022 MSU, Taxonomy of Spermatophytes (undergraduate/graduate; BIO  
 4203/6203, offered biennially)

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2018, UF, co-instructor of record, Taxonomy of Vascular Plants  
 (undergraduate/graduate; BOT5725)  
 2016, UF, co-instructor of record, Principles of Systematics (graduate;  
 BOT6726/ZOO6927)

MENTORSHIP:

*Postdoctoral scholars:* Carolina Siniscalchi (2020 –)

*Graduate students:* Nicholas Engle-Wrye (Ph.D., 2019 –), Sushil Dahal (Ph.D., 2021 –),  
 Dexcem Pantinople (Ph.D., 2022 –)

*Undergraduates and high school students (only MSU listed, 12 individuals before this period):* Tyrikus  
 Hayes (2022; now a med student at Ole Miss), Sydney Beachler (2021 – 2022),  
 Tajinder Singh (2021 –), Sofia Nail (2021 –), Reagan Conner (2020 – 2022; now a  
 graduate student at the University of Arizona), Stephanie Dauber (2019 –), Sushil  
 Dahal (2021; now a PhD student in my lab), Zoe Fowler (2021 summer; now a PhD  
 student on a GRFP at Georgia Tech), Briana Johnston (2020 – 2021; now an MS  
 student at University of Arkansas), Peyton Dunn (2020 – 2021; now in a co-op  
 program), Kelli Broussard (2020 – 2021; now at LSU in medical school), Paige  
 Marrota (2021; now a lab tech), Matt Mattox (2019 – 2020; now a lab tech at Fisher  
 Scientific)

*Visiting scientists:* Tanisha Williams (2022, again in 2023, Bucknell University), Joshua Doby  
 (2020, University of Florida)

*Awards and grants to trainees [non-competitive funds omitted]:* N.J. Engle-Wrye: \$5,000 (MSU  
 Research Opportunity Fund), \$3,000 (Society of Systematic Biologists Graduate  
 Student Research Award), \$2,000 (MSU Zernickow Fund), \$1,200 (American Society  
 of Plant Taxonomists Graduate Student Research Award), \$1,100 (IAPT Graduate  
 Student Award), \$500 (MSU Biological Sciences BFF Research Award), \$500 and  
 \$450 (MSU Biological Sciences BFF Travel Award), \$246 (ASB Graduate Student  
 Support Award).

D. Pantinople: \$1,500 (American Society of Plant Taxonomists BIPOC Excellence in  
 Systematic Botany grant), \$500 and \$500 (MSU Biological Sciences BFF Research  
 Award), \$500 (MSU Biological Sciences BFF Travel Award).

S. Dahal: \$500, \$500 (MSU Biological Sciences BFF Research Awards), \$500 (MSU  
 Biological Sciences BFF Travel Award), \$246 (ASB Graduate Student Support  
 Award).

C. Siniscalchi: \$500 (MSU Biological Sciences BFF Travel Award).



T. Singh (undergraduate): \$2,000 (MSU Shackouls Honor College: Honors Research Fellowship [this is a research grant for undergraduate projects]).

*Miscellaneous trainee accomplishments:* N.J. Engle-Wrye featured in February 2022 newsletter of the Botanical Society of America (BSA Spotlight Series).

SERVICE:

2019 –, Herbarium Curator, MISSA (MSU's herbarium)

Oversaw relocation, ~8% expansion, database move to CyVerse, update to APGIV sequence.

2020 –, Associate Editor, *Systematic Biology* (2020 impact factor 15.683)

*Dissertation/Masters committee memberships:*

Jacob Hockensmith (MSU Master's, 2022 –)

Samuel Schmid (MSU PhD, 2022 –)

Zach Dymeka (MSU PhD, 2020 –)

Nicholas Fry (MSU PhD, 2020 –)

Andrew Sample (MSU Master's, 2020 – 2023)

Alexander Tice (MSU PhD, 2019 – 2020)

*Other committee memberships:*

2023 –, Member-at-Large, American Society of Plant Taxonomists Council

2020 – 2023 [2021-2022 chair], Membership Committee, American Society of Plant Taxonomists

2019 –, Museums and Galleries Committee, Greenhouse Committee, Server Committee (Mississippi State University)

2018 – 2019, Awards and Honors Committee, American Society of Plant Taxonomists

*Peer reviews* (~10/yr) for: *Nature Plants*, *PNAS*, *Trends in Ecology and Evolution*, *Systematic Biology*, *Molecular Biology and Evolution*, *Ecology Letters*, *New Phytologist*, *Evolution*, *Proceedings of the Royal Society B*, *American Naturalist*, *Molecular Ecology*, *Current Biology* [presubmission inquiry], *Ecological Monographs*, *Genome Biology and Evolution*, *Journal of Biogeography*, *Molecular Phylogenetics and Evolution*, *BMC Evolutionary Biology*, *BMC Plant Biology*, *Frontiers in Plant Science*, *Biology Letters*, *Taxon*, *Cladistics*, *American Journal of Botany*, *Ecography*, *Frontiers in Genetics*, *Heredity*, *PLoS One*, *PeerJ*, *Applications in Plant Science*, *Botanical Journal of the Linnean Society*, *Biological Journal of the Linnean Society*, *Systematic Botany*, *Botany Letters*, *Botany*, *Phytotaxa*, *Journal of Systematics and Evolution*, *Evolutionary Bioinformatics*, *American Fern Journal*

*Proposal review activity:*

2023, remote referee, ERC (European Research Council) Starting Grant 2023 Call  
2020, 2021, NSF Panelist for BoCP [2023], PCE [2021, 2023], SBS [2020] (all  
Division of Environmental Biology).

2016 – 2021, NSF ad hoc reviewer (for the following DEB programs: PCE [2022];  
IntBio [2021]; Population and Community Ecology [2017]; OPUS [2016])

2017 – 2019, 2022, American Society of Plant Taxonomists (graduate student awards)

*Public outreach:*

- 2021 – 2023, Plant survey project for the Mississippi Band of Choctaw Indians (confidential cultural site in Winston Co., MS).
- 2021, 2023, Herbarium display at Starkville Partnership School.
- 2020 – 2023, Table for Mississippi State event “Night at the Museum” (attendance ~1,000)
- 2019, Talk delivered to the Mississippi Native Plant Society: “Hidden coral bells in the southeast”
- 2018, Cameo appearance on “Plants are Cool, Too!” – rediscovery of *Heuchera alba* (<https://youtu.be/SFApGT8cHcE>).
- 2017, Scientific advisor (credited), multimedia outreach video “TreeTender” on the relevance of the Tree of Life; in collaboration with the UF Digital Worlds institute and coordinated with the 100-year anniversary celebration of FLMNH (press release and trailer <https://www.floridamuseum.ufl.edu/science/tree-of-life-events/>; impact ~1,500 visitors over two days)
- 2016, Organizing volunteer, several Tree of Life pop-up tent events (UF campus, FLMNH public museum, local brew-pub)
- 2016, Table volunteer for iDigBio at Botany meetings
- 2014, Talk delivered at the Ohio Botany Research Symposium: “Evolutionary relationships and hybridization among species of coral bells (*Heuchera*)”
- 2011 – 2015, Organizing volunteer, OSU Museum of Biological Diversity Open House (impact ~1000-3000 visitors on single-day event)
- 2009, Talk delivered at the Ohio Natural History Conference: “The jaw morphology of the parasitic rotifer *Proales werneckii*”

*Workshops and colloquia held:*

- 2022 – 2023, Lead organizer for Botanical Society of America workshop: “Biodiversity data wrangling: Linking large phylogenies with species traits and ecologies.”
- 2020, Lead organizer for Botanical Society of America colloquium: “Biodiversity synthesis: Linking large phylogenies with species traits and ecologies.”
- 2016 – 2019, Co-organizer and lecturer for Botanical Society of America iDigBio/BiotaPhy workshop: “Using Digitized Herbarium Data in Research: Applications for Ecology, Phylogenetics, and Biogeography”
- 2018, Lecturer for iDigBio ADBC (Advancing Digitization of Biodiversity Collections) Summit: “BiotaPhy web platform”

*Invited workshops attended and public panelist roles:*

- 2021, NSF mini-ideas lab, virtual – “Revitalizing monography” (see Gorneau et al. 2022 in Publications above)
- 2020, Panelist for Academic Career Panel, Plant Science Council at the University of Florida.
- 2020, Panelist for online Zoom showing of *TreeTender* (<https://www.treetender.org/>).
- 2020, NSF mini-ideas lab, Gainesville FL – “The Future of Systematics”
- 2020, Society of Systematic Biologists discussion panelist (topic: Integrating phylogenies and ecological data layers; see also “Biodiversity data wrangling: Linking large phylogenies with species traits and ecologies” in Workshops above)

2017, BCoN Workshop (Next-Generation Natural History Collections; Harvard University, Cambridge)

2017, FuturePhy SoTol (“State of the Tree of Life”; Field Museum, Chicago)

Miscellaneous society duties:

2018, 2022, presentation judge, Cooley Award (American Society of Plant Taxonomists)

2017 – 2018, session chair, Macroevolution (Botanical Society of America meeting)

SCIENCE COMMUNICATION:

*Symbology: reverse order of event; † graduate trainee, ‡ postdoc trainee, § undergraduate trainee, \* co-presented/tag-team. Unless otherwise noted by \* the first author is the presenting author.*

*Keynote speaker:*

**Folk, R.A.** 2023 (forthcoming). 8th International Legume Conference, symposium “Novelties in Legume-Rhizobia Symbiosis.”

*Invited departmental seminars:*

**Folk, R.A.** 2022. Nitrogen-fixing symbioses: Insights from a megaphylogenetic approach. *CU Denver* (Department of Integrative Biology)

**Folk, R.A.** 2021. Nitrogen-fixing symbioses: Insights from a megaphylogenetic approach. *Louisiana State University* (Department of Biological Sciences).

**Folk, R.A.** 2021. How to get your Nit Fix—Dissecting the history of a globally important nitrogen-fixing symbiosis. *Mississippi State University* (Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology).

**Folk, R.A.** 2020. Bursts of evolution outside the tropics: The temperate plant radiation Saxifragales. *Otterbein University* (Department of Biology & Earth Science).

**Folk, R.A.** 2019. Macroevolutionary approaches to habitat evolution in flowering plants. *Mississippi State University* (Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology).

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**Folk, R.A.** 2019. Macroevolutionary approaches to niche evolution in flowering plants. *Kunming Institute of Botany* (P.R. China).

**Folk, R.A.** 2019. Macroevolutionary approaches to niche evolution in flowering plants. *University of Hawai’i at Mānoa*.

**Folk, R.A.** 2019. Macroevolutionary approaches to niche evolution in flowering plants. *Mississippi State University* (Department of Biological Sciences).

**Folk, R.A.** 2019. Macroevolutionary approaches to niche evolution in flowering plants. *Marshall University*.

**Folk, R.A.** 2018. Large-scale approaches to understanding niche evolution and symbiosis in the flowering plants. *University of Florida*.

**Folk, R.A.** 2017. Large-scale approaches to understanding niche evolution and symbiosis in the flowering plants. *San Diego State University*.

Soltis, D.E.\*, P.S. Soltis\*, and **R.A. Folk\***. 2017. The Tree of Life and the evolution of nitrogen-fixing symbioses. *New York Botanical Garden*.

**Folk, R.A.** 2017. Hybridization and diversification: Extreme phylogenomic discord in *Heuchera*. *Kunming Institute of Botany* (P.R. China).

- Folk, R.A.** 2017. Hybridization and diversification: Extreme phylogenomic discord in *Heuchera*. School of Integrative Plant Science, *Cornell University*.
- Folk, R.A.** 2017. Hybridization and diversification: Extreme phylogenomic discord in *Heuchera*. Department of Biology, *San Francisco State University*.
- Folk, R.A.** 2017. Hybridization and diversification: Extreme phylogenomic discord in *Heuchera*. Department of Biological Sciences, *University of Alabama*.
- Folk, R.A.** 2016. Hybridization and diversification: Extreme phylogenomic discord in *Heuchera*. Department of Biological Sciences, *Texas Tech University*.
- Folk, R.A.** 2016. New sequencing strategies for radiations ancient and recent—An explicit test of reticulate evolution in the *Heuchera* clade (Saxifragaceae). *Royal Botanic Garden Edinburgh* (United Kingdom).
- Folk, R.A.** 2015. Phylogenomics of *Heuchera*—Organellar capture and trait evolution. Florida Museum of Natural History, *University of Florida*.
- Folk, R.A.** 2014. Phylogenetic relationships in *Heuchera* (Saxifragaceae) based on ribosomal and low-copy nuclear loci. Department of Evolution, Ecology, and Organismal Biology, *The Ohio State University*.

*Invited symposium presentations:*

- Zhang, Q., **R.A. Folk**, D.E. Soltis, P.S. Soltis, X.-Q. Yu. 2022. Phylotranscriptomics of Theaceae: generic level relationships, reticulation and whole-genome duplication. Botanical Society of America colloquium: From the backbone to diversification: Unraveling the evolutionary history of Ericales (Anchorage, AK).
- Folk, R.A.** 2020. Strategies for assessing phylogenomic conflict and testing hybridization, with an example from *Heuchera*. Botanical Society of America colloquium: Exploring the utility and limits of target enrichment methods to disentangle evolutionary processes (online conference).
- Siniscalchi, C.M.**‡, H.-R. Kates, P.S. Soltis, D.E. Soltis, R.P. Guralnick, and **R.A. Folk**. 2020. Testing the evolutionary success of nitrogen-fixing symbioses in challenging soil environments. Botanical Society of America colloquium: Biodiversity synthesis: Linking large phylogenies with species traits and ecologies (online conference).
- Kates, H., **R.A. Folk**, R.P. Guralnick, P.S. Soltis, and D.E. Soltis. 2020. Building and using a massive-scale 13,000 species phylogeny for the nitrogen-fixing clade. Botanical Society of America colloquium: Phylogenomics and evolution of Superrosids (online conference).
- de Souza Cortez, M.B., **R.A. Folk**, C.J. Grady, A. Stewart, J. Spoelhof, D.E. Soltis, and P.E. Soltis. 2020. Is the occurrence of ancient angiosperms associated with old, climatically stable and infertile landscapes in Brazil? Botanical Society of America colloquium: Plant life in Neotropical rocky outcrops (online conference).
- Stull, G.W., H.-R. Kates, Q. Tian, **R.A. Folk**, R.P. Guralnick, D.E. Soltis, P.S. Soltis, T-S. Yi. 2020. A deeply sampled phylogenomic tree for Rosaceae, with preliminary insights on chromosome evolution, ancient polyploidy, and diversification patterns across the family. Botanical Society of America colloquium: Phylogenomics and evolution of Superrosids (online conference).
- Sun, M., **R.A. Folk**, M.A. Gitzendanner, S.A. Smith, Z. Chen, P.S. Soltis, D.E. Soltis, and R.P. Guralnick. 2020. Phylogenetic and diversification analyses of rosids. Botanical Society of America colloquium: Phylogenomics and evolution of Superrosids (online conference).

- Folk, R.A.** 2020. Challenging soil environments and the origins of nitrogen-fixing symbioses. Plant and Animal Genome XXVIII Conference workshop: Root Nodule Symbiosis: Genetics, Evolution, and Engineering for Future Crops (San Diego, CA).  
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- Folk, R.A.**, M. Gaynor, Y. Okuyama, P.S. Soltis, D.E. Soltis, R.P. Guralnick. 2019. New prospects in studying hybridization: Assessing historical climatic drivers. Botanical Society of America symposium: Phylogenomic Perspectives on Reproductive Isolation and Introgression (Tucson, AZ).
- Folk, R.A.** 2019. Hybridization and diversification: Extreme phylogenomic discord in *Heuchera*. Chicago Plant Science Symposium (Chicago, IL).
- Kates, H.\*, **R.A. Folk\***, B. Ruben, C. Dervinis, R. LaFrance, M. Kirst, R.P. Guralnick, D.E. Soltis, P.S. Soltis. 2018. Rapid workflows from specimens to sequences: Global-scale phylogenomics from collections. Botanical Society of America colloquium: Revolutionizing systematics: Herbaria in the Genomics Age (Rochester, MN).
- Folk, R.A.**, D.E. Soltis, P.S. Soltis, N. Cellinese, M.E. Mort, J.M. Allen, R.L. Stubbs, R.P. Guralnick. 2018. Large-scale integration of specimens, literature, and database infrastructure in Saxifragales. Botanical Society of America colloquium: Revolutionizing systematics: Herbaria in the Genomics Age (Rochester, MN).
- Folk, R.A.\***, R.P. Guralnick, P.S. Soltis, D.E. Soltis, J.M. Allen\*. 2017. Data assembly and post-processing in aTRAM for museum phylogenomics. International Botanical Congress symposium: Use of target capture and high-throughput sequencing as a tool for plant systematics (Shenzhen, P.R. China).
- Folk, R.A.**, C.J. Visger, R.P. Guralnick, D.E. Soltis, P.S. Soltis. 2017. Assessing ancestral niche suitability and geographic range dynamics as drivers of hybridization in *Heuchera* (Saxifragaceae). International Botanical Congress symposium: Hybridization and phylogenetic reconstruction (Shenzhen, P.R. China).
- Soltis, D.E.\*, R.P. Guralnick, S.R. Manchester, J.M. Allen, M. Kirst, J. Oliverio, and **R.A. Folk\***. Uncovering hidden enablers of nitrogen fixation in a major clade of flowering plants. University of Florida symposium: Collaborations in Biodiversity Research (Gainesville, FL).

*Contributed conference presentations:*

- Engle-Wrye, N.J.†** and **R.A. Folk**. 2023 (forthcoming). Investigating conserved pollinator attractants as a driver of hybridization in *Heuchera*. Botanical Society of America meeting (Boise, ID).
- Dahal, S.†**, **C.M. Siniscalchi†**, and **R.A. Folk**. 2023 (forthcoming). Species delimitation in the *Symphytotrichum subulatum* group (Asteraceae) reveals a new species in central Mexico. Botanical Society of America meeting (Boise, ID).
- Pantinople, D.†**, **R. Conner§**, **S. Dauber§**, **K. Broussard§**, **N.J. Engle-Wrye†**, **H. Jordan**, **C.M. Siniscalchi†**, **R.A. Folk**. 2023 (forthcoming). Phylogenetic and spatial determinants of leaf endophyte microbiomes in the flowering plant *Heuchera*. Botanical Society of America meeting (Boise, ID).
- Folk, R.A.**, M. Belitz, **C.M. Siniscalchi†**, D.E. Soltis, H.R. Kates, P.S. Soltis, R.P. Guralnick, L.M. Borges. 2023 (forthcoming). Phylogenetic diversity and regionalization of the mimosoid clade: Drivers of diversity in dry tropical forest. Botanical Society of America meeting (Boise, ID).

- Singh, T.**§, P. Rodrigo, T. Mlsna, J. Dhillon, J. Varco, **R.A. Folk**. 2023 (forthcoming). P-LDH/BC as a controlled-release fertilizer: Effects on plant growth and the soil microbiome. Botanical Society of America meeting (Boise, ID).
- Folk, R.A., C.M. Siniscalchi**‡, M. Belitz, J.R. Doby, S.R. Manchester, P.S. Soltis, D.E. Soltis, R.P. Guralnick. 2022. Spatial phylogenetics of Fagales: Investigating the history of temperate forests. Botanical Society of America meeting (Anchorage, AK).
- Siniscalchi, C.M.**‡, Y. Barros-Souza, J.R. Doby, M. Belitz, H.R. Kates, T.-S. Yi, P.S. Soltis, D.E. Soltis, R.P. Guralnick, L. Borges, **R.A. Folk**. 2022. Investigating the role of environment, ploidal level, and symbiotic partner in the diversification of the Mimosoid clade (Leguminosae). Botanical Society of America meeting (Anchorage, AK).
- Kates, H.R., **R.A. Folk**, R.P. Guralnick, R. LaFrance, B. O'Meara, D.E. Soltis, P.S. Soltis. 2022. Two shifts in evolutionary lability explain many independent origins of nitrogen-fixing nodulation symbiosis in angiosperms. Botanical Society of America meeting (Anchorage, AK).
- Stull, G., Q. Tian, S.-Y. Liu, X.-G. Fu, H.R. Kates, **R.A. Folk**, R.P. Guralnick, P.S. Soltis, D.E. Soltis, T.-S. Yi. 2022. A nuclear phylogenomic overview of Rosaceae. Botanical Society of America meeting (Anchorage, AK).
- Engle-Wrye, N.J.**†, **R.A. Folk**. 2022. Using *Heuchera* to infer historical patterns of gene flow driven by Pleistocene glaciation, and why extensive population level sampling is crucial for understanding evolutionary processes. Botanical Society of America meeting (Anchorage, AK).
- Pantinople, D.**†, **C.M. Siniscalchi**‡, **R.A. Folk**. 2022. Edaphic ecology in island-like systems—A case study in the *Heuchera parviflora* complex. Botanical Society of America meeting (Anchorage, AK).
- Dahal, S.**†, **C.M. Siniscalchi**‡, **R.A. Folk**. 2022. Population genomics and biogeography of *Symphyotrichum* in Mexico and the eastern U.S. Botanical Society of America meeting.
- Doby, J.R.; D. Li, **R.A. Folk**, **C.M. Siniscalchi**‡, R.P. Guralnick. 2022. Aridity drives diversity of nitrogen fixing plants in North America. Botanical Society of America meeting (Anchorage, AK).
- Engle-Wrye, N.J.**† and **R.A. Folk**. 2022. Investigating conserved pollinator attractants as a driver of hybridization in *Heuchera*. Association of Southeastern Biologists meeting 2022 (Little Rock, AR).
- Siniscalchi, C.M.**‡, **R. Conner**, **S. Dauber**, **S. Dahal**†, **N.J. Engle-Wrye**†, and **R.A. Folk**. 2022. Ironing out species boundaries in ironweed (*Vernonia*, Asteraceae) with phylogenomics. Association of Southeastern Biologists meeting 2022 (Little Rock, AR).
- Dahal, S.**†, **R.A. Folk**, and **C.M. Siniscalchi**‡. 2022. Population genomics and biogeography of *Symphyotrichum* in Mexico and the eastern U.S. Association of Southeastern Biologists meeting 2022 (Little Rock, AR).
- Engle-Wrye, N.J.**†, T. Mlsna, and **R.A. Folk**. 2021. Investigating conserved pollinator attractants as a driver of hybridization in *Heuchera*. Botanical Society of America meeting (online meeting).
- Siniscalchi, C.M.**‡, J. Correa, H.R. Kates, T. Heath, D.E. Soltis, P.S. Soltis, R.P. Guralnick, S.R. Manchester, **R.A. Folk**. 2021. Reevaluating the biogeographical history of living and fossil Fagales. Botanical Society of America meeting (online meeting).
- Engle-Wrye, N.J.**† and **R.A. Folk**. 2020. Environmental drivers of a hybridization zone in *Heuchera*. Botanical Society of America meeting (online meeting).



- Kates, H., B. O'Meara, **R.A. Folk**, R.P. Guralnick, P.S. Soltis, and D.E. Soltis. 2020. Using a 13,000-species phylogeny of the nitrogen-fixing clade to reconstruct the origins and evolution of a critical symbiosis. Botanical Society of America meeting (online meeting).
- Liu, L., **R.A. Folk**, S. Wang, D.E. Soltis, F. Shang, P. Li. 2020. Plastome evolution in Saxifragaceae and multiple plastid capture events involving *Heuchera* and *Tiarella*. Botanical Society of America meeting (online meeting).
- García, N., **R.A. Folk**. 2020. Progress in elucidating the phylogeny and species delimitation in a Chilean endemic clade of lilies. Botanical Society of America meeting (online meeting).
- García, N., **R.A. Folk**. 2019. Progreso en la delimitación de especies en *Phycella* s.l. (Amaryllidaceae tribu Hippeastreae) ("Progress in species delimitation in *Phycella* s.l. [Amaryllidaceae tribe Hippeastreae]). Argentine Botanical Society meeting.
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- Folk, R.A.**, P.S. Soltis, D.E. Soltis, R.P. Guralnick. 2019. Drivers of inverse biodiversity gradients in Saxifragales. Botanical Society of America meeting (Tucson, AZ).
- Kates, H.R., **R.A. Folk**, M. Kirst, S. Roy, J.-M. Ané, R.P. Guralnick, D.E. Soltis, and P.S. Soltis. 2019. Phylogenomics of the nitrogen-fixing clade to uncover genomic novelties required for evolution of root nodule symbioses. Botanical Society of America meeting (Tucson, AZ).
- Melton, A., **R.A. Folk**, C.J. Grady, A. Stewart, J. Beach, P.S., Soltis, D.E. Soltis. 2019. Does ecology or biogeography better explain the eastern Asia–eastern North America species richness anomaly? Botanical Society of America meeting (Tucson, AZ).
- Oswald J., J.M. Allen, **R.A. Folk**, B. Stucky, D. Steadman, R.P. Guralnick. 2019. Using ancient DNA from fossils to place an extinct flightless bird genus in a phylogenetic context. American Ornithological Meeting.
- Howard, C.C., J.B. Landis, **R.A. Folk**, J.M. Beaulieu, N. Cellinese. 2019. Digging for answers: The causes and consequences of geophytism in the monocots. SICB (Society for Integrative and Comparative Biology) 2019 meeting.
- Stubbs, R.L., **R.A. Folk**, D.E. Soltis, N. Cellinese. 2019. Phylogenomics resolves relationships within an alpine–Arctic plant clade (*Micranthes*, Saxifragaceae) and reveals evolutionary processes and historical biogeography. SICB 2019 meeting.
- Kates, H.R., J.-M. Ane, K. Balmant, D. Conde, M. Crook, C. Dervinis, R.P. Guralnick, T. Irving, M. Kirst, S. Knaack, L. Maia, S. Roy, **R.A. Folk**, D.E. Soltis, P.S. Soltis. 2019. Global-scale phylogenomics of the nitrogen-fixing clade. PAG XXVII (Plant and Animal Genome Conference, San Diego, CA).
- Kirst, M., J.-M. Ane, D.E. Soltis, S. Roy, P.S. Soltis, R.P. Guralnick, D. Conde, **R.A. Folk**, T. Irving, L. Maia, H.R. Kates, K. Balmant, S. Knaack, M. Crook, C. Dervinis. 2019. Engineering nitrogen-fixing symbiosis into poplar. PAG XXVII (San Diego, CA).
- Folk, R.A.**, D.E. Soltis, P.S. Soltis, N. Cellinese, M.E. Mort, J.M. Allen, R.L. Stubbs, R.P. Guralnick. 2018. Correlation among functional trait shifts, habitat shifts, and diversification patterns in the flowering plant clade Saxifragales. Botanical Society of America meeting (Rochester, MN).
- Howard, C., J. Landis, **R.A. Folk**, J. Beaulieu, N. Cellinese. 2018. Global phylogenetic patterns and diversification of monocotyledonous geophytes. Botanical Society of America meeting (Rochester, MN).

- Schuette, S., **R.A. Folk**, J.T. Cantley, C. Martine. 2018. The hidden *Heuchera*: How science and Twitter uncovered a globally imperiled species in Pennsylvania, USA. Botanical Society of America meeting (Rochester, MN).
- Stubbs, R.L.; **R.A. Folk**, C.-L. Xiang, D.E. Soltis, N. Cellinese. 2018. The evolution of cold-adapted plants: A phylogenomic analysis of *Micranthes* (Saxifragaceae). Botanical Society of America meeting (Rochester, MN).
- Folk, R.A.**, D.E. Soltis, P.S. Soltis, N. Cellinese, M.E. Mort, J.M. Allen, R.L. Stubbs, R.P. Guralnick. 2018. Correlation among functional trait shifts, habitat shifts, and diversification patterns in the flowering plant clade Saxifragales. Society of Systematic Biologists meeting (Rochester, MN).
- García N., A.W. Meerow, S. Arroyo-Leuenberger, J. Dutilh, R.S. Oliveira, W.S. Judd, **R.A. Folk**, D.E. Soltis, & P.S. Soltis. 2017. Propuesta de clasificación genérica de Amaryllidaceae tribu Hippeastreae basada en su filogenia (“Proposal of a generic classification of Amaryllidaceae tribe Hippeastreae based on their phylogeny”). Argentine Botanical Society meeting.
- Allen, J.M., R. LaFrance, **R.A. Folk**, K. Bell, K. Johnson, R.P. Guralnick. 2017. aTRAM 2.0: Targeted assembly of loci from both reduced and whole genome NGS data. Evolution meeting.
- Soltis, D.E., P.S. Soltis, J. Beach, A. Stewart, A. Thompson, J. Cavner, C.J. Grady, S. Smith, J. Fortes, **R.A. Folk**, M. Gitzendanner. 2017. Biotaphy—Connecting resources to enable large scale biodiversity analyses. International Botanical Congress (Shenzhen, P.R. China).
- Stubbs, R.L., **R.A. Folk**, D.E. Soltis, N. Cellinese. 2017. Investigating the Sierra Nevada-Rocky Mountain disjunction in *Micranthes* (Saxifragaceae) with a target enrichment approach. Botanical Society of America meeting (Fort Worth, TX).
- Naranjo, A., **R.A. Folk**, P.S. Soltis, D.E. Soltis. 2017. *Dicerandra*: Understanding ancestral niches of a narrow endemic. Botanical Society of America meeting (Fort Worth, TX).
- Soltis, D.E., P.S., Soltis, J. Beach, A. Stewart, A. Thompson, J. Cavner, C.J. Grady, S. Smith, J. Fortes, **R.A. Folk**, M. Gitzendanner. 2017. Biotaphy: Mobilizing and integrating big data in studies of spatial and phylogenetic patterns of biodiversity. Botanical Society of America meeting (Fort Worth, TX).
- Folk, R.A.**, R.L. Stubbs, N. Cellinese, M.E. Mort, P.S. Soltis, D.E. Soltis, R.P. Guralnick. 2017. Dynamics of niche evolution in the Saxifragales. Botanical Society of America (Fort Worth, TX).
- Folk, R.A.**, R.P. Guralnick, P.S. Soltis, D.E. Soltis, J.M. Allen. 2017. Data assembly and post-processing in aTRAM for museum phylogenomics. Botanical Society of America meeting (Fort Worth, TX).
- Folk, R.A.**, C.J. Visger, R.P. Guralnick, D.E. Soltis, P.S. Soltis. 2017. Historical range dynamics drove hybridization in a lineage of angiosperms. Society of Systematic Biologists standalone meeting.
- Soltis, D.E., M. Sun, C. Germain-Aubrey; S. Smith; P.S. Soltis, Z. Chen, **R.A. Folk**, R.P. Guralnick. 2016. Wrestling with the rosids II: Too big to nail—Challenges in conducting comprehensive analyses in the angiosperms. Botanical Society of America meeting (Savannah, GA).
- Stubbs, R., **R.A. Folk**, D.E. Soltis, N. Cellinese. 2016. Specialized adaptations and restricted niche preferences of cold-adapted saxifrages (*Micranthes*, Saxifragaceae). Botanical Society of America meeting (Savannah, GA).

- Folk, R.A.**, C.J. Visger, R.P. Guralnick, D.E. Soltis, P.S. Soltis. 2016. Ancestral reconstruction of habitat shifts from ecological niche models of extant species: A pipeline with applications to ancestral hybridization in *Heuchera* (Saxifragaceae). Botanical Society of America meeting (Savannah, GA).
- García, N., A.W. Meerow; S. Chamala, M. Gitzendanner, R.S. Oliveira, **R.A. Folk**, D.E. Soltis, P.S. Soltis, 2016. Revisiting incongruence in the diploid phylogeny of Amaryllidaceae tribe Hippeastreae (Asparagales): Hybridization or incomplete lineage sorting? Botanical Society of America meeting (Savannah, GA).
- Folk, R.A.**, J.R. Mandel, J.V. Freudenstein. 2015. Phylogenomic approaches in the genus *Heuchera* (Saxifragaceae) elucidate deep reticulation and simultaneous mitochondrial and chloroplast capture. Botanical Society of America meeting (Edmonton, Alberta, Canada).
- Folk, R.A.**, J.R. Mandel, J.V. Freudenstein. 2015. Protocol for targeted enrichment of intron-containing sequence markers for recent radiations: A phylogenomic example from *Heuchera* (Saxifragaceae). Botanical Society of America meeting (Edmonton, Alberta, Canada).
- Folk, R.A.**, J.V. Freudenstein. 2014. “Sky islands” in the eastern US? – Strong phylogeographic structure in the *Heuchera parviflora* group (Saxifragaceae). Botanical Society of America meeting (Cooley Award winner, Boise, ID).
- Folk, R.A.**, J.V. Freudenstein. 2013. Phylogenetic relationships in *Heuchera* (Saxifragaceae) based on ribosomal and low-copy nuclear loci. Botanical Society of America meeting (New Orleans, LA).
- Folk, R.A.**, J.V. Freudenstein. 2012. Reticulate evolution and phylogenetic relationships in the genus *Heuchera* (Saxifragaceae). Botanical Society of America meeting (Columbus, OH).

*Posters:*

- Dahal, S.†, C.M. Siniscalchi‡, N.J. Engle-Wrye†, R.A. Folk**. 2021. Population genomics of *Symphyotrichum* subg. *Virgulus* and test of the putative hybrid origin of *S. amethystinum*. Botanical Society of America meeting (online conference). Re-presented at Mississippi State 2021 Summer Undergraduate Research Symposium (Starkville, MS).
- Conner, R.M., S. Dauber, K. Broussard, N.J. Engle-Wrye†, H. Jordan, C.M. Siniscalchi‡, R.A. Folk**. 2021. Phylogenetic and spatial determinants of leaf endophyte microbiomes in the flowering plant *Heuchera*. Botanical Society of America meeting (online conference). Re-presented at Mississippi State 2021 Summer Undergraduate Research Symposium (Starkville, MS).

*Pre-MSU*

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- Amarasinghe P., J. Jantzen, **R.A. Folk**, D.E. Soltis, P.S. Soltis, N. Cellinese. 2019. Developing a new bioinformatics pipeline to capture low-copy nuclear loci for two distant clades of Melastomataceae. Botanical Society of America meeting.
- García N. and **R.A. Folk**. 2019. Genomic phylogeography and species delimitation in *Phycella* s.l. (Amaryllidaceae tribe Hippeastreae). Botanical Society of America meeting.
- Kates, H.R., J.-M. Ané, K. Balmant, D. Conde, M. Crook, C. Dervinis, R.P. Guralnick, T. Irving, M. Kirst, S. Knaack, L. Maia, S.Roy, **R.A. Folk** (*presenting author*), D.E. Soltis,

- and P.S. Soltis. 2019. NitFix: Global-Scale Phylogenomics of the Nitrogen-fixing Clade. Department of Energy PI meeting (Genomic Sciences Program).
- R.A. Folk**, D.E. Soltis, P.S. Soltis, R.P. Guralnick. 2017. Dynamics of niche evolution in the Saxifragales. Research Using Biological Collections (RUBC) PRFB Symposium.
- Tarullo, C., **R.A. Folk**, D.E. Soltis, P.S. Soltis, B. Drew. 2016. Using a supermatrix approach to explore historical biogeography, divergence times and phylogenetics of Saxifragales. Botanical Society of America meeting.

#### MEDIA COVERAGE:

- 2021, *National Science Foundation Research News*:  
[https://www.nsf.gov/discoveries/disc\\_summ.jsp?cntn\\_id=302694&fbclid=IwAR11kv6yUwWl4jDffjexIA3jR-Tha4x3JoVSIwGIUu7J9JhJZV\\_OJNM02o](https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=302694&fbclid=IwAR11kv6yUwWl4jDffjexIA3jR-Tha4x3JoVSIwGIUu7J9JhJZV_OJNM02o), *Phys.org*:  
<https://phys.org/news/2021-04-herbaria-biodiversity-qr-code-sampling-to-sequencing.html>
- 2020, Podcast *In Defense of Plants*:  
<https://www.indefenseofplants.com/podcast/2020/9/13/ep-282-the-rosid-radiation>
- 2019, *Phys.org*: <https://phys.org/news/2019-08-extinct-caribbean-bird-yields-dna.html>,  
*Science Daily*: <https://www.sciencedaily.com/releases/2019/08/190815143212.htm>  
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- 2019, *Science Daily*: <https://www.sciencedaily.com/releases/2019/01/190101094500.htm>,  
*Morning Ag Clips*: <https://www.morningagclips.com/using-big-data-for-planet-sized-plant-questions/>, *Phys.org*: <https://phys.org/news/2019-01-scientists-ripe-big-planet-sized.html>, <https://phys.org/news/2019-06-lineage-evolutionary-playbook-temperate-species.html>
- 2018, *BBC Radio*: <https://www.bbc.co.uk/programmes/w3cswmpk>, *Quartz*:  
<https://qz.com/1258508/botany-twitter-just-helped-discover-a-rare-plant-clinging-to-a-cliff-in-pennsylvania/amp/>, *IFL Science*: <http://www.iflscience.com/plants-and-animals/how-twitter-helped-find-and-possibly-save-an-endangered-plant/>, *Phys.org*:  
<https://phys.org/news/2018-04-science-twitter-uncover-globally-imperiled.html>,  
*PLoS Blogs*: <https://blogs.plos.org/ecology/2018/06/12/science-twitter-and-the-secretly-super-rare-saxifragaceae/>

#### SOFTWARE REPOSITORIES:

<https://github.com/ryanafolk>

#### AWARDS:

- 2017, Travel award, Florida Museum of Natural History (\$1,000)
- 2015, Travel award for the Phylogenomics Symposium and Software School, Ann Arbor, Michigan (\$500)
- 2014, George R. Cooley Award for best contributed paper in plant systematics (“Sky islands’ in the eastern US? – Strong phylogeographic structure in the *Heuchera parviflora* group (Saxifragaceae)”); American Society of Plant Taxonomists, \$500)
- 2010, Susan L. Huntington Distinguished University Fellowship (3 yr; \$64,800)
- 2010, Young Botanist Award (Botanical Society of America)
- 2006 – 2010, Dean’s List (The University of Akron)

FIELDWORK: Western U.S.A. (2011 – 2012, 2014, 2019), eastern U.S.A. (2011 – 2013, 2016, 2019 – 2022), eastern Mexico (2011).

HERBARIA VISITED (*INDEX HERBARIORUM* CODE): The Ohio State University (OS), University of Florida (FLAS), New York Botanical Garden (NY), Missouri Botanical Garden (MO), California Academy of Sciences (CAS), University of Texas Austin (TEX, LL), Botanical Research Institute of Texas (BRIT), Kunming Institute of Botany (KUN), University of Tokyo (TI), Royal Botanic Gardens Kew (K), Royal Botanic Garden Edinburgh (E), Natural History Museum London (BM), Harvard University Herbaria (GH, A), San Diego State University (SDSU), Rancho Santa Anna Botanical Garden (RSA, DS), Eastern Kentucky University (EKY), University of Minnesota (MIN), Instituto de Ecología, A.C. (XAL), University of Alabama (UNA), University of Memphis (MEM), University of North Carolina at Chapel Hill (NCU).

TAXONOMIC CONTRIBUTIONS: **2021:** *Cascadieae* R.A.Folk & D.E.Soltis tr. nov., *Micrantheae* R.A.Folk & D.E.Soltis tr. nov., *Darmereae* R.A.Folk & D.E.Soltis tr. nov., *Boykinieae* R.A.Folk & D.E. Soltis tr. nov., *Spuriomitella* (H.Boissieu) R.A.Folk & Y.Okuyama stat. nov., *Spuriomitella integripetala* (H.Boissieu) R.A.Folk & Y.Okuyama comb. nov., *Asimitellaria* (Wakab.) R.A.Folk & Y.Okuyama stat. nov., *Asimitellaria acerina* (Makino) R.A.Folk & Y.Okuyama comb. nov., *Asimitellaria amamiana* (Y.Okuyama) R.A.Folk & Y.Okuyama comb. nov., *Asimitellaria doiana* (Ohwi) R.A.Folk & Y.Okuyama comb. nov., *Asimitellaria formosana* (Hayata) R.A.Folk & Y.Okuyama comb. nov., *Asimitellaria furusei* (Ohwi) R.A.Folk & Y.Okuyama comb. nov., *Asimitellaria japonica* (Maxim.) R.A.Folk & Y.Okuyama comb. nov., *Asimitellaria kiusiana* (Makino) R.A.Folk & Y.Okuyama comb. nov., *Asimitellaria koshiensis* (Ohwi) R.A.Folk & Y.Okuyama, comb. nov., *Asimitellaria pauciflora* (Rosend.) R.A.Folk & Y.Okuyama comb. nov., *Asimitellaria stylosa* (H.Boissieu) R.A.Folk & Y.Okuyama comb. nov., *Asimitellaria yoshinagae* (Hara) R.A.Folk & Y.Okuyama comb. nov., *Brewerimitella* (Engl.) R.A.Folk & Y.Okuyama, stat. nov., *Brewerimitella breweri* (A.Gray) R.A.Folk & Y.Okuyama, comb. nov., *Brewerimitella ovalis* (Greene) R.A.Folk & Y.Okuyama, comb. nov.; **2015:** *Heuchera soltisii* R. A. Folk & P. J. Alexander sp. nov., *Heuchera inconstans* R. A. Folk sp. nov., *Heuchera glomerulata* Rosend., Butters, & Lakela emend. R. A. Folk, *Heuchera parviflora* var. *saurensis* R.A.Folk, var. nov., *Heuchera missouriensis* Rosend. emend. R.A. Folk, **2014:** *Heuchera mexicana* var. *potosiensis* R. A. Folk var. nov., *Heuchera longipetala* var. *nudicaulis* R.A. Folk var. nov., *Heuchera longipetala* var. *orizabensis* (Hemsl.) R.A. Folk. comb. nov., *Heuchera* subsect. *Rosendabliae* R.A. Folk subsect. nov., *Heuchera rosendabliae* R.A. Folk sp. nov., *Heuchera wellsiae* R.A. Folk sp. nov., **2013:** *Heuchera lakelae* R.A. Folk, sp. nov., as well as various lectotypifications and neotypifications.

EPONYMY: *Heuchera folkii* Engle-Wrye.

#### OUTSIDE COURSES:

2015, 2018 Phylogenomics Symposium and Software School (Ann Arbor, Michigan; Columbus, Ohio)  
2011, Cladistics Workshop by the Willi Hennig Society (INECOL, Xalapa, Mexico)

#### PROFESSIONAL SOCIETIES:

Botanical Society of America; American Society of Plant Taxonomists; Society of Systematic Biologists; International Association of Plant Taxonomy.

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