

# RYAN FOLK

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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 of Natural History	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:

*MSU competitive federal funds \$1,868,197 discounting collaborative non-leads and subawards. MSU total indirect: \$453,485. Student and postdoc competitive funds: \$56,492 (§Mentorship, below).*

2024 – 2029, Sole PI: DEB core (NSF DEB-2337784, \$515,016). MSU indirect: \$116,609.  
 CAREER: Hybridization and radiation: Integrating across phylogenomics, ancestral niche evolution, and pollination biology. Press release:  
<https://www.msstate.edu/newsroom/article/2024/02/msus-folk-receives-prestigious-nsf-career-award-groundbreaking>

2023 – 2027, PI: IntBIO (NSF DEB-2316266, \$1,696,322 in total across four institutions; \$920,400 on MSU proposal [lead institution]). MSU indirect: \$214,394.  
 Collaborative Research: IntBIO: Assessing drivers of the nitrogen-fixing symbiosis at continental scales. Co-PIs Heather Jordan (MSU), Daijiang Li (LSU), Claudia Solís-Lemus (UW-Madison), Robert Guralnick (UF). MSU collaboration details: Folk 90% effort, \$902,690 fiduciary responsibility; Jordan 10% effort, \$17,710 fiduciary responsibility; there are no child accounts. Press release:  
<https://www.msstate.edu/newsroom/article/2023/08/msu-researchers-lead-national-collaboration-16-million-nsf-grant-study>

2020 – 2023, PI: DEB core (NSF DEB-1916632, \$749,003, \$432,781 less subaward). MSU indirect: \$122,482. Origin and impact of nitrogen-fixing symbioses in a major clade of flowering plants. Co-PIs Robert Guralnick, Douglas Soltis, Pamela Soltis (all UF).

- 2020, PI: SRI Seed Grant (Mississippi State University College of Arts & Sciences, \$10,000). Assessing drivers of nitrogen-fixing symbioses at the continental scale. MSU indirect: \$0. Co-PI Heather Jordan (MSU).
- 2019 – , Sr. Pers: DBI (NSF DBI-1930007, \$880,172, \$0 to MSU). MSU indirect: \$0. CIBR: Collaborative Research: Integrating data communities with BiotaPhy: A computational platform for data-intensive biodiversity research and training. PIs Jim Beach (University of Kansas), Douglas Soltis (UF), Pamela Soltis (UF), Jose Fortes (UF), Stephen Smith (University of Michigan).
- Pre-MSU*
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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: <http://blogs.ifas.ufl.edu/news/2017/10/02/uf-researchers-awarded-7m-grant-improve-plants-get-nitrogen-reduce-pollution/>. Project website: <http://nitfix.org/>.
- 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)

PEER-REVIEWED PUBLICATIONS:

*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; 2024 impact factor in square brackets; † graduate trainee, ‡ postdoc trainee, § undergraduate trainee, \* equal authorship, ¶ corresponding author.*

PAPERS ACCEPTED:

73. **Dahal, S.†**, **C.M. Siniscalchi‡**, and **R.A. Folk**. Accepted. A phylogenomic investigation into the biogeography of the Mexico–eastern U.S disjunction in *Symphyotrichum* (Asteraceae). *American Journal of Botany*.
72. Liu, S.-Y.; Y.-Y. Yang, Q. Tian, Z.-Y. Yang, H.R. Kates, S.-F. Li, P.J. Valdes, A. Farnsworth, H.R. Kates, **C.M. Siniscalchi‡**, R.P. Guralnick, D.E. Soltis, P.S. Soltis, G.W. Stull¶, **R.A. Folk¶**, T.-S. Yi¶. Accepted. Phylogenomic analyses reveal widespread gene flow during the early radiation of oaks and relatives (Fagaceae: Quercoideae). *Journal of Integrative Plant Biology*. [9.3] <https://doi.org/10.1111/jipb.13773>

## PAPERS PUBLISHED:

71. Gu, W., T. Zhang, S.-Y. Liu, Q. Tian, C.-X. Yang, Q. Lu, X.-G. Fu, H.R. Kates, G.W. Stull, P.S. Soltis, D.E. Soltis, **R.A. Folk**, R.P. Guralnick, D.-Z. Li¶, T.-S. Yi¶. 2024. Phylogenomics, reticulation, and biogeographical history of Elaeagnaceae. *Plant Diversity* 46: 683–697. <https://doi.org/10.1016/j.pld.2024.07.001>
70. **Pantinople, D.†¶**, **R. Conner§**, **S. Dauber§**, **K. Broussard§**, **N.J. Engle-Wrye†**, H.R. Jordan, **C.M. Siniscalchi‡**, and **R.A. Folk**. 2024. Continental sampling reveals core bacterial and environmentally-driven fungal leaf endophytes in *Heuchera*. *American Journal of Botany* 111: e16428. <https://doi.org/10.1002/ajb2.16428>
69. **Folk, R.A.¶**, A.A. Maassoumi, **C.M. Siniscalchi‡**, H.R. Kates, D.E. Soltis, P.S. Soltis, M.B. Belitz, and R.P. Guralnick. 2024. Phylogenetic diversity and regionalization in the temperate arid zone. *Journal of Systematics and Evolution* 62: 1201–1217. <https://doi.org/10.1111/jse.13077>
68. Moreno-García¶, P., Flavia Montaña-Centellas, Y. Liu, E.Y. Reyes-Mendez, R.R. Jha, R.P. Guralnick, **R.A. Folk** [...; 40 authors in total] D. Li. 2024. Long-term nitrogen deposition reduces the diversity of nitrogen-fixing plants. *Science Advances* 10: eadp7953. <https://doi.org/10.1126/sciadv.adp7953>
67. Doby, J.R.¶, **C.M. Siniscalchi‡**, M. Pajuelo, J. Krigbaum, D.E. Soltis, R.P. Guralnick\*¶, and **R.A. Folk\*¶**. 2024. Elemental and isotopic analysis of leaves predicts nitrogen-fixing phenotypes. *Scientific Reports* 14: 20065. <https://doi.org/10.1038/s41598-024-70412-8>
66. **Folk, R.A.¶**, **C.M. Siniscalchi‡**, J. Doby, H.R. Kates, S.R. Manchester, P.S. Soltis, D.E. Soltis, R.P. Guralnick, and M. Belitz. 2024. Spatial phylogenetics of Fagales: Investigating the history of temperate forests. *Journal of Biogeography* 51: 1518–1532. <https://doi.org/10.1111/jbi.14840>
65. 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¶**. 2024. Two shifts in evolutionary lability underlie independent gains and losses of root-nodule symbiosis in a single clade of plants. *Nature Communications* 15: 4262 <https://doi.org/10.1038/s41467-024-48036-3>
64. **Pantinople D.J.†¶**, **N.J. Engle-Wrye†**, and **R.A. Folk**. 2024. *Heuchera tuckasegeensis* sp. nov. (Saxifragaceae), a new species from western North Carolina. *Systematic Botany* 49: 37–47. <https://doi.org/10.1600/036364424X17110456120677>
63. Jiang, Y.-Z., J.-B. Yang, **R.A. Folk**, J.-L. Zhao, J. Liu, Z.-S. He, S.-X. Yang¶, C.-L. Xiang¶, and X.-Q. Yu¶. 2024. Species delimitation of tea plants (*Camellia* sect. *Thea*) based on next generation super-barcodes. *BMC Plant Biology* 24: 181. <https://doi.org/10.1186/s12870-024-04882-3>

62. Folk, R.A.¶, J.L.M. Charboneau, M. Belitz, T. Singh§, H.R. Kates, D.E. Soltis, P.S. Soltis, R.P. Guralnick, and C.M. Siniscalchi‡. 2024. Anatomy of a mega-radiation: Biogeography and niche evolution in *Astragalus*. *American Journal of Botany* 111: e16299. <https://doi.org/10.1002/ajb2.16299>
61. Li, W., R. Wang, M.-F. Liu, R.A. Folk¶, B. Xue¶, R.M.K. Saunders¶. 2024. Climatic and biogeographic processes underlying the diversification of the pantropical and early divergent angiosperm family Annonaceae. *Frontiers in Plant Science* 15: 1287171. <https://doi.org/10.3389/fpls.2024.1287171>
60. Xu, Z., R.A. Folk, M.A. Gitzendanner, G.-W. Hu, P.S. Soltis¶, D.E. Soltis¶, and Q.-F. Wang¶. 2024. Re-examining the placement of *Hydrostachys* using a large-scale phylogenetic approach. *Taxon* 73: 237–248. <http://doi.org/10.1002/tax.13122>
59. Folk, R.A.¶, R.P. Guralnick, and R.T. LaFrance. 2024. FloraTraiter: Automated parsing of traits from descriptive biodiversity literature. *Applications in Plant Sciences* 12: e11563. <https://doi.org/10.1002/aps3.11563>
58. 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¶. 2024. Rampant upslope biome shifting during late-Cenozoic climate cooling in a diverse alpine plant radiation. *Nature Communications* 15: 1100. <https://doi.org/10.1038/s41467-024-45289-w>
57. Tian, Q., G. Stull; J. Kellermann, D. Medan, F. Nge, L. Shuiyin, H.R. Kates, D.E. Soltis, P.S. Soltis, R.P. Guralnick, R.A. Folk, R. Onstein¶, and T.-S. Yi¶. 2024. Rapid in-situ diversification rates in Rhamnaceae explain the parallel evolution of high diversity in temperate biomes from global to local scales. *New Phytologist* 241: 1851–1865. <https://doi.org/10.1111/nph.19504>
56. Dahal, S.¶, C.M. Siniscalchi‡, and R.A. Folk. 2023. Species delimitation in the *Symphytotrichum subulatum* group (Asteraceae) reveals a new species in central Mexico. *Systematic Botany* 48: 595–607. <https://doi.org/10.1600/036364423X17000842213579>
55. Wang, C., Z.-Y. Yap; P. Wan, K. Chen, R.A. Folk, D.Z. Damrel, W. Barger, A Diamond, C. Horn, G.P. Landry, T. Samarakoon, S. Harvey, D.R. Morgan, Y. Qiu¶, and P. Li¶. 2023. Molecular phylogeography and historical demography of a widespread herbaceous species from eastern North America, *Podophyllum peltatum*. *American Journal of Botany* 110: e16254. <https://doi.org/10.1002/ajb2.16254>
54. Zhang, Q., R.A. Folk, Z. Mo, H. Ye, Z. Zhang, H. Peng, J. Zhao¶, S. Yang¶, X. Yu¶. 2023. Phylotranscriptomic analyses reveal deep gene tree discordance in *Camellia* (Theaceae). *Molecular Phylogenetics and Evolution* 188: 107912. <https://doi.org/10.1016/j.ympev.2023.107912>
53. Yang, C.-X., S.-Y. Liu N.J.C. Zerega, G.W. Stull, E.M. Gardner, Q. Tian, W. Gu, Q. Lu, R.A. Folk, H.R. Kates, R.P. Guralnick, D.E. Soltis, P.S. Soltis, Y.-H. Wang, and T. Yi¶. 2023. Phylogeny and biogeography of *Morus* (Moraceae). *Agronomy* 13: 2021. <https://doi.org/10.3390/agronomy13082021>
52. Liu, L.\*, M. Chen\*, R.A. Folk\*, M. Wang, T. Zhao, F. Shang, D.E. Soltis, and P. Li¶. 2023. Phylogenomic and syntenic data demonstrate complex evolutionary processes in early radiation of the rosids. *Molecular Ecology Resources* 23: 1673–1688. <https://doi.org/10.1111/1755-0998.13833>

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. 2023. Identifying climatic drivers of hybridization with a new ancestral niche reconstruction method. *Systematic Biology* 72: 856–873. <https://doi.org/10.1093/sysbio/syad018>
50. Siniscalchi C.M.‡, J.R. Ackerfield¶, and R.A. Folk. 2023. Diversification and biogeography of North American thistles (*Cirsium*: Carduoideae: Compositae): Drivers of a rapid continent-wide radiation. *International Journal of Plant Sciences* 184: 322–341. (Invited special issue: Tribute to Vicki A. Funk). <https://doi.org/10.1086/724310>
49. Naranjo A.A.¶, R.A. Folk, M.A. Gitzendanner, D.E. Soltis, P.S. Soltis. 2023. Ancestral area and divergence time analyses reveal Pleistocene-influenced biogeographic evolution in a clade of narrow coastal plain endemic plants. *Journal of Biogeography* 50: 393–405. <https://doi.org/10.1111/jbi.14541>
48. Fu, X.-G.; 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¶. 2023. Phylogenomic analysis of the hemp family (Cannabaceae) reveals deep cyto-nuclear discordance and provides new insights into generic relationships. *Journal of Systematics and Evolution* 61: 806–826. <https://doi.org/10.1111/jse.12920>
47. Yu, X.-Q.¶, 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. <https://doi.org/10.1111/1755-0998.13683>
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. <https://doi.org/10.1111/geb.13535>
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. <https://doi.org/10.1111/nph.18006>
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. <https://doi.org/10.1093/aob/mcac007>
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, Y. 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. <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. <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<sup>¶</sup>, H. Liu<sup>¶</sup>. 2021. *Chloranthus* genome provides insights into the early diversification of angiosperms. *Nature Communications* 12: 6930. <https://doi.org/10.1038/s41467-021-26922-4>
40. Kates, H.R.<sup>¶</sup>, J.R. Doby, **C.M. Siniscalchi**<sup>‡</sup>, R. Lafrance, D.E. Soltis, P.S. Soltis, R.P. Guralnick<sup>¶</sup>, and **R.A. Folk**<sup>¶</sup>. 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. <https://doi.org/10.3389/fpls.2021.669064>
39. **Folk, R.A.**<sup>¶</sup>, **C.M. Siniscalchi**<sup>‡</sup>. 2021. Biodiversity at the global scale: The synthesis continues. Invited review in *American Journal of Botany* 108: 912-924. <https://doi.org/10.1002/ajb2.1694>
38. **Folk, R.A.**<sup>\*</sup> <sup>¶</sup>, H.R. Kates<sup>\*¶</sup>, R. LaFrance, D.E. Soltis, P.S. Soltis, and R.P. Guralnick<sup>¶</sup>. 2021. High-throughput methods for efficiently building massive phylogenies from natural history collections. *Applications in Plant Sciences* 9: e11410. <https://doi.org/10.1002/aps3.11410> (included in 10th anniversary virtual issue of the 25 most important and influential *APPS* papers)
37. **Folk, R.A.**<sup>¶</sup>, R.L. Stubbs, **N.J. Engle-Wrye**<sup>†</sup>, D.E. Soltis, and Y. Okuyama<sup>¶</sup>. 2021. Biogeography and habitat evolution of Saxifragaceae, with a revision of generic limits and a new tribal system. *Taxon* 70: 263–285. <https://doi.org/10.1002/tax.12450>
36. M.B. de Souza Cortez<sup>¶</sup>, **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. <https://doi.org/10.1093/biolinnean/blaa174> (Part of a special issue, *OCBIL theory: A new science for old ecosystems*.)
35. **Folk, R.A.**<sup>¶</sup>, **C.M. Siniscalchi**<sup>‡</sup>, and D.E. Soltis. 2020. Angiosperms at the edge: Extremity, diversity and phylogeny. Invited review in *Plant, Cell & Environment* 43: 2871–2893. <https://doi.org/10.1111/pce.13887>
34. Stubbs, R.L.<sup>¶</sup>, **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. <https://doi.org/10.1600/036364420X16033963649282>
33. **Folk, R.A.**<sup>\*¶</sup>, N. Sewnath<sup>\*</sup>, 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. <https://doi.org/10.1186/s12870-020-02533-x>
32. Sun, M.<sup>\*¶</sup>, **R.A. Folk**<sup>\*¶</sup>, M.A. Gitzendanner, P.S. Soltis, Z. Chen, D.E. Soltis, and R.P. Guralnick<sup>¶</sup>. 2020. Recent, accelerated diversification in rosids occurred outside the tropics. *Nature Communications* 11: 3333. <https://doi.org/10.1038/s41467-020-17116-5>
31. Liu, L.-X., Y.-X. Du, **R.A. Folk**, S.-Y. Wang, D.E. Soltis, F.-D. Shang<sup>¶</sup>, and P. Li<sup>¶</sup>. 2020. Plastome evolution in Saxifragaceae and multiple plastid capture events involving *Heuchera* and *Tiarella*. *Frontiers in Plant Sciences* 11: 361. <https://doi.org/10.3389/fpls.2020.00361>
30. Sun, M.<sup>\*</sup>, **R.A. Folk**<sup>\*</sup>, M.A. Gitzendanner, P.S. Soltis, Z. Chen, D.E. Soltis<sup>¶</sup>, and R.P. Guralnick<sup>¶</sup>. 2020. Estimating rates and patterns of diversification with incomplete sampling: A case study in the rosids. *American Journal of Botany* 107: 895-909. <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. <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. <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. <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. <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. <https://doi.org/10.1002/aps3.11315> (included in the 10th anniversary virtual issue of the 25 most important and influential *APPS* papers)
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. <https://doi.org/10.1016/j.ympev.2019.106576>
- Pre-MSU
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23. Yang, R., **R.A. Folk**, N. Zhang, X. Gong¶. 2019. Homoploid hybridization of plants in the Hengduan mountains region. Review in *Ecology and Evolution* 9: 8399-8410. <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. <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. <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 in *Proceedings of the Royal Society B* 286: 20190099. <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 perspective in *Nature Plants* 5: 11–13. <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. <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. <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. <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. <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. <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. <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 in *American Journal of Botany* 105: 433–444. <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 in *American Journal of Botany* 105: 363–374. <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 ducliformis* and *L. paradoxa* (Asteraceae). *PeerJ* 5: e3884. <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. <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. Perspective in *Systematic Biology* 66(4): 644–656. <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. <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. <https://doi.org/10.1600/036364415X688853>
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. <https://doi.org/10.3732/apps.1500039>
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. <https://doi.org/10.12705/642.3>



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. <https://doi.org/10.3732/ajb.1400290>
2. Folk, R.A. and J.V. Freudenstein. 2014. Revision of *Heuchera* section *Rhodobeuchera* subsections *Hemsleyanae* and *Rosendahliae* subsect. nova (Saxifragaceae). *Systematic Botany* 39: 850–874. <https://doi.org/10.1600/036364414X682300>
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. <https://doi.org/10.11646/phytotaxa.124.1.4>

MANUSCRIPTS SUBMITTED:

74. Siniscalchi, C.M.‡¶, H.R. Kates, P.S. Soltis, D.E. Soltis, R.P. Guralnick, and R.A. Folk. Resubmission in preparation. Testing the evolutionary drivers of nitrogen-fixing symbioses in challenging soil environments. Folk lab empirical paper. Preprint available at: <https://doi.org/10.1101/2022.09.27.509719>
75. Siniscalchi, C.M.‡¶, J. Correa-Narvaez, H.R. Kates, D.E. Soltis, P.S. Soltis, R.P. Guralnick, S.R. Manchester, and R.A. Folk. Resubmission in preparation. Fagalean phylogeny in a nutshell: Chronicling the diversification history of Fagales. Folk lab empirical paper. Preprint available at: <https://doi.org/10.1101/2023.03.06.531381>
76. Chen, H.-F. R.A. Folk, Y.-L. Wang, W.-J. Wang, G.-J. Shao, M.-Y. Huang, Y. Xiang-Qin, Q. Li, Z. Li, and J.-L. Zhao. Resubmission in preparation. Extensive introgressions failed to erode species boundaries among multiple sympatric related species. Collaborative empirical paper.
77. Folk, R.A.¶, M. Belitz, C.M. Siniscalchi‡, H.R. Kates, P.S. Soltis, D.E. Soltis, R.P. Guralnick, and L.M. Borges. Resubmission in preparation. Phylogenetic diversity and regionalization of root nodule symbiosis. Folk lab empirical paper. Preprint available at: <https://doi.org/10.1101/2023.09.08.556918>
78. Siniscalchi, C.M.‡¶, J. Bonfim e Cândido, E.R. Moore-Pollard, J.L. Gomez, S. Dahal, J.R. Pirani, R.A. Folk, J.R. Mandel, and B. Loeuille. In revision at *Taxon*. Phylogenomics reveal widespread ancient hybridization in the evolution of Lychnophorinae (Vernonieae, Asteraceae). Collaborative empirical paper.
79. Zhang, Z., M. Wang, Z. Yang, H.P. Comes, X. Zhong, R.A. Folk, Y. Song, D.A. York, K.M. Cameron, P. Li. In revision. Incomplete lineage sorting and introgression among genera and species of tribe Tulipeae: Insights from phylogenomics. Preprint available at: <https://doi.org/10.21203/rs.3.rs-5010010/v1>
80. García, N. T. Fuentes-Castillo, M.J. Román, R.A. Folk. Submitted. Integration of genomic phylogeography, morphological variation and climatic niche reveal speciation mechanisms across southern Andean lilies (*Phycella*, Hippeastreae, Amaryllidaceae). Preprint available at: <https://doi.org/10.22541/au.173314648.84434697/v1>
81. C. Finegan, H.R. Kates, R.P. Guralnick, P.S. Soltis, M.F. Resende, J.-M. Ané, M. Kirst, R.A. Folk, D.E. Soltis. In revision. Convergent evolution of NFP-facilitated root nodule symbiosis.

STUDENT PEER-REVIEWED PAPERS:

- N.J. Engle-Wrye. 2023. Morphometrics and phylogenomics reveal a new species of *Heuchera* (Saxifragaceae) in northeastern México. *Systematic Botany* 48: 220-230.

## UNPUBLISHED 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, NEWSLETTER CONTRIBUTIONS, AND OTHER NON-PEER-REVIEWED CONTRIBUTIONS:

- R.A. Folk**. 2023. Phylogenomics and origins of nodulation [abstract only]. *The Beanbag* 70: 17 (worldwide newsletter in legume science).
- R.A. Folk**. 2023. A phylogenomic survey of *Astragalus* [abstract only]. *The Beanbag* 70: 18.
- Kates, H.R., **R.A. Folk**, R.P. Guralnick, D.S. Soltis, and P.S. Soltis. 2020 A new resource for legume diversity and systematics: The Nit-Fix project. *The Beanbag* 67: 28-29.
- 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. This series has been subject to long publication delays.]

*Pre-MSU*

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- 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:

- MSU, Biogeography (graduate; BIO 8113, offered biennially): Spring 2021, Fall 2023
- MSU, Plant Biology (undergraduate; BIO 2113, offered annually): Fall 2020, Fall 2021, Spring 2023, Fall 2024.
- MSU, Taxonomy of Spermatophytes (undergraduate/graduate; BIO 4203/6203, offered biennially with no-credit lab): Spring 2020, Fall 2022, Spring 2024. 2022 offering co-taught with Carolina Siniscalchi (below)

*Pre-MSU*

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

## MENTORSHIP:

*Postdoctoral scholars:*

- Carolina Siniscalchi (2020 – 2023; now Assistant Professor/Data Science Coordinator, MSU University Libraries)

*Graduate students:*

- John Kees (Ph.D., 2024 –)
- Shamim Ahmed (Ph.D., 2024 –)

Pranoti Giram (Ph.D., 2024 –)  
 Dexcem Pantinople (Ph.D., 2022 –)  
 Sushil Dahal (Ph.D., 2021 –)  
 Nicholas Engle-Wrye (Ph.D., 2019 –)

*Undergraduates (only MSU listed, 12 individuals before this period):*

Natalie Triplett (2025 –)  
 Essence Baker (2025 –)  
 Katherine Quinn (2024 –)  
 Marley Hurt (2024 –)  
 Chassity “Chase” Fry (2024 –)  
 Gabriel McLaughlin (2024 –)  
 Hawinet Adunga (2024 –)  
 Tyrikus Hayes (2022; now a medical student at Ole Miss)  
 Sydney Beachler (2021 – 2022)  
 Tajinder Singh (2021 – 2024; now on internships at UW Madison, HudsonAlpha, and the Danforth Center)  
 Sofia Nail (2021 – 2023; now a lab tech at Biolife Plasma Lab)  
 Reagan Conner (2020 – 2022; recently graduated from University of Arizona)  
 Stephanie Dauber (2019 – 2023; now Post-Bachelor's Research Student at Los Alamos National Laboratories)  
 Sushil Dahal (2021; now a PhD student in my lab)  
 Zoe Fowler (2021 summer; now a PhD student at Georgia Tech)  
 Briana Johnston (2020 – 2021; recently completed an MS University of Arkansas)  
 Peyton Dunn (2020 – 2021; now a mechanical engineer at AMERICAN Cast Iron Pipe Company)  
 Kelli Broussard (2020 – 2021; now at LSU in medical school)  
 Paige Marrota (2021; now a nursing student at the University of Tennessee Health Science Center)  
 Matt Mattox (2019 – 2020; now QC Scientist at Thermo Fisher Scientific)

*Visiting scientists:*

Natalia Tkach (May – July 2024; wissenschaftliche Mitarbeiter [“research fellow”]; Martin Luther University Halle-Wittenberg, Halle, Germany)  
 Leonardo Borges (May 2024; professor; Universidade Federal de São Carlos, São Carlos, Brazil)  
 Thiago Cobra e Monteiro (May 2024; graduate student; Universidade Estadual Paulista [UNESP], São Paulo, Brazil)  
 Tanisha Williams (postdoc, April 2022, Bucknell University, Lewisburg, PA)  
 Joshua Doby (graduate student, 2020, University of Florida, Gainesville, FL)

*Awards and grants to trainees [non-competitive funds omitted]:*

*J. Kees* (graduate student): \$20,000 (KGCF Graduate Scholarship), \$2,500 (MSU Biological Sciences GRAG stipend enhancement).

*P. Giram* (graduate student): \$2,500 (MSU Biological Sciences GRAG stipend enhancement), \$500 (MSU Biological Sciences BFF Research Award).

*D. Pantinople* (graduate student): \$3,000 (Society of Systematic Biologists Graduate Student Research Award), \$2,000 (MSU Zernickow Fund 2024), \$1,500 (American Society of Plant Taxonomists BIPOC Excellence in Systematic Botany grant 2022), \$1000 (Botany 2023 SISRIS workshop [Supporting Inclusive and Sustainable Research Infrastructure for Systematics]), \$600 (Graduate Student Travel Support Grant, MSU College of Arts and Sciences), \$500 and \$500 (MSU Biological Sciences BFF Research Award), \$500 and \$500 (MSU Biological Sciences BFF Travel Award).

*S. Dabal* (graduate student): \$1,200 (American Society of Plant Taxonomists Graduate Student Research Award 2024), \$500 (Botany 2023 SISRIS workshop [Supporting Inclusive and Sustainable Research Infrastructure for Systematics]), \$500 and \$500 (MSU Biological Sciences BFF Research Awards), \$500 (MSU Biological Sciences BFF Travel Award), \$246 (ASB Graduate Student Support Award).

*N.J. Engle-Wrye* (graduate student): \$5,000 (MSU Research Opportunity Fund 2021), \$3,000 (Society of Systematic Biologists Graduate Student Research Award 2021), \$2,000 (MSU Zernickow Fund 2021), \$1,200 (American Society of Plant Taxonomists Graduate Student Research Award 2022), \$1,100 (IAPT Graduate Student Award 2021), \$500 (MSU Biological Sciences BFF Research Award), \$500 and \$450 (MSU Biological Sciences BFF Travel Award), \$246 (ASB Graduate Student Support Award 2022).

*T. Singh* (undergraduate student): \$3,000 (PLANTS [Preparing Leaders and Nurturing Tomorrow's Scientists] Scholar program), \$2,000 and \$1,800 and \$1,650 (MSU Shackouls Honor College: Honors Research Fellowship 2022 and 2023 [this is a research grant for undergraduate projects]).

*C. Simiscalchi* (postdoc): \$500 (MSU Biological Sciences BFF Travel Award).

*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, specimen exchange program, a 2000-specimen gift from Crosby Arboretum, ~13.7% expansion, database move to CyVerse, filing update to APGIV sequence. More information may be sought at the herbarium's GBIF page: <https://www.gbif.org/dataset/456d9e9d-43e4-47f6-acba-6a66cb2a7f05>

2020 –, Associate Editor, *Systematic Biology* (2024 impact factor 6.1)

#### *Dissertation/Masters committee memberships:*

Aviral Neupane (MSU PhD, 2024 –)

Audrey Bales (MSU PhD, 2024 –)

Ashlyn Silliman (MSU PhD, 2024 –)

Jenny Patalinghug (MSU PhD, 2024 –)

Ramtin Vamenani (MSU PhD, 2024 –)  
 Felicity Kleitz-Singleton (MSU PhD, 2023 –)  
 Jacob Hockensmith (MSU Master's, 2022 – 2024)  
 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 MSU committee memberships:*

2023 – 2024, 3-position search committee (Biological Sciences)  
 2021 – 2022, Organismal Biology search committee (Biological Sciences)  
 2019 –, Museums and Galleries Committee (campus-wide)  
 2019 –, Greenhouse Committee (Biological Sciences)

*External committee memberships:*

2023 – 2026, Member-at-Large, American Society of Plant Taxonomists Council  
 2023 – 2026, Publications Committee, American Society of Plant Taxonomists  
 2020 – 2023 [2021-2022 chair], Membership Committee, American Society of Plant Taxonomists  
 2018 – 2019, Awards and Honors Committee, American Society of Plant Taxonomists

*Peer reviews (~10/yr) for: Nature Plants, PNAS, Trends in Ecology and Evolution, Current Biology [presubmission inquiry], Systematic Biology, Molecular Biology and Evolution, Ecology Letters, New Phytologist, Evolution, Proceedings of the Royal Society B, American Naturalist, Molecular Ecology, Ecological Monographs, Genome Biology and Evolution, Journal of Biogeography, Scientific Reports, 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).  
 2020 – 2023, NSF Panelist four times for PCE [×2], BoCP [×1], SBS [×1] (all Division of Environmental Biology).  
 2016 – 2022, NSF ad hoc reviewer for the following DEB programs: PCE (×3); IntBIO (×1).  
 2017 – 2022, American Society of Plant Taxonomists (graduate student awards, ×4).

*Public outreach:*

2023 – 2024, Annual Noxubee Wildlife Refuge Bioblitz (public tour leader 5/18/24, participant other years)  
 2020 – 2024, Table for Mississippi State event “Night at the Museum” (attendance ~1,000)



- 2024, Second showing of multimedia outreach video “TreeTender II” on the relevance of the Tree of Life for conservation at the Night at the Museum event on Mississippi State campus (Starkville, MS).
- 2024, Official debut of multimedia outreach video “TreeTender II” at the Florida Museum (Gainesville, FL; 1/25/24).
- 2023, Draft debut of multimedia outreach video “TreeTender II” at Dragon Con (cosplay conference in Atlanta, GA; 9/1/23).
- 2023, Talk delivered to the Botanical Society of Washington (online; 11/7/23): “Nitrogen-fixing symbioses in a challenging world: Insights from large-scale ecological modeling”
- 2021 – 2023, Plant survey project for the Mississippi Band of Choctaw Indians (confidential cultural site in Winston Co., MS).
- 2021, 2023, Semester-long herbarium displays at Starkville Partnership School.
- 2019, Talk delivered to the Mississippi Native Plant Society (Mississippi Museum of Natural History, Jackson, MS; 9/7/19): “Hidden coral bells in the southeast”

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- 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 for humanity; 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 – 2024, Lead organizer for Botanical Society of America workshop: “Biodiversity data wrangling: Linking large phylogenies with species traits and ecologies” (three years in the running: on-site at Anchorage, AK [7/25/2024]; Boise, ID [7/23/2024]; and Grand Rapids, MI [6/26/2024])
- 2023, Co-panelist for “Driving grant funding through the diversity & inclusion imperative,” campus-wide workshop held by MSU ADI (10/24/2023)
- 2022, Hosted 7<sup>th</sup> installment of the Biotaphy Webinar series on “Species Distribution Modeling 2,” <https://www.idigbio.org/content/biotaphy-2022-webinar-series> (online; 11/2/2022)
- 2020, Lead organizer for Botanical Society of America colloquium: “Biodiversity synthesis: Linking large phylogenies with species traits and ecologies” (online; 7/28/2020)

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- 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” (on-site at each year’s Botany meeting location)
- 2018, Lecturer for iDigBio ADBC (Advancing Digitization of Biodiversity Collections) Summit: “BiotaPhy web platform” (Gainesville, FL)

*Invited workshops attended and public panelist roles:*

- 2021, NSF mini-ideas lab – “Revitalizing monography” (online; 3/3/2021; see Gorneau et al. 2022 in Publications above)
- 2020, Panelist for virtual Academic Career Panel, Plant Science Council at the University of Florida (online; 5/29/2020)
- 2020, Panelist for Zoom showing of *TreeTender* (online; 4/22/2020; <https://www.treetender.org/>).
- 2020, NSF mini-ideas lab – “The Future of Systematics” (Gainesville FL ; 1/6/2020)
- 2020, Society of Systematic Biologists discussion panelist – “Integrating phylogenies and ecological data layers” (1/4/2020; Gainesville, FL)

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- 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:*

- 2024, co-organizer, special issue of *Systematic Botany* on “The Ever-Expanding Role of the Modern Herbarium”
- 2018, 2022 – 2023, presentation judge, Cooley Award (American Society of Plant Taxonomists)
- 2023, session chair, Biogeography (Botanical Society of America meetings)
- 2017 – 2018, session chair, Macroevolution (Botanical Society of America meetings)

SCIENCE COMMUNICATION:

*Symbology: reverse order of event; † graduate trainee, ‡ postdoc trainee, § undergraduate trainee, ¶ presenting author (multiple means tag-team). In person unless marked otherwise.*

*Keynote speaker:*

- Folk, R.A.¶** 8/11/2023. 8th International Legume Conference (“8ILC”), symposium “Novelties in Legume-Rhizobia Symbiosis.” Pirenópolis, Brazil.

*Invited departmental seminars:*

- Folk, R.A.¶** 10/31/2024. Hybridization and radiation: Integrating across phylogenomics, ancestral niche evolution, and pollination biology. *Miami University* (Department of Biology; Miami, OH).
- Folk, R.A.¶** 10/15/2024. Nitrogen-fixing symbiosis in a challenging world: Insights from large-scale modeling. *University of Minnesota* (Department of Plant and Microbial Biology, Minneapolis/St. Paul, MN).

- Folk, R.A.**¶ 7/22/2024. Nitrogen-fixing symbiosis in a challenging world: Insights from large-scale modeling. *Universidad Politécnica de Madrid* (Centro de Biotecnología y Genómica de Plantas UPM; Madrid, Spain).
- Folk, R.A.**¶ 3/28/2024. Nitrogen-fixing symbiosis in a challenging world: Insights from large-scale modeling. *University of Arkansas* (Department of Biological Sciences; Fayetteville, AR).
- Folk, R.A.**¶ 3/5/2024. Nitrogen-fixing symbiosis in a challenging world: Insights from large-scale modeling. *HudsonAlpha Institute for Biotechnology* (Huntsville, AL).
- Folk, R.A.**¶ 12/4/2023. Nitrogen-fixing symbiosis in a challenging world: Insights from large-scale modeling. *University of Texas at Austin* (Department of Integrative Biology; Austin, TX).
- Folk, R.A.**¶ 5/6/2022 [remote]. Nitrogen-fixing symbioses: Insights from a megaphylogenetic approach. *University of Colorado Denver* (Department of Integrative Biology; online).
- Folk, R.A.**¶ 10/4/2021. Nitrogen-fixing symbioses: Insights from a megaphylogenetic approach. *Louisiana State University* (Department of Biological Sciences; Baton Rouge, LA).
- Folk, R.A.**¶ 2/22/2021 [remote]. 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; Starkville, MS).
- Folk, R.A.**¶ 9/7/2020 [remote]. Bursts of evolution outside the tropics: The temperate plant radiation Saxifragales. *Otterbein University* (Department of Biology & Earth Science; online).
- Folk, R.A.**¶ 9/9/2019. Macroevolutionary approaches to habitat evolution in flowering plants. *Mississippi State University* (Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology; Starkville, MS).

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*Pre-MSU*

- Folk, R.A.**¶ 2019. Macroevolutionary approaches to niche evolution in flowering plants. *Kunming Institute of Botany* (Kunming, Yunnan, China).
- Folk, R.A.**¶ 2019. Macroevolutionary approaches to niche evolution in flowering plants. *University of Hawai'i at Mānoa* (Honolulu, HI).
- Folk, R.A.**¶ 2019. Macroevolutionary approaches to niche evolution in flowering plants. *Mississippi State University* (Department of Biological Sciences; Starkville, MS).
- Folk, R.A.**¶ 2019. Macroevolutionary approaches to niche evolution in flowering plants. *Marshall University* (Huntington, WV).
- Folk, R.A.**¶ 2018. Large-scale approaches to understanding niche evolution and symbiosis in the flowering plants. *University of Florida* (Gainesville, FL).
- Folk, R.A.**¶ 2017. Large-scale approaches to understanding niche evolution and symbiosis in the flowering plants. *San Diego State University* (San Diego, CA).
- 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* (New York, NY).
- Folk, R.A.**¶ 2017. Hybridization and diversification: Extreme phylogenomic discord in *Heuchera*. *Kunming Institute of Botany* (Kunmin, Yunnan, China).
- Folk, R.A.**¶ 2017. Hybridization and diversification: Extreme phylogenomic discord in *Heuchera*. School of Integrative Plant Science, *Cornell University* (Ithaca, NY).
- Folk, R.A.**¶ 2017. Hybridization and diversification: Extreme phylogenomic discord in *Heuchera*. Department of Biology, *San Francisco State University* (San Francisco, CA).
- Folk, R.A.**¶ 2017. Hybridization and diversification: Extreme phylogenomic discord in *Heuchera*. Department of Biological Sciences, *University of Alabama* (Tuscaloosa, AL).

- Folk, R.A.**¶ 2016. Hybridization and diversification: Extreme phylogenomic discord in *Heuchera*. Department of Biological Sciences, *Texas Tech University* (Lubbock, TX).
- 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* (Edinburgh, United Kingdom).
- Folk, R.A.**¶ 2015. Phylogenomics of *Heuchera*—Organellar capture and trait evolution. Florida Museum of Natural History, *University of Florida* (Gainesville, FL).
- 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* (Columbus, OH).

*Invited symposium presentations:*

- Dahal, S.**‡¶, **C.M. Siniscalchi**‡, **R.A. Folk**. 7/26/2024. Biogeography of the Mexico-eastern U.S. disjunction in *Symphytotrichum*. XX International Botanical Congress (IBC 2024) symposium: Synanthology Reloaded: Recent Advances and the Future of Evolutionary Studies in Compositae. (Madrid, Spain).
- Engle-Wrye, N.J.**‡¶ and **R.A. Folk**. 7/25/2024. Investigating conserved floral scent profiles acting as a driver of hybridization in *Heuchera*. XX International Botanical Congress (IBC 2024) symposium: Polyploidy and Homoploid Hybridization as Evolutionary Drivers in Mediterranean Plants. (Madrid, Spain).
- 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. 7/26/2024. Identifying climatic drivers of hybridization with a new ancestral niche reconstruction method. XX International Botanical Congress (IBC 2024) symposium: Natural Hybridization and Species Conservation. (Madrid, Spain).
- Folk, R.A.**¶, M. Belitz, **C.M. Siniscalchi**‡, H.R. Kates, P.S. Soltis, D.E. Soltis, R.P. Guralnick, and L.M. Borges. 7/27/2024. Phylogenetic diversity and regionalization of root nodule symbiosis. XX International Botanical Congress (IBC 2024) symposium: Integrating Ecology into Macro and Microevolutionary Studies: Problems and Opportunities in Current and Past Data Sources. (Madrid, Spain).
- García, N.¶, T. Fuentes, **R.A. Folk**. 7/22/2024. Integration of genomic phylogeography, morphology and climatic niche to elucidate speciation within *Phycella* (Amaryllidaceae). XX International Botanical Congress (IBC 2024) symposium: Geophytic monocots: Taxonomy and the evolution of succulence. (Madrid, Spain).
- Siniscalchi, C.M.**‡¶, M.B. Belitz, J.L.M. Charbonneau, A.A. Maassoumi, **T. Singh**§, H.R. Kates, D.E. Soltis, P.S. Soltis, R.P. Guralnick, and **R.A. Folk**. 7/23/2024. A phylogenetic insight into *Astragalus* diversification and biogeography. XX International Botanical Congress (IBC 2024) symposium: Recent advances in the megadiverse legume subfamily Papilionoideae - Part I. (Madrid, Spain).
- Folk, R.A.**¶ 11/8/2023 [online]. Identifying climatic drivers of hybridization in *Heuchera*. International Symposium of Horticulture and Plant Biology (hybrid conference held in Wuhan, China).
- Zhang, Q., **R.A. Folk**, D.E. Soltis, P.S. Soltis, X.-Q. Yu¶. 7/26/2022. 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.** 7/28/2020 [online]. Strategies for assessing phylogenomic conflict and testing hybridization, with an example from *Heuchera*. Botanical Society of America (online conference) colloquium: Exploring the utility and limits of target enrichment methods to disentangle evolutionary processes.
- Siniscalchi, C.M.**, H.-R. Kates, P.S. Soltis, D.E. Soltis, R.P. Guralnick, and **R.A. Folk**. 7/29/2020 [online]. Testing the evolutionary success of nitrogen-fixing symbioses in challenging soil environments. Botanical Society of America (online conference) colloquium: Biodiversity synthesis: Linking large phylogenies with species traits and ecologies.
- Kates, H., **R.A. Folk**, R.P. Guralnick, P.S. Soltis, and D.E. Soltis. 7/29/2020 [online]. Building and using a massive-scale 13,000 species phylogeny for the nitrogen-fixing clade. Botanical Society of America (online conference) colloquium: Phylogenomics and evolution of Superrosids.
- de Souza Cortez, M.B., **R.A. Folk**, C.J. Grady, A. Stewart, J. Spoelhof, D.E. Soltis, and P.E. Soltis. 7/31/2020 [online]. Is the occurrence of ancient angiosperms associated with old, climatically stable and infertile landscapes in Brazil? Botanical Society of America (online conference) colloquium: Plant life in Neotropical rocky outcrops.
- Stull, G.W., H.-R. Kates, Q. Tian, **R.A. Folk**, R.P. Guralnick, D.E. Soltis, P.S. Soltis, T-S. Yi. 7/29/2020 [online]. 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 (online conference) colloquium: Phylogenomics and evolution of Superrosids.
- Sun, M., **R.A. Folk**, M.A. Gitzendanner, S.A. Smith, Z. Chen, P.S. Soltis, D.E. Soltis, and R.P. Guralnick. 7/29/2020 [online]. Phylogenetic and diversification analyses of rosids. Botanical Society of America (online conference) colloquium: Phylogenomics and evolution of Superrosids.
- Folk, R.A.** 1/14/2020. 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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- Pre-MSU*
- 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.**<sup>¶</sup>, R.P. Guralnick, P.S. Soltis, D.E. Soltis, J.M. Allen<sup>¶</sup>. 2017. Data assembly and post-processing in aTRAM for museum phylogenomics. XIX International Botanical Congress (IBC 2017) symposium: Use of target capture and high-throughput sequencing as a tool for plant systematics (Shenzhen, China).
- Folk, R.A.**<sup>¶</sup>, 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). XIX International Botanical Congress (IBC 2017) symposium: Hybridization and phylogenetic reconstruction (Shenzhen, China).
- Soltis, D.E.<sup>¶</sup>, R.P. Guralnick, S.R. Manchester, J.M. Allen, M. Kirst, J. Oliverio, and **R.A. Folk**<sup>¶</sup>. 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.**<sup>†¶</sup> and **R.A. Folk**. 7/25/2023. Investigating conserved pollinator attractants as a driver of hybridization in *Heuchera*. Botanical Society of America meeting (Boise, ID).
- Dahal, S.**<sup>†¶</sup>, **C.M. Siniscalchi**<sup>‡</sup>, and **R.A. Folk**. 7/26/2023. Species delimitation in the *Symphytotrichum subulatum* group (Asteraceae) reveals a new species in central Mexico. Botanical Society of America meeting (Boise, ID).
- Pantinople, D.**<sup>†¶</sup>, **R. Conner**<sup>§</sup>, **S. Dauber**<sup>§</sup>, **K. Broussard**<sup>§</sup>, **N.J. Engle-Wrye**<sup>†</sup>, H.R. Jordan, **C.M. Siniscalchi**<sup>‡</sup>, **R.A. Folk**. 7/25/2023. Phylogenetic and spatial determinants of leaf endophyte microbiomes in the flowering plant *Heuchera*. Botanical Society of America meeting (Boise, ID).
- Folk, R.A.**<sup>¶</sup>, M. Belitz, **C.M. Siniscalchi**<sup>‡</sup>, D.E. Soltis, H.R. Kates, P.S. Soltis, R.P. Guralnick, L.M. Borges. 7/26/2023. Phylogenetic diversity and regionalization of the mimosoid clade: Drivers of diversity in dry tropical forest. Botanical Society of America meeting (Boise, ID).
- Singh, T.**<sup>§¶</sup>, P. Rodrigo, T. Mlsna, J. Dhillon, J. Varco, **R.A. Folk**. 7/25/2023. 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.**<sup>¶</sup>, **C.M. Siniscalchi**<sup>‡</sup>, M. Belitz, J.R. Doby, S.R. Manchester, P.S. Soltis, D.E. Soltis, R.P. Guralnick. 7/26/2022. Spatial phylogenetics of Fagales: Investigating the history of temperate forests. Botanical Society of America meeting (Anchorage, AK).
- Siniscalchi, C.M.**<sup>‡¶</sup>, 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**. 7/26/2022. 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<sup>¶</sup>, and P.S. Soltis<sup>¶</sup>. 7/26/2022. 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.<sup>¶</sup>, 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. 7/27/2022. A nuclear phylogenomic overview of Rosaceae. Botanical Society of America meeting (Anchorage, AK).
- Engle-Wrye, N.J.**<sup>†¶</sup>, **R.A. Folk**. 7/25/2022. 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**. 7/25/2022. 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**. 7/26/2022. 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. 7/25/2022. 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**. 3/31/2022. 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**. 3/31/2022. 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†‡**. 3/31/2022. Population genomics and biogeography of *Symphyotrichum* in Mexico and the eastern U.S. Association of Southeastern Biologists meeting 2022 (Little Rock, AR).
- Kates, H.¶, B. O'Meara, **R.A. Folk**, R.P. Guralnick, D.E. Soltis, and P.S. Soltis. 7/23/2021 [online]. 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).
- Engle-Wrye, N.J.†¶**, T. Mlsna, and **R.A. Folk**. 7/21/2021 [online]. 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**. 7/21/2021 [online]. Reevaluating the biogeographical history of living and fossil Fagales. Botanical Society of America meeting (online meeting).
- Engle-Wrye, N.J.†¶** and **R.A. Folk**. 7/27/2020 [online]. Environmental drivers of a hybridization zone in *Heuchera*. Botanical Society of America meeting (online meeting).
- García, N., **R.A. Folk**. 7/31/2020 [online]. 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**. 9/11/2019. Progreso en la delimitación de especies en *Phycella* s.l. (Amaryllidaceae tribu Hippeastreae) (“Progress in species delimitation in *Phycella* s.l. [Amaryllidaceae tribe Hippeastreae]). XXXVII Jornadas Argentinas de Botánica [Argentine Botanical Society meeting] (San Miguel de Tucumán, Argentina).

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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 (Anchorage, AK).
- 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 (Tampa, FL).
- 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 (Tampa, FL).
- 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”). XXXVI Jornadas Argentinas de Botánica [Argentine Botanical Society meeting] (Mendoza, Argentina).
- 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 (Portland, OR).

- 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, 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 (Baton Rouge, LA).
- 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:*

- Pantinople, D.**†¶, **C.M. Siniscalchi**‡, **R.A. Folk**. 7/22/2024. Edaphic ecology in island-like systems—A case study in the *Heuchera parviflora* complex. XX International Botanical Congress (IBC 2024, Madrid, Spain).
- Adugna, H.**§, **N.J. Engle-Wrye**†, and **Ryan A. Folk**. 8/2/2024. Verifying the effective pollinators by using metabarcoding. Mississippi State 2024 Summer Undergraduate Research Symposium (Starkville, MS).
- Siniscalchi, C.M.**‡¶, **T. Singh**§, **D.J. Pantinople**†, and **Ryan A. Folk**. 3/21/2022. Patterns of diazotroph diversity in nodulating plants of the Southeastern USA. Association of Southeastern Biologists (Chattanooga, TN).
- Siniscalchi C.M.**¶, L.M. Borges, H.R. Kates, P.S. Soltis, D.E. Soltis, R.P. Guralnick, **R.A. Folk**. 8/11/2023. Assessing niche shifts in the mimosoid clade using a quantitative discretization method. 8th International Legume Conference, poster session (“Legumes as a model for biogeography, macroecology and evolution” workshop) (Pirenópolis, Brazil).
- Dahal, S.**†¶, **C.M. Siniscalchi**‡, **N.J. Engle-Wrye**†, **R.A. Folk**. 7/19/2021. 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**. 7/19/2021. 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 (Tucson, AZ).
- García N. and **R.A. Folk**. 2019. Genomic phylogeography and species delimitation in *Phycella* s.l. (Amaryllidaceae tribe Hippeastreae). Botanical Society of America meeting (Tucson, AZ).
- 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; Tyson, VA).
- 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 (Cambridge, MA).
- 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 (Savannah, GA).



## MEDIA (MY WORK):

- 2024, Front page of *Starkville Daily News*, 2-15-2024, “MSU’s Folk receives prestigious NSF CAREER award for groundbreaking hybridization research.”
- 2023, Front page of *Starkville Daily News*, 8-29-2023, “MSU researchers lead national collaboration with \$1.6 million NSF grant to study plant access to nitrogen in shifting environments.”
- 2021, *National Science Foundation Research News*:  
[https://www.nsf.gov/discoveries/disc\\_summ.jsp?cntn\\_id=302694&fbclid=IwAR11kv6yUwW14JDfljexIA3jR-Tha4x3JoVSIwGIUu7J9JhJZV\\_OJNM02o](https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=302694&fbclid=IwAR11kv6yUwW14JDfljexIA3jR-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>

## Pre-MSU

- 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/>

## MEDIA (COMMENTARY ON OTHERS’ WORK):

- 2024, *New Scientist*: <https://www.newscientist.com/article/2428359-huge-genetic-study-redraws-the-tree-of-life-for-flowering-plants/> (quoted expert in media article on a recent *Nature* paper: <https://doi.org/10.1038/s41586-024-07324-0>)

## SOFTWARE REPOSITORIES:

<https://github.com/ryanafolk>

## AWARDS:

- 2017, Travel award, Florida Museum of Natural History (\$1,000)
- 2015, Travel award, Phylogenomics Symposium and Software School, Ann Arbor, MI (\$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, 2024), eastern Mexico (2011).

HERBARIA VISITED (*INDEX HERBARIORUM CODE*):

**Large domestic:** Botanical Research Institute of Texas (BRIT), California Academy of Sciences (CAS), University of Florida (FLAS), Harvard University Herbaria (GH, A), Louisiana State University (LSU), University of Minnesota (MIN), Missouri Botanical Garden (MO), Miami University (MU), University of North Carolina at Chapel Hill (NCU), New York Botanical Garden (NY), The Ohio State University (OS), Rancho Santa Anna Botanical Garden (RSA, DS), University of Texas Austin (TEX, LL). **Small domestic:** Eastern Kentucky University (EKY), University of Memphis (MEM), San Diego State University (SDSU), University of Alabama (UNA). **Foreign:** Natural History Museum London (BM), Royal Botanic Garden Edinburgh (E), Botanic Gardens Kew (K), Kunming Institute of Botany (KUN), University of Tokyo (TI), Royal Instituto de Ecología, A.C. (XAL). More information is available on my Bionomia profile: <https://bionomia.net/0000-0002-5333-9273>

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 kinsiana* (Makino) R.A.Folk & Y.Okuyama comb. nov., *Asimitellaria kosbiensis* (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 rosendablii* 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. More information is available on my IPNI profile: <https://www.ipni.org/a/20014967-2>

EPONYMY: *Heuchera folkii* Engle-Wrye.

OUTSIDE COURSES:

2015, 2018 Phylogenomics Symposium and Software School (Ann Arbor, MI; Columbus, OH)  
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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