

Erin A. Manzitto-Tripp
CURRICULUM VITAE

October 2023

PRESENT POSITION

Associate Professor, Department of Ecology & Evolutionary Biology
Curator of Botany (COLO Herbarium), Museum of Natural History
University of Colorado—Boulder, 2013 – present

ADDRESS: University of Colorado Museum of Natural History
Department of Ecology and Evolutionary Biology & Museum of Natural History
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RESEARCH INTERESTS: systematic biology, molecular phylogenetics, plant and lichen
biodiversity, taxonomy, and nomenclature, evolutionary genomics, tropical biology, pollination
ecology, biochemical evolution, conservation biology, biogeography, paleontology

EDUCATION

2008-2012	Postdoctoral Researcher, Rancho Santa Ana Botanic Garden
2003-2008	Ph.D., Dept. of Ecology & Evolutionary Biology, Duke University Dissertation: Systematics & Pollination System Evolution in <i>Ruellia</i> (Acanthaceae)
1999-2002	B.A. (<i>cum laude</i>), University of North Carolina, Asheville, 1999-2002 Undergraduate Thesis: Plant Diversity and Biogeography of the Upper Potaro Watershed, Tepui Highlands of Guyana

PREVIOUS POSITIONS

2009-2012	NSF-Funded Postdoctoral Researcher, Rancho Santa Ana Botanic Garden
2008-2009	Fletcher Jones Postdoctoral Fellow, Rancho Santa Ana Botanic Garden
2008-pres.	Research Associate, Academy of Natural Sciences of Philadelphia
2007-2010	Teaching Assistant, Duke University (Bryology, Plant Communities of North Carolina, Plant Diversity, Organismal Evolution, Intro to Biology)
2005-2006	Research Assistant, NSF-Funded Grant, Fagaceae Macroevolution
2002-2003	Flora of Pennsylvania Intern, Academy of Natural Sciences and Morris Arboretum of the University of Pennsylvania
2002-2003	Undergraduate Teaching Assistant, Zoology
2001-2013	Plant Collector, Smithsonian, Biological Diversity of the Guianas Program

EXTRACURRICULAR QUALIFICATIONS

2019-pres.	Airline Transport Pilot (FAA Commercial License #4048627)
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GRANTS AND FELLOWSHIPS (small grants <\$2,000 excluded)

- 2023-2024 **Boulder County Open Space:** Lichen Community Assembly and Physiological Constraints Throughout BoCo Open Space. **PIs: Jacob Watts & Erin Manzitto-Tripp.** \$8,500.
- 2023-2024 **Boulder County Nature Association:** Lichen Inventory of the Indian Peaks Wilderness, Roosevelt National Forest—Towards a Complete Inventory of the Lichens of Colorado. **PIs: Seth Raynor & Erin Manzitto-Tripp.** \$4,000
- 2023-2024 **Indian Peaks Wilderness Association:** Lichen Inventory of the Indian Peaks Wilderness, Roosevelt National Forest—Towards a Complete Inventory of the Lichens of Colorado. **PIs: Seth Raynor & Erin Manzitto-Tripp.** \$2,000
- 2021-2024 **National Science Foundation,** Digitization TCN: Collaborative Research: Bringing Asia to digital life: mobilizing underrepresented Asian herbarium collections in the US to propel biodiversity discovery. **Lead PI (Univ. Colorado): Erin Tripp.** Additional Collaborating PIs: Dina Clark (COLO), Ryan Allen (COLO). Overall TCN PI: Charles Davis (Harvard University). Award #2101846 (COLO). **Amount: \$434,103 (COLO only).**
- 2021-2025 **National Science Foundation,** Digitization TCN: Collaborative Research: Building a global consortium of bryophytes and lichens: keystones of cryptobiotic communities (GLOBAL). **PIs (Univ. Colorado):** Erin Tripp, Dina Clark, Ryan Allen (COLO). Overall TCN PI: Jessica Budke (University of Tennessee). Award #2001427 (COLO). **Amount: \$230,682 (COLO only).**
- 2019-2022 **Fulbright Global Scholars Fellow,** Drivers of Neotropical Diversification in the Species-Rich Plant Genus *Ruellia*, with Emphasis on the Brazilian Cerrado Biodiversity Hotspot. Local Host: Rosane Colevatti, Universidade de Goiania.
- 2018-2022 **National Science Foundation,** Collaborative Research: New World *Justicia* s.l.: A Microcosm for Understanding Covariation of Floral Traits and Pollinators in a Phylogenetic Context. Lead PI (Rancho Santa Ana Botanic Garden): Carrie Kiel; **Lead PI (Univ. Colorado): Erin Tripp.** Additional Collaborating PIs: Lucinda McDade (Rancho Santa Ana Botanic Garden) and Amanda Fisher (California State University, Long Beach). Award #s 1754493 (COLO) & 1754845 (RSABG). **Amount: \$300,441 (COLO only).**
- 2017-2022 **National Science Foundation,** Advancing Digitization of Biodiversity Collections, Digitization TCN: Collaborative Research: Using Herbarium Data to Document Plant Niches in the High Peaks and High Plains of the Southern Rockies—Past, Present, and Future. **Lead PI: Erin Tripp** (w/ lead CoPIs Dina Clark & Ryan Allen; University of Colorado). Award #1702516. **Amount: \$2,872,000 (COLO portion: \$1,585,917).** Large-scale collaboration involving 38 partnering institutions (universities, botanical gardens, national parks, Native American Nations).
- 2016-2020 **National Science Foundation,** Dimensions of Biodiversity, Collaborative Research: Biodiversity Gradients in Obligate Symbiotic Organisms: A Case Study in Lichens in a Global Diversity Hotspot. **Lead PIs: Erin Tripp & James Lendemer** (New York Botanical Garden). Co-PIs: Nolan Kane, Christy McCain (University of Colorado). Award #s 1542629 & 1542639. **Amount: \$1,794,031 (COLO portion: 1,035,332).**
- 2016 **Boulder County Open Space:** Partial Inventory of the Lichens of White Rocks Niwot, Colorado. **Sole PI: Erin Tripp.** \$2,310.

- 2014-2018 **National Science Foundation**, Collaborative Research: Understanding Constraints on Floral Evolution: A Phylogenetic Approach to Comparative Anthocyanin Evolution in *Ruellia* (Acanthaceae). **Lead PI: Erin Tripp**; Collaborating PI: Lucinda McDade (Rancho Santa Ana Botanic Garden). Award #s1354963 (COLO) & 1355138 (RSABG). **Amount: \$856,289 (COLO portion: 499,989).**
- 2014-2015 **City of Boulder, Open Space and Mountain Parks**: Lichen Inventory of White Rocks Open Space, Boulder, Colorado. **Sole PI: Erin Tripp.** \$4,550.
- 2009-2013 **National Science Foundation**: Broad to Fine Scale Phylogenetic Pattern, Character Evolution, and Diversification in Ruellieae (Acanthaceae). **Lead PI: Erin Tripp**; Co-PI: Lucinda McDade (Rancho Santa Ana Botanic Garden). Award #0919594. **Amount: \$540,505.**
- 2012-2013 **Great Smoky Mountains Conservation Association**: Lichen Diversity, Ecology, and Conservation in Great Smoky Mountains National Park. Lead PIs: Erin Tripp & James Lendemer (Rancho Santa Ana Botanic Garden & New York Botanical Garden), \$5,000.
- 2012-2013 **Smithsonian Institution**: Plant and Lichen Diversity of Kamakusa Tepui, Western Guayana. Lead PI: E. Tripp. \$4,000 for expeditionary research.
- 2011-2012 **Great Smoky Mountains National Park, Tallassee Foundation**: Lichens of the Exposed Limestone Bluffs of Great Smoky Mountains National Park. Lead PIs: E. Tripp & J. Lendemer (Rancho Santa Ana Botanic Garden & New York Botanical Garden), \$2,400.
- 2008-2009 **Society of Systematic Biologists, Mini-PEET Training Award**: Scripts and Lips: Training in Microlichen Taxonomy and Identification Through Study of Eastern North American Graphidaceae. Lead PI: E. Tripp. Co-PIs: R. Harris & J. Lendemer (New York Botanical Garden). \$2,750.

Graduate School and Earlier

- 2007-2008 Duke University: Semester Research Fellowship. \$8,500.
- 2006-2008 National Science Foundation, Dissertation Improvement Grant: Systematics and Pollination System Evolution in *Ruellia* (Acanthaceae). Lead PI: P. Manos. Co-PI: E. Tripp (Duke University). \$11,910.
- 2006-2007 American Philosophical Society, Lewis and Clark Grant: Systematics and Pollination Syndrome Transitions in the Species-Rich Genus *Ruellia* (Acanthaceae). \$3,800.
- 2006-2007 Garden Club of America, Tropical Botany Award: Systematics of *Ruellia*: An Examination of Evolutionary Relationships Within a Species-Rich Genus. \$5,500.
- 2006-2007 Society of Systematic Biologists, Graduate Student Award: Systematics and Floral Evolution in Ruellieae and *Ruellia* (Acanthaceae). \$1,400.
- 2006-2007 American Society of Plant Taxonomists, William R. Anderson Award. \$1,000.
- 2006-2007 Duke University, International Travel Award. \$1,500.
- 2006-2007 Academy of Natural Sciences, Summer Fellowship. \$3,600.
- 2005-2006 Sigma Xi, Graduate Research Award: Patterns of Reproductive Isolation Across Multiple Sister Taxon Pairs in *Ruellia* (Acanthaceae). \$1,300.
- 2005-2006 Organization for Tropical Studies: Tropical Ecology Course Participant. \$2,000.
- 2005-2006 Latin American Studies, Graduate Research Award: Pollination Syndrome Transitions in *Ruellia* (Acanthaceae): Are Specialized Forms Evolutionary Dead-Ends? \$650.
- 2004-2005 Society for Integrative and Comparative Biology, Graduate Research Award: Pollination Syndrome Transitions in *Ruellia* (Acanthaceae). \$1,000.

2004-2005	Duke University, Dept. of Biology Grants In Aid of Research. \$1,000
2004-2005	National Science Foundation, Graduate Research Fellowship: Honorable Mention.
2003-2004	Sackler Conference on Speciation, Funded Participant. \$300.
2003-2004	Mellon Foundation, Semester Fellowship. \$8,000.
2003-2004	Mellon Foundation, Research Grant. \$1,000.

HONORS AND AWARDS

2011	American Society of Plant Taxonomists, George R. Cooley Award, Best Presentation by a Young Systematist, Annual Botany Conference (St. Louis, MO)
2006	American Society of Plant Taxonomists, William R. Anderson Award, Top Award to Graduate Student in Plant Systematics, Annual Botany Conference (Chico, CA)

PUBLICATIONS

**indicates undergraduate student author

* indicates graduate student or post-doctoral author

[as indicated since hire date at Univ Colorado, 7 Jan 2013]

Books

4. **Tripp EA**, Lendemer JC. 2020. *Field Guide to the Lichens of Great Smoky Mountains National Park*. With illustrations by Bobbi Angell. University of Tennessee Press, 660 p.
3. **Tripp EA**, Luján M*. 2018. *Venezuelan Ruellia: A Monograph. Memoirs of the New York Botanical Garden*, 179 p.
2. **Tripp EA**. 2016. *Field Guide to the Lichens of White Rocks Open Space*. University Press of Colorado, Boulder, Colorado, 170 p.
1. Lendemer JC*, Harris RC, **Tripp EA**. 2013. *Lichens and Lichenicolous Fungi of Great Smoky Mountains National Park*. Memoirs of the New York Botanical Garden, New York Botanical Garden Press: Bronx, New York, 260 p.

Chapters in Books

1. Dexter KG, Swanepoel W, Loiseau O, Darbyshire I, Nanyeni L, Maiato Gonçalves F, Lages F, Chase F, **Manzitto-Tripp EA**. In Press. High endemism of the genus *Petalidium* (Acanthaceae) in the Southwest African Highlands in: *A Review of Endemism in the Highlands and Escarpments of Angola and Namibia* (eds: Mendelsohn JM, Huntley BJ, Vaz Pinto P). Ongava Research Centre, Namibia.
2. Phillipson PB, Andriamahefarivo L, Callmender M, Daniel TF, Darbyshire I, Kiel CA, Letsara R, McDade LA, **Manzitto-Tripp EA**. 2022. *Acanthaceae in: The New Natural History of Madagascar* (Goodman SM, ed.). Princeton University Press, Princeton, NJ.

Peer-Reviewed Articles

106. Fernandes, UG, **Manzitto-Tripp EA**, Medina N, Simão-Bianchini R, Kameyama C. In Press. Novelties in *Ruellia* L. (Acanthaceae) for the Brazilian Cerrado. *Systematic Botany*.
105. Sharples, MS, **Manzitto-Tripp EA**. In Press. Origins of cryophilous lineages: evidence from the cosmopolitan angiosperm genus *Stellaria*. *Botanical Journal of the Linnean Society*.
104. **Manzitto-Tripp EA**, Raynor SJ, Anderson Stewart CR. In Press. Diversity of lichens in northern Alabama yields evidence of an exceptionally diverse biota. *Southeastern Naturalist* 22: xx.

103. Loiseau O, **Manzitto-Tripp EA**, Swanepoel W, Dexter KG. 2023. Net diversification rates of the woody plant genus *Petalidium* (Acanthaceae) are highest in the ancient and arid Namib Desert. *Frontiers in Ecology & Evolution* 11:1193728.
102. **Manzitto-Tripp EA**, Daniel TF. In Press. Phylogeny and revised classification of New World *Ruellia*. *Taxon*.
101. Kiel CA, **Manzitto-Tripp EA**, Fisher AE, Porter JM, McDade LA. In Press. Remarkable variation in androecial morphology is closely associated with corolla traits and likely pollinators in Western Hemisphere Justicioids (Acanthaceae: Justicieae). *Annals of Botany*.
100. Diaz V*, **Tripp EA**. In Press. A synopsis of the genus *Xanthoparmelia* in Colorado. *Opuscula Philolichenum*.
99. Koch N, Lendemer J, **Manzitto-Tripp EA**, McCain CM, Stanton D. 2023. Carbon-concentrating mechanisms are a key trait in lichen ecology and distribution. *Ecology* 2023: e4011.
98. Daniel TF, **Manzitto-Tripp EA**, Ezcurra C. 2023. *Ruellia eriocalyx* (Acanthaceae, Ruellieae), a pyrophilous species from Central Brazil. *Proceedings of the California Academy of Sciences* 67: 395-399.
97. Raynor SJ*, Kesler J, Allen JR, **Manzitto-Tripp EA**. In Press. New and noteworthy reports on Colorado lichens and lichen allies, 2: *Biatoropsis hirtae* and *B. minuta*. *Western North American Naturalist*.
96. Gaier A, **Manzitto-Tripp EA**, Resasco J. 2023. Floral visitors of a Colorado endemic chasmophyte, *Telesonix jamesii* (Saxifragaceae). *Western North American Naturalist* 83: 103-113.
95. **Manzitto-Tripp EA**, Luján M, Clark DA. 2022. *Ruellia whitneyana*, a new species of Acanthaceae from Bolivia. *Systematic Botany* 47: 1107-1111.
94. Swanepoel W, **Manzitto-Tripp EA**. 2022. *Petalidium sesfonteinense* (Acanthaceae), a new species from the Kaokoveld, Namibia. *Phytotaxa* 549: 127-135.
93. Arias J, **Manzitto-Tripp EA**, Kiel CA, McDade LA, Fisher AE. 2022. An evolutionary framework of Acanthaceae based on transcriptomes and genome skims. *Systematic Botany* 47: 716-728.
92. **Manzitto-Tripp EA**, Lendemer JC, McCain CM. 2022. Most lichens are rare, and degree of rarity is mediated by lichen traits and biotic partners. *Diversity and Distributions* 28: 1810-1819.
91. Darbyshire I, Kiel CA, Chase FM, **Manzitto-Tripp EA**. 2022. The demise of *Monechma*: new combinations and a new classification in the resurrected genera *Meiosperma* and *Pogonospermum* (Acanthaceae). *Kew Bulletin* 77: 249-270.
90. Zhuang Y, **Manzitto-Tripp EA**. 2022. Co-expression network analyses reveal the molecular evolution and architecture of genes associated with anthocyanin biosynthesis in petals of *Ruellia* (Wild Petunias; Acanthaceae). *BMC Ecology & Evolution*: 22: 27.
89. Warsh, S, Schroeter, I., **Manzitto-Tripp EA**. In Press. A floristic inventory of two Boulder County Open Space parcels: Heil Valley Ranch and Hall Ranch, Colorado, U.S.A. *Madroño* 69: 263-285.
88. Lendemer JC, Bugartz F, Morse C, **Manzitto-Tripp EA**. 2022. *Sarcogyne similis* (Acarosporaceae) produces psoromic acid and is confirmed to be widespread in North America. *The Bryologist* 125: 91-101.
87. **Manzitto-Tripp EA**, Darbyshire I, Daniel TF, Kiel CA, McDade LA. 2021. Revised classification of Acanthaceae and worldwide dichotomous keys. *Taxon* 71: 103-153.
86. Keepers, K, Pogoda, C, Lendemer J, Kane, N, **Manzitto-Tripp EA**. 2021. Author response to Tagirdzhanova et al., 2021, titled "Lichen fungi do not depend on the alga for ATP production: a comment on Pogoda et al. (2018)". *Molecular Ecology* 17: 4160-4161.
85. Darbyshire, I, **Manzitto-Tripp EA**, Chase FM. 2021. A taxonomic revision of Acanthaceae tribe Barlerieae in Angola and Namibia. Part 2. *Kew Bulletin* 76: 127-190.

84. Fernandes UG*, **Manzitto-Tripp EA**, Simão-Bianchini R, Kameyama C. In Press. Novelties in *Ruellia* L. (Acanthaceae) for the Brazilian Cerrado. *Systematic Botany*.
83. Sharples, M, Bentz PC, **Tripp, EA**. 2021. Evolution of apetalogy in the cosmopolitan genus *Stellaria*. *American Journal of Botany* 108: 869-882.
82. England, KE, Lendemer JC, **Tripp EA**. 2021. *Rockefelleria crossophylla* (Pannariaceae) rediscovered in Alabama. *Opuscula Philolichenum* 20: 1-6.
81. **Tripp EA**, Dexter KG, Stone H**. 2021. Reproductive character displacement in a diverse genus of tropical plants (*Ruellia*: Acanthaceae). *Ecology & Evolution* 11: 4719-4730.
80. Hammel PB, McDade LA, **Tripp EA**. 2020. *Ruellia*, pp. 140-158 in: *Manual de Plantas de Costa Rica, Vol IV, Part 1* (eds. Hammel BE, Grayum MH, Herrera C, Zamora N). Monographs in Systematic Botany from the Missouri Botanic Garden, Vol 137. Missouri Botanic Garden Press, St. Louis, MO.
79. Beeler RB*, Sharples MT*, **Tripp EA**. 2020. Introgression among three western North American bilberries (*Vaccinium* Section *Myrtillus*). *Systematic Botany* 45: 576-584.
78. Hansen CJ, Lendemer JC, **Tripp EA**, Allen JL, Buck WR, England K, Harris RC, Howe NM, McMullin RT, Waters DP. 2020. Lichens and allied fungi of Central Alabama, U.S.A.: survey results from the 26th Tuckerman Workshop. *Opuscula Philolichenum* 19: 36-57.
77. Piatkowski BT, Imwattana K, **Tripp EA**, Weston DJ, Healey A, Schmutz J, and Shaw AJ. 2020. Phylogenomics reveals convergent evolution of red-violet coloration in land plants and the origins of the anthocyanin biosynthetic pathway. *Molecular Phylogenetics & Evolution* 141: 106904.
76. Darbyshire I, Kiel CA, Astroth**, Dexter KG, Chase FM, and **Tripp EA**. 2020. Phylogenomic study of *Monechma* reveals two divergent plant lineages of ecological importance in the African savannah and succulent biomes. *Diversity* 12: 237.
75. **Tripp EA**. 2020. Lucinda A. McDade—recipient of the 2019 Asa Gray Award. *Systematic Botany* 45: 1-3.
74. Braz DM, Azevedo IHF, **Tripp EA**. 2020. A new species and lectotypification in *Ruellia* L. (Acanthaceae) from the southeastern Atlantic Forest, Brazil. *Systematic Botany* 45: 1-6.
73. Darbyshire I, **Tripp EA**, Chase FM. 2019. A taxonomic revision of Acanthaceae tribe Barlerieae in Angola and Namibia. Part. 1. *Kew Bulletin* 74-75: 1-85.
72. Keepers KG*, Pogoda C*, White KH*, Anderson Stewart CR*, Hoffman JM*, Ruiz AM, McCain CM, Kane NC, **Tripp EA**. 2019. Whole genome shotgun sequencing detects greater lichen fungal diversity than amplicon-based methods in environmental samples. *Frontiers in Ecology and Evolution* <https://doi.org/10.3389/fevo.2019.00484>
71. Allen JL, McMullin TR, **Tripp EA**, Lendemer JC. 2019. Lichen conservation in North America: a review of current practices and research in Canada and the United States. *Biodiversity and Conservation* 28: 3103-3138.
70. Sharples MS*, **Tripp EA**. 2019. Phylogenetic relationships within and delimitation of the cosmopolitan flowering plant genus *Stellaria* L. (Caryophyllaceae). *Systematic Botany* 44: 857-876.
69. Malone AI**, Brinda JC, **Tripp EA**. In Press. A survey of the liverworts from Colorado's Comanche National Grassland. *Evansia*.
68. **Tripp EA**, Lendemer JC, McCain CM. 2019. Habitat quality and disturbance drive lichen species richness in a temperate biodiversity hotspot. *Oecologia* 190: 445-457.
67. Lendemer JC, Keepers KG, **Tripp EA**, Pogoda C, McCain C, Kane NC. 2019. A taxonomically broad metagenomic survey of 339 species spanning 57 families suggests cystobasidiomycete yeasts are not ubiquitous across all lichens. *American Journal of Botany* 106: 1090-1095.
66. **Tripp EA**, Morse CA, Keepers KG, Anderson Stewart C, Pogoda CS, White, KH, Hoffman JR, Kane NC, McCain CM. 2019. Evidence of substrate endemism of lichens on Fox Hills

- Sandstone: discovery and description of *Lecanora lendemeri* as new to science. *Bryologist* 122: 246-259.
65. Pogoda C, Keepers KG, Nadiadi AY, Bailey DW, Lendemer JC, **Tripp EA**, Kane NC. 2019. Genome streamlining via complete or partial loss of introns has occurred multiple times in lichenized fungal mitochondria. *Ecology & Evolution* 9:4245-4263.
 64. England JE, Hansen CJ, Allen JL, Beeching SQ, Buck WR, Charny V, Guccion JG, Harris RC, Hodges M, Howe NM, Lendemer JC, McMullin RT, **Tripp EA**, Waters DP. 2019. Checklist of the lichens and allied fungi of Kathy Stiles Freeland Bibb County Glades Preserve, Alabama, U.S.A. *Opuscula Philolichenum* 18: 420-434.
 63. *Kiel CA, **Tripp EA**. In Press. Acanthaceae. In: *New Manual of Vascular Plants of Northeastern United States and Adjacent Canada*. Ed. R. Naczi. New York Botanical Garden Press.
 62. **Tripp EA**, Lendemer JC. 2019. Highlights from 10 years of lichenological research in Great Smoky Mountains National Park: celebrating the United States National Park Service centennial. *Systematic Botany* 44: 943-980.
 61. Sharples M, **Tripp EA**. 2019. RAD sequencing rejects long distance disjunction in *Stellaria* (Caryophyllaceae) and yields support for a new southern Rocky Mountains endemic. *Taxon* 68: 280-296.
 60. Darbyshire I, **Tripp EA**, Chase FM. 2019. A taxonomic revision of Acanthaceae tribe Barlerieae in Angola and Namibia. Part I. *Kew Bulletin* 74: 5.
 59. Daniel TF, **Tripp EA**. 2018. *Louteridium* (Acanthaceae): Taxonomy, phylogeny, reproductive biology, and conservation. *Proceedings of the California Academy of Sciences* 65: 41-106.
 58. **Tripp EA**, Agabani R**, McMullin T. 2018. New and noteworthy reports of Colorado lichens and lichen allies, 1: *Phaeocalicium polyporaenum*. *Opuscula Philolichenum* 17: 362-367.
 57. **Tripp EA**, Zhuang Y*, Schreiber M**, Stone H**, Berardi AE*. 2018. Ecological and evolutionary drivers of plant flavonoids. *Molecular Phylogenetics and Evolution* 128: 147-161.
 56. Anderson Stewart* C., Lendemer JC, Keepers KG*, Pogoda CS*, McCain CM, Kane NC, **Tripp EA**. 2018. *Lecanora markjohnstonii* (Lecanoraceae, lichenized Ascomycetes), a new sorediate crustose lichen from the southeastern United States. *The Bryologist* 121: 498-512.
 55. Brigham LM**, Allende LM*, Shipley GR**, Boyd KC**, Higgins TJ**, Kelly N**, Keepers KG*, Pogoda CS*, Lendemer JC, **Tripp EA**, Kane NC. 2018. Genomic insights into the mitochondria of nine eastern North American *Cladonia* species. *Mitochondrial DNA Part B* 3: 508-512.
 54. Pogoda CS *, Keepers KG*, Lendemer JC, Kane NC, **Tripp EA**. 2018. Reductions in complexity of mitochondrial genomes in lichen-forming fungi shed light on genome architecture of obligate symbioses. *Molecular Ecology*. DOI: 10.1111/mec.14519
 53. Funk ER*, Adams AA*, Spotten SM*, Van Hove RA*, Whittington KT*, Keepers KG*, Pogoda CS*, Lendemer JC, **Tripp EA**, Kane NC. 2018. The complete mitochondrial genomes of five lichenized fungi in the genus *Usnea* (Ascomycota: Parmeliaceae). *Mitochondrial DNA Part B* 3: 305-308.
 52. **Tripp EA**, Zhang N, Schneider H, Huang Y, Mueller GM, Hu Z, Häggblom M, Bhattacharya D. 2017. Reshaping Darwin's tree: impact of the symbiome. *TREE* 32: 552-555. (<http://dx.doi.org/10.1016/j.tree.2017.05.002>).
 51. **Tripp EA**, Tsai YE*, Zhuang Y*, Dexter KG. 2017. RADseq data resolve nascent radiation of *Petalidium* (Acanthaceae) in the ultra-arid deserts of Namibia and Angola. *Ecology & Evolution* 30: 7920-7936.
 50. **Tripp EA**, Zhuang Y*, Lendemer JC. 2017. Are lichen mycelia haploid or diploid? A test using whole genome data. *The Bryologist* (in press).
 49. **Tripp EA**, Lendemer JC. 2017. Twenty-seven modes of reproduction in the obligate lichen symbiosis. *Brittonia* 70: 1-14.
 48. Kleinkopf J**, Clark DA, **Tripp EA**. 2017. The Purgatory Watershed of southeastern Colorado and

- northeastern New Mexico: a newly recognized center of endemism? *Western North American Naturalist* (in press).
47. Lendemer JC, Stone HB**, **Tripp EA**. 2017. Taxonomic delimitation of the rare, eastern North American endemic lichen *Santessonella crossophylla* (Pannariaceae). *Journal of the Torrey Botanical Society* 144: 459-468.
 46. **Tripp EA**, Tsai YE*. 2017. Disentangling geographical, biotic, and abiotic drivers of plant diversity in Neotropical *Ruellia* (Acanthaceae). *PLoS ONE* 12: e0176021.
 45. Zhuang Y*, **Tripp EA**. 2017. Genome-scale transcriptional study of hybrid effects and regulatory divergence in an F₁ hybrid *Ruellia* (Wild Petunias: Acanthaceae) and its parents. *BMC Plant Biology* 17: 15.
 44. Zhuang Y*, **Tripp EA**. 2017. The draft genome of *Ruellia speciosa* (Wild Petunias: Acanthaceae). *DNA Research* 1: 179-192 (doi: 10.1093/dnares/dsw054)
 43. **Tripp EA**, Darbyshire I. 2017. Phylogenetic relationships among Old World *Ruellia* and reinstatement of the genus *Dinteracanthus*. *Systematic Botany* 42: 470-483.
 42. Darbyshire I, **Tripp EA**, Onjalalaina G. 2017. *Ruellia domatiata* (Acanthaceae), a striking new species from Madagascar. *Kew Bulletin* 72: 13.
 41. **Tripp EA**. 2016. Is asexual reproduction an evolutionary dead-end in lichens? *Lichenologist* 48: 559-580. **Invited Paper**
 40. **Tripp EA**, Lendemer JC*, Barberán A*, Dunn R, Fierer N. 2016. Biodiversity gradients in obligate symbiotic organisms: exploring the diversity and traits of lichen propagules across the United States. *Journal of Biogeography* 43: 1667-1678.
 39. Faist AM*, Stone HB**, **Tripp EA**. 2015. Impacts of mastication: soil seed bank responses to a forest thinning treatment in three Colorado (USA) conifer forest types. *Forests* 6: 3060-3074.
 38. **Tripp EA**, Lendemer JC*. 2015. *Candelariella clarkiae* and *Lecidea hoganii*: two lichen species new to science from White Rocks Open Space, City of Boulder, Colorado. *The Bryologist* 118: 154-163.
 37. **Tripp EA**. 2015. Lichen inventory of White Rocks Open Space (Boulder, Colorado). *Western North American Naturalist*. 75: 301-310.
 36. Rabinowitz O**, **Tripp EA**. 2015. Observations on the phelloderm of aspens (*Populus tremuloides*). *Western North American Naturalist* 75: 364-369.
 35. **Tripp EA**, Koenemann DM*. 2015. Nomenclatural synopsis of the genus *Sanchezia* (Acanthaceae). *Novon* 213-221.
 34. Lendemer JC *, **Tripp EA**. 2015. *Lecanora anakeestiicola* (Lecanorales): an unusual new fruticose species from Great Smoky Mountains National Park in eastern North America. *The Bryologist* 118 1-10.
 33. **Tripp EA**, Lendemer JC*. 2014. Sleepless nights: when you cannot find anything to use in describing new taxa but molecules. *TAXON* 63: 969-971.
 32. **Tripp EA**, Fekadu M**. 2014. Comparative leaf and stem anatomy in selected species of Ruellieae (Acanthaceae) representative of all major lineages. *Kew Bulletin* 69: 9543 (8 pgs).
 31. Lendemer JC*, **Tripp EA**, Sheard J. 2014. Review of *Rinodina* Ach. in the Great Smoky Mountains highlights the significance of this “island of biodiversity” in North America. *The Bryologist* 117: 259-281.
 30. Lendemer JC*, **Tripp EA**. 2014. Discovery of *Gyalideopsis mexicana* in the United States. *North American Fungi* 7: 1-4.
 29. **Tripp EA**, McDade LA. 2014. A rich fossil record yields calibrated phylogeny for Acanthaceae (Lamiales) and evidence for marked biases in timing and directionality of intercontinental disjunctions. *Systematic Biology* 63: 660-684.
 28. Freyre R, **Tripp EA**. 2014. Artificial hybridization between the U.S.A. native *Ruellia caroliniensis* and the invasive *Ruellia simplex* (syn. *R. brittoniana*). *HortScience* 49: 991-996.
 27. Callmender MW, **Tripp EA**, Phillipson PB. 2014. A new name in *Ruellia* L. (Acanthaceae) for

- Madagascar. *Candollea* 69: 81-83.
26. Harris RC, **Tripp EA**, Lendemer JC*. 2014. *Arthopyrenia betulicola* (Arthopyreniaceae, Dothidiomycetes), an unusual new lichenized fungus from high elevations of the southern Appalachian mountains. *Aliso* 31: 77-81.
 25. **Tripp EA**, McDade LA. 2013. Time-calibrated phylogenies of hummingbirds and hummingbird-pollinated plants reject hypothesis of diffuse co-evolution. *Aliso* 31: 89-103.
 24. **Tripp EA**, Hoagland KE. 2013. Typifying an era in biology through synthesis of biodiversity information. *Taxon* 62: 899-911. **Invited Paper**
 23. **Tripp EA**, Fatimah S**, Darbyshire I, McDade LA. 2013. Origin of African *Physacanthus* (Acanthaceae) Via Wide Hybridization. *PLoS ONE* 8: e55677.
 22. **Tripp EA**, Daniel TF, Fatimah S**, McDade LA. 2013. Phylogenetic relationships within Ruellieae (Acanthaceae), and a revised classification. *International Journal of Plant Sciences* 174: 97-137.
 21. Darbyshire I, **Tripp EA**, Dexter KG. 2012. A new species and a revised record in the Namibian *Barleria* (Acanthaceae). *Kew Bulletin* 67: 759-766. (including an erratum, published in early 2013).
 20. **Tripp EA**, Dexter KG. 2012. Taxonomic novelties in Namibian *Ruellia* (Acanthaceae). *Systematic Botany* 37: 1023-1030.
 19. **Tripp EA**, McDade LA. 2012. New synonymies for *Ruellia* (Acanthaceae) of Costa Rica and notes on other neotropical species. *Brittonia* 64: 305-317.
 18. **Tripp EA**, Lendemer JC. 2012. (3-4) Request for binding decisions on the descriptive statements associated with *Mortierella sigyensis* (fungi: Mortierellaceae) and *Piromyces cryptodigmaticus* (fungi: Neocallimastigaceae). *Taxon* 61:886-888.
 17. **Tripp EA**, Fatimah S**. 2012. Comparative anatomy, morphology, and molecular phylogenetics of the African genus *Satanocrater* (Acanthaceae). *American Journal of Botany* 99: 967-982.
 16. **Tripp EA**, Lendemer JC. 2012. Not too late for American biodiversity? New discoveries give hope for mitigation of an extinction epidemic and call for increased inventory and protection of biodiversity in our backyards. *BioScience* 62: 218-219.
 15. **Tripp EA**. 2010. Taxonomic revision of *Ruellia* sect. *Chiropterophila* (Acanthaceae): a lineage of rare and endemic species from Mexico. *Systematic Botany* 35: 629-661.
 14. **Tripp EA**, Lendemer JC. 2010. The genus *Platygramme* in North America. *Castanea* 75:388-393.
 13. **Tripp EA**, Lendemer JC, Harris RC. 2010. Resolving the genus *Graphina* Müll. Arg. in North America: new species, new combinations, and treatments for *Acanthothecis*, *Carbacanthographis*, and *Diorgyma*. *The Lichenologist* 42: 55-71.
 12. **Tripp EA**, Daniel TF, Lendemer JC, McDade LA. 2009. New molecular and morphological insights prompt transfer of *Blechnum* to *Ruellia* (Acanthaceae). *Taxon* 58: 893-906.
 11. Schmidt-Lebuhn A, **Tripp EA**. 2009. *Ruellia saccata* (Acanthaceae), a new species from Bolivia. *Novon* 19:515-519.
 10. Stone DE, Oh SH, **Tripp EA**, Ríos LE, Manos PS. 2009. Natural history, distribution, phylogenetic relationships, and conservation of Central American black walnuts (*Juglans* sect. *Rhysocaryon*). *Journal of the Torrey Botanical Society* 136: 1-25.
 9. **Tripp EA**, Manos PS. 2008. Is floral specialization an evolutionary dead-end? Pollination system transitions in *Ruellia* (Acanthaceae). *Evolution* 62: 1712-1737.
 8. **Tripp EA**. 2007. Evolutionary relationships within the species-rich genus *Ruellia* (Acanthaceae). *Systematic Botany* 32: 628-649.
 7. McDade LA, **Tripp EA**. 2007. Synopsis of Costa Rican *Ruellia* L. (Acanthaceae), with descriptions of four new species. *Brittonia* 59: 199-216.
 6. Lendemer JC, Harris RC, **Tripp EA**. 2007. *Heterodermia neglecta*, a new lichen species from eastern North America. *Bryologist* 110: 490-493.
 5. McDade LA, **Tripp EA**, with assistance from T.F. Daniel. 2007. Acanthaceae of La Selva Biological Station, Costa Rica. In: La Flora Digital de La Selva. pdf available at

<http://clade.acnatsci.org/mcdade/>

4. **Tripp EA**, Dexter KG*. 2006. *Sabal minor* (Arecaceae): A new northern record of palms in eastern North America. *Castanea* 71: 170-175.
3. **Tripp EA**. 2006. Ruellieae (Acanthaceae). Version 10 Apr 2007. <http://tolweb.org/Ruellieae/> in The Tree of Life Web Project, <http://tolweb.org> (Web Publication).
2. **Tripp EA**. 2004. The current status of *Ruellia* (Acanthaceae) in Pennsylvania: two endangered/threatened species. *Bartonia* 62: 55-62.
1. **Tripp, EA**. 2002. Plant diversity and biogeography of the Upper Potaro Watershed in Guyana, South America. *Proceedings of the National Conference for Undergraduate Research 2002*.

Book Reviews

1. **Tripp EA**. 2019. Book Review: *Delmarva Lichens: An Illustrated Manual*. *Castanea*.

Articles Under Review

- Vagle GL, Lendemer JC, **Manzitto-Tripp EA**, McCain CM. In review. Patterns and predictors of lichen rarity in a biodiversity hotspot. *Biodiversity and Conservation*.
- Su, H, Jiang H, Anderson Stewart C, Clark D, Liu S, **Manzitto-Tripp EA**. In review. Depth effects of trail development on herbaceous plant diversity and stress responses through flavonoid accumulation. *Functional Ecology*.
- Rose J, **Manzitto-Tripp EA**. In Review. Spatial attributes limit gene flow in the sympatric species of a diverse Neotropical clade of flowering plants. *American Naturalist*.
- Sharples, MS, **Manzitto-Tripp EA**. In Press. Origins of cryophilous lineages: evidence from the cosmopolitan angiosperm genus *Stellaria*. *Botanical Journal of the Linnean Society*.
- Mccain, CA, Lendemer JC, **Manzitto-Tripp EA**. In Review. Biotic interactions drive lichen elevational richness. *Proceedings of the Royal Society, B*.
- Beckrich K**, **Tripp EA**. In Review. Pollination ecology and reproductive isolation in a sympatric population of *Penstemon virens* and *Penstemon secundiflorus*.

Articles In Preparation

- Tripp EA**, Raynor S*. In Prep. The North American lichen biota: drivers of diversity, endemism, and range sizes.
- Dexter KG, **Tripp EA**. In Prep. Ten years of data reveal significant directional trends in vegetation changes in a long-term study plot (Great Smoky Mountains National Park).

Books In Preparation

- Tripp EA**, Darbyshire I, Klaasseen E, Kwembeya E. In Prep. The Acanthaceae of Namibia and Angola [for *Flora of Namibia Project*].
- Tripp EA**. In Prep. *Botanical Travels in a Guyanese Wilderness* [a novel].

SELECTED NEWS ARTICLES

- 2018 Scientists Mark 1,000th New Species Discovered in Great Smoky Mountains National Park, *Asheville Citizen Times*, story by Karen Chávez, 18 October 2018: <https://www.citizen-times.com/story/news/local/2018/10/18/new-species-discovered-2018-great-smoky-mountains-national-park-lichens-biodiversity-ecosystem/1669321002/S>
- 2018 Some Lichen Fungi Let Genes Go Bye, *Scientific American*, 60 second science, story by Karen Hopkin, 7 March 2018: <https://www.scientificamerican.com/podcast/episode/some-lichen-fungi-let-genes-go-bye/>

- 2018 Great Smoky Mountains National Park's Biodiversity Inventory Reaches 1,000 Species Mark, *National Parks Traveller Newsletter*, story by NPT Staff, 18 October 2018: <https://www.nationalparkstraveler.org/2018/10/great-smoky-mountains-national-parks-biodiversity-inventory-reaches-1000-species-mark>
- 2017 Colorado Public Radio, Colorado Matters Interview w/ Nathan Heffel, <http://www.cpr.org/news/story/the-charm-of-lichens>
- 2017 CU Boulder Today Press Release, <https://www.colorado.edu/today/2017/09/13/researchers-create-digital-archive-rocky-mountain-plants>
- 2015 Colorado Magazine: Lichen Hunter, <https://www.coloradanmagazine.org/2015/12/01/inquiry-erin-tripp/>
- 2015 CU Connections: Five Questions For Erin Tripp, <https://connections.cu.edu/news/five-questions-for-erin-tripp/>
- 2015 CU Professor Discovers New Lichen Species In Boulder, CU News Center, <http://www.9news.com/story/news/education/2015/06/24/new-lichen-species-boulder/29208795/>
- 2014 Liking Lichen Diversity: Great Smoky Mountains National Park, Science Dispatch, by NPS Staff. http://www.nps.gov/grsm/learn/nature/dispatch_lichen.htm
- 2013 National Geographic Magazine: "Islands in the Sky are Hotspots for Biodiversity and Evolution: South America's Tepui Mesas Reveal Secrets to Scientists", by B. Howard. <http://news.nationalgeographic.com/news/2013/09/130928-tepuis-pebble-toads-biodiversity-evolution-science/>
- 2013 Colorado Public Radio: "Why Botanical Illustration Still Matters in the Digital Age", by S. Speier. <https://www.cpr.org/news/story/essay-why-botanical-illustration-still-matters-digital-age>
- 2008 Science Magazine: "Pollinator Plasticity", by J. Kling. <http://news.sciencemag.org/sciencenow/2008/08/01-02.html>

SELECTED NON PEER REVIEWED WRITINGS

- 2019 Bowers MD, **Tripp EA**, Lendemer JC. 2019. Lichens to Dye For. *Turkey Red Journal*. Spring Issue.
- 2018 Hogan TM, **Tripp EA**. 2018. William A. Weber receives ABLS lifetime achievement awards. *Evansia* 35: 106-108.
- 2017 *Where Hemlocks Live*, University Press of Colorado, Website Blog, January 2017: <http://upcolorado.com/about-us/blog/item/3162-where-hemlocks-live>
- 2017 *The Ruellia Pages*: <https://trippreport.com/the-ruellia-pages/>
- 2015 *Compliments to the Collection Manager: New Species of Lichens From Boulder Honor Tim Hogan and Dina Clark (COLO Herbarium)*, Colorado Native Plant Society Newsletter, *Aquilegia*, Fall 2015
- 2015 84, University of Colorado Museum of Natural History Newsletter

PROFESSIONAL SOCIETIES

American Society of Plant Taxonomists
 American Bryological and Lichenological Society
 Botanical Society of America
 Colorado Native Plant Society
 International Association of Plant Taxonomists
 Society of Herbarium Curators
 Society for the Preservation of Natural History Collections
 Society for Systematic Biology
 Society for the Study of Evolution
 Southeastern Biologists

PROFESSIONAL SERVICE & ACTIVITIES

Service

2023-2025	Elected Council Member, Society of Systematic Biologists
2022-2024	Society of Herbarium Curators, Past-President & Program Director
2020-2022	Society of Herbarium Curators, President
2019	Society of Herbarium Curators, President-Elect
2018-current	American Society of Plant Taxonomists, Membership Committee (Chair)
2017	NSF Panel Service, Collections in Support of Biological Research (Nov 2017)
2015	NSF Panel Service, Evolutionary Processes (Oct 2015)
2015	Society of Herbarium Curators, Invitation to stand for officer election [declined owing to full service load]
2014-2017	Council Member [elected], American Society of Plant Taxonomists
2014-current	Editorial Board, <i>Aliso</i>
2012-current	Nomenclature Editor, <i>TAXON</i>
2012-current	Editorial Committee, <i>Systematic Botany Monographs</i>
2014-2015	Associate Editor, <i>Systematic Botany</i>
2013-2014	Board of Directors [elected], Colorado Native Plant Society
2014-2016	American Society of Plant Taxonomists, Honors Committee (Chair)
2013-2014	American Society of Plant Taxonomists, Publications Award Committee
2007-2010	American Society of Plant Taxonomists, Environment and Public Policy Committee (Chair, 2010)
2012	NSF Panel Service, DDIG

Reviewer for Scholarly Journals

Acta Botanica Fennica, *Aliso*, American Journal of Botany, American Naturalist, Annals of Botany, Biological Journal of the Linnean Society, BMC Biology, Botanical Studies, Brittonia, Evolution, Evolutionary Ecology, International Journal of Plant Sciences, International Journal of Tropical Biology and Conservation (Revista de Biología Tropical), Journal of the Botanical Research Institute of Texas, Kew Bulletin, Molecular Ecology, Molecular Phylogenetics and Evolution, Mycotaxon, *Opuscula Philolichenum*, Plant Species Biology, Proceedings of the California Academy of Sciences, Smithsonian Contributions to Botany, Southeastern Naturalist, Systematic Botany, Systematic Botany Monographs, Systematic Biology, Taxon, Torrey Botanical Society, and NSF External Reviewer

Other Professional Activities

2014-current	Extensive collaboration with Center for Biological Diversity to petition the U.S. Fish & Wildlife service to consider 30 species of North American lichens for federal protection under the Endangered Species Act
2009-2011	Curation of USDA PLANTS Database for Acanthaceae
1999-2002	General identifications of plants from Guyana Highlands, Smithsonian

MEMBERSHIP ON UNIVERSITY AND DEPARTMENTAL COMMITTEES

Departmental

2022	Merit Review Committee (Museum), Greenhouse Committee (EBIO) Li Tenure Committee (EBIO)
2021	Graduate Committee (EBIO), Greenhouse Committee (EBIO), Research Committee (EBIO)
2020	Merit Review Committee (EBIO)
2018	Merit Review Committee (Museum)

2018	Graduate Committee (EBIO, Fall Only)
2017	Merit Review Committee (EBIO)
2016	Stephanie Mayer, Re-appointment Committee (EBIO)
2015	Assistant Curator of Art Search Committee (Art Museum)
2014-2015	Invertebrate Curator Search Committee (EBIO & Museum)
2013-2014	ARPAC Space and Research Committees (Museum)
2013-current	Greenhouse Committee (EBIO)
2013-2014	Executive Committee (EBIO)

TEACHING

University of Colorado (IR = Instructor Rating and CR= Rating, Both out of 6 Total Points):

Summer 2023	EBIO4560/5560: Colorado Field Botany, N=13 students
Fall 2021	EBIO 4520/5520: Plant Systematics.
Summer 2021	EBIO 4560/5560: The Lichen Biome.
Summer 2019	EBIO 4460/5640: Colorado Field Botany, N=13 students, IR=6.0, CR=6.0.
Fall 2018	EBIO 4520/5520: Plant Systematics. N=16 students. IR=5.7, CR=5.3.
Summer 2018	EBIO 4560/5560 / MUSM 6110: The Lichen Biome. N=23 students. IR=5.7, CR=5.6.
Fall 2016	MUSM 5051 / ARTH5929: Collections Management. N=15 students. IR=5.8, CR=5.2.
Fall 2015	EBIO 4520 / 5520: Plant Systematics. N=22 students. IR=5.6, CR=5.1
Spring 2015	EBIO 6300: Evolutionary Genomics [co-taught with 4 other faculty]. N=9 students. IR=5.5, CR=6.0
Fall 2014	MUSM 5051 / ARTH5929: Collections Management. IR=5.4, CR=5.0
Fall 2013	EBIO 4520: Plant Systematics. N=23 students. IR=5.9, CR=5.5

Rancho Santa Ana Botanic Garden [Claremont Graduate University]:

Fall 2012	Graduate Seminar: Stephen Jay Gould's <i>Structure of Evolutionary Theory</i>
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Organization for Tropical Studies [OTS]:

2014	Plant Systematics, Faculty Resource Person (Las Cruces Biological Station)
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Extracurricular Teaching:

2017	Organized and led 2017 Tuckerman Lichen Workshop, an annual gathering of lichen professions, amateurs, and students; Alabama 4-H Center, Talledega National Forest
2017	Trained 5 new students in lichenology during 2017 Tuckerman Workshop (Carly Anderson, Kristin White, Adam Solon, Zach Muscavitch, Jordan Hoffmann)
2017	Taught a one-day lichen biology field workshop for CoNPS in the Flat Tops Wilderness
2017	Taught a lichen identification workshop and information session on importance of biodiversity in Boulder's open spaces to City of Boulder's OSMP program
2017	Gave lichen diversity & management seminar to Boulder County's Parks & Open Space program
2017	Contributed content to CU Museum's Symbiosis exhibit
2016	Colorado Native Plant Society, Weekend Workshop on Lichen Biology
2015	Ira B. Jones Elementary School (Asheville, NC), Annual Schoolyard Plant Ecology Plot Monitoring Project and In-Class Science Training

- 2014 Taxonomy, Nomenclature, and Flora Writing, Two-Week Training (6 Technicians) at The National Botanical Research Institute of Namibia
- 2014 Colorado Native Plant Society, Lichen Biology Field Trip
- 2013 Colorado Native Plant Society, Weekend Workshop on Lichen Biology
- 2013 Ira B. Jones Elementary School (Asheville, NC), Annual Schoolyard Plant Ecology Plot Monitoring Project and In-Class Science Training
- 2012 Ira B. Jones Elementary School (Asheville, NC), Annual Schoolyard Plant Ecology Plot Monitoring Project and In-Class Science Training
- 2011 Ira B. Jones Elementary School (Asheville, NC), Annual Schoolyard Plant Ecology Plot Monitoring Project and In-Class Science Training
- 2011 Greeneville High School's AP Biology Class, Lichen Workshop at Southern Appalachian Highlands Learning Center

STUDENTS & POSTDOCS

Graduate Students, University of Colorado

- Jacob Watts (EBIO PhD, 2022-in progress)
- Seth Raynor (Museum Masters, 2022-in progress)
- Adele Preusser (Museum Masters, 2022-in progress)
- Jesse Harris (EBIO PhD, 2016-in progress)
- Carly Anderson (EBIO PhD, 2016-in progress)
- Skylar Lynch (EBIO PhD, 2021-in progress)
- Mathew Sharples (EBIO PhD, 2013-2020)
- Angelia Romano (Museum Masters, 2021-2022)
- Justin Williams (Museum Masters, 2019-2021)
- Reese Beeler (EBIO Masters, 2017-2019)
- Louise Barton (EBIO Masters, 2017-2019)
- Sophia Warsh (Museum Masters, 2017-2019)
- Vanessa Díaz (Museum Masters 2014-2016)

Post-Doctoral Fellows

- Jessica Persinger (2021-present)
- Hu Su (2019-present)
- Hi Jiang (2019-present)
- Jeffrey Rose (2016-2019)
- Yongbin Zhuang (2015-2017)
- Yi-Hsin Erica Tsai (2013-2016)

INVITED SEMINARS AND SYMPOSIA

- 2021 Eastern Washington University, *Biogeography of North American Lichens*
- 2021 University of Minnesota, *Macroecology of North American Lichens*
- 2021 Eastern Washington University, *Macroecology of North American Lichens*
- 2021 Pacific Northwest Lichenologists, Annual Meeting, *Macroecology of North American Lichens*
- 2019 Universidade Federal de Goiania (Dept of Ecology & Evolution), *The North American Lichen Biota: New Ecological Syndromes and Drivers of Diversity and Distributions*
- 2019 Universidade Federal de Goiania (Dept of Ecology & Evolution), *How Many Ways are There to Make A Purple Flower?*
- 2018 Michigan State University (Dept of Biochemistry & Molecular Biology), East Lansing, MI, , *The North American Lichen Biota: New Ecological Syndromes and Drivers of Diversity and Distributions*

- 2018 Michigan State University (Dept of Plant Biology), East Lansing, MI, *How Many Ways are There to Make A Purple Flower?*
- 2018 University of Colombia, New York NY, *forthcoming*
- 2018 Harvard University, Cambridge, MA, "Evidence for Reinforcement in *Ruellia* (Acanthaceae)"
- 2018 Colorado Mycological Society, Denver, CO, "Nearly 6,000 Species of North American Lichens: Distributions, Traits, Ecologies, and New Syndromes"
- 2018 University of Colorado-Denver, Denver, CO, "Diversification and Flower Color Evolution in *Ruellia*: From Genomes to Phenotypes"
- 2018 Great Smoky Mountains National Park, Gatlinburg, TN, "Highlights from 10 Years of Lichenological Research in Great Smoky Mountains National Park"
- 2015 Missouri Botanical Garden & Danforth Plant Science Center Fall Symposium, St. Louis, MO, "Biocomplexity in Natural Systems: Adaptions to Arid Ecosystems in Plants and Lichens"
- 2015 Plenary Lecture: Society for the Preservation of Natural History Collections, Gainesville, FL, "Endless Forms Most Useful: The Role of Natural History Collections in Research, Education, and Outreach"
- 2015 University of North Colorado, Greeley, CO, "Origins of Floral Diversity and Macroevolutionary Consequences"
- 2014 Botany Meetings (American Society of Plant Taxonomists & Botanical Society of America), Boise, ID, "Lichens As Endangered Species in the United States"
- 2014 National Botanical Research Institute, Namibia: "The Acanthaceae of Namibia"
- 2013 Oklahoma State University, Stillwater, OK, "A history of divergence and diversification in Acanthaceae"
- 2013 Royal Botanic Garden, Kew, Richmond, Surrey, U.K., "Macroevolutionary Trends in Acanthaceae"
- 2013 Royal Botanic Garden, Edinburgh, Scotland, U.K., "Macroevolutionary Trends in Acanthaceae"
- 2013 Namibian Botanical Society, Windhoek, Namibia: "The Acanthaceae of Namibia"
- 2012 Great Smoky Mountains Conservation Association, Knoxville TN, "Lichens of Great Smoky Mountains: Discovery and Conservation of a Hyperdiverse Biota"
- 2012 Great Smoky Mountains National Park Headquarters, Twin Creeks TN, "Lichens of Great Smoky Mountains: Discovery and Conservation of a Hyperdiverse Biota"
- 2012 The University Club, Claremont CA, "How Known is "Well-Known"? Progress in Lichenology in Great Smoky Mountains National Park"
- 2012 Botany Meetings (American Society of Plant Taxonomists & Botanical Society of America), Columbus OH, Symposium: Where is Plant Systematics Headed in the Next Ten Years? "The Biodiversity Information Synthesis"
- 2012 University of Colorado-Boulder, Boulder CO, "Macroevolutionary Trends and Countertrends: Evidence from Acanthaceae"
- 2011 South China Botanical Garden, Guangzhou, China, "Ruellia, Ruellieae, and Evolution of Acanthaceae"
- 2011 South China Botanical Garden, Guangzhou, China, "Plant Botanical Exploration in the Tepui Highlands of Guyana"
- 2010 Escuela Agrícola Panamericana Zamorano, Honduras, "La Importancia de la Diversidad Vegetal en Los Trópicos para la Conservación de la Biodiversidad Mundial"
- 2010 Institut für Systematische Botanik, Zurich, Switzerland, "Distributions, Diversification, and Divergence Times in Acanthaceae"
- 2008 Rancho Santa Ana Botanic Garden, Claremont CA, *Systematics and Pollination System Transitions in Ruellia (Acanthaceae)*"
- 2008 Academy of Natural Sciences, Philadelphia PA, "Systematics and Pollination System Transitions in *Ruellia* (Acanthaceae)"
- 2007 Philadelphia Botanical Club, Philadelphia PA, "Botanical Collections in the Tepui Highlands of Guyana"

PAPERS AND POSTERS PRESENTED AT PROFESSIONAL MEETINGS

- 2023 Botany Meetings, Boise, ID “*Pollination Diversity in American Justicia (Acanthaceae)*” [Erin Manzitto-Tripp [Amanda Fisher, Carrie Kiel, Lucinda McDade, Erin Manzitto-Tripp]
- 2023 Botany Meetings, Boise, ID “*Pattern, Timing and Biotic Context of Diversification in Justicia*” [Carrie Kiel, Lucinda McDade, Erin Manzitto-Tripp].
- 2023 Botany Meetings, Boise, ID “*Microclimate and substrate shape lichen community composition and functional diversity in the foothills of the Southern Rocky Mountains*” [Jacob Watts, Erin Manzitto-Tripp].
- 2023 Botany Meetings, Boise, ID “Comparing phenological shifts in tropical wet and dry habitats using herbarium specimens” [Skylar Graves, Erin Manzitto-Tripp]
- 2023 Botany Meetings, Boise, ID “Internal and external biotic factors drive patterns of lichen species richness in the imperiled Southern Appalachian Biodiversity Hotspot” (James Lendemer, Erin Manzitto-Tripp, Christy McCain]
- 2022 Botany Meetings, Anchorage, AK, “Filament curtains, didynamous stamens, asymmetric stigmas, and the evolution of reproductive floral whorls in *Ruellia* (Acanthaceae) [Jeffrey Rose, Erin Manzitto-Tripp]
- 2022 Botany Meetings, Anchorage, AK, “A synopsis of lichenology research in Colorado and plans for future exploration” [Seth Raynor, Erin Manzitto-Tripp]
- 2022 Botany Meetings, Anchorage, AK, “Comparing a phenological shift in tropical wet and dry habitats using herbarium specimens” [Skylar Lynch, Brett Melbourne, Erin Manzitto-Tripp]
- 2021 Botany Meetings, virtual, “The surprising morphological and interspecific variation among stigmas in New World *Justicia*: is this remarkable diversity associated with pollination syndromes?” [Carrie Kiel, Erin Manzitto-Tripp, Amanda Fisher, Lucinda McDade]
- 2020 Botany Meetings, virtual, “Homoplasious character assessment in *Clematis* subgenus *Viorna*” [Jesse Harris, Erin Manzitto-Tripp, Stacey Smith]
- 2018 Botany Meetings, Rochester, MN, “*Inferring the Biogeographical History of the Cosmopolitan Angiosperm Genus Stellaria L.*” [Mathew Sharples, Erin Tripp]
- 2018 Botany Meetings, Rochester, MN, “*Ingression Among Western North American Bilberries (Vaccinium section Myrtillus)*” [Reese Beeler, Erin Tripp, Mathew Sharples]
- 2018 Botany Meetings, Rochester, MN, “*How Many Ways Are There To Make a Purple Flower?*” [Lucinda McDade, Erin Tripp + 7 others]
- 2018 Botany Meetings, Rochester, MN, “*Nearly 6,000 Species of North American Lichens: Distributions, Traits, Ecologies, and New Syndromes*” [Erin Tripp, James Lendemer]
- 2018 American Bryological & Lichenological Society, University of Colorado's Mountain Research Station, “*Nearly 6,000 Species of North American Lichens: Distributions, Traits, Ecologies, and New Syndromes*” [Erin Tripp, James Lendemer]
- 2017 Botany Meetings, Ft. Worth, TX, “*Intercontinental Gradients in Plant Flavonoids: Testing the Impacts of Latitude, Environment, and Phylogeny in Ruellia (Wild Petunias: Acanthaceae)*” [Erin Tripp, Yongbin Zhuang, Matt Schreiber, Heather Stone, Andrea Berardi]
- 2016 Botany Meetings, Savannah, GA, “*RADseq Dataset with 90% Missing Data Fully Resolve Nascent Radiation of Petalidium (Acanthaceae) in the Ultra-Arid Deserts of Namibia*” [Erin Tripp, Erica Tsai, Yongbin Zhuang, Kyle Dexter]
- 2015 Botany Meetings, Edmonton, Alberta, “*Correlates of Lichen Biogeography: Continental-Scale Exploration of Taxon and Trait Distributions Across the United States*” [Erin Tripp, James Lendemer, Albert Barberán, Rob Dunn, Noah Fierer]
- 2014 Botany Meetings, Boise, ID, “*Now That We Have a Date For Our Clade: Using the Calibrated Phylogeny for Acanthaceae to Test Hypotheses about Tempo, Mode, and Drivers of Evolution*” [Lucinda McDade, Erin Tripp]
- 2014 Botany Meetings, Boise, ID, “*Reproductive Isolating Mechanisms in Ruellia (Acanthaceae)*” [Heather Stone, Erin Tripp]

- 2013 Botany Meetings, New Orleans, LA, “*Flower Color Evolution in Ruellia (Acanthaceae)*” [Erin Tripp]
- 2013 Botany Meetings, New Orleans, LA, “*The Enticing Life of Arthonia (Arthoniomycete: Ascomycota)*” [Erin Tripp, James Lendemer]
- 2012 Botany Meetings, Columbus OH, “*Biogeography and Divergence Times in Acanthaceae*” [Lucinda McDade, Erin Tripp]
- 2011 Botany Meetings, St. Louis MO, “*The Genus Physacanthus (Acanthaceae) – an Intergeneric, Interlineage hybrid?*” [**recipient of The George R. Cooley Award for best evolution paper presented by a young scientist**] [Erin Tripp, Lucinda McDade, Siti Fatimah, Iain Darbyshire]
- 2011 Botany Meetings, St. Louis, MO, “*How Known is “Well-Known”? Progress in Lichenology in Great Smoky Mountains National Park*” [Erin Tripp, James Lendemer]
- 2011 Botany Meetings, Columbus OH, “*Systematics and Comparative Anatomy of Satanocrater*” [Siti Fatimah, Erin Tripp]
- 2011 Rancho Santa Ana Botanic Garden, Claremont CA, “*How Known is “Well-Known”? Progress in Lichenology in Great Smoky Mountains National Park*” [Erin Tripp]
- 2011 Association for Southeastern Biologists, Huntsville AL, “*How Known is “Well-Known”? Progress in Lichenology in Great Smoky Mountains National Park*” [Erin Tripp, James Lendemer, Richard Harris]
- 2010 Botany Meetings, “*Preliminary Analysis of Phylogenetic Relationships within Ruellieae (Acanthaceae)*” [Erin Tripp]
- 2009 NSF-sponsored MORPH Homology conference, Boulder CO, “*Proper Assessment of Floral Color Homology Through Anthocyanin Pigment Profiling and Molecular Expression of Key Loci in Ruellia (Acanthaceae)*” [Erin Tripp]
- 2008 Botany Meetings, Vancouver, British Columbia, “*Pollination System Evolution in Ruellia (Acanthaceae)*” [Erin Tripp, Paul Manos]
- 2008 Duke University Dissertation Seminar, Durham NC, “*Systematics and Pollination System Evolution in Ruellia (Acanthaceae)*” [Erin Tripp]
- 2008 South African Society for Systematic Biology, Johannesburg, South Africa, “*Biogeography and Diversification of the Acanthaceae*” [Lucinda McDade, Tom Daniel, Carrie Kiel, and Erin Tripp]
- 2007 Botany Meetings, “*Phylogeny and Biogeography of Juglans (Juglandaceae) Based on Nuclear DNA sequences*” [Sang-Hun Oh, Paul Manos, Erin Tripp]
- 2007 Association for Tropical Biology & Conservation, Morelia, Mexico, “*Evolution of Pollination Systems in Ruellia (Acanthaceae)*” [Erin Tripp]
- 2006 Duke University, Durham NC, “*Diversification Patterns in Ruellia (Acanthaceae)*” [Erin Tripp]
- 2006 The Academy of Natural Sciences, Philadelphia PA, “*Systematics and Pollinator Transitions in the Species-Rich Genus Ruellia (Acanthaceae)*” [Erin Tripp]
- 2006 Botany Meetings, Chico CA, “*Systematics of Ruellia (Acanthaceae): a Preliminary Examination of Evolutionary Relationships within a Species-Rich Genus*” [Erin Tripp]
- 2006 Society for Integrative and Comparative Biology, Orlando FL, “*Systematics and Pollinator Transitions in Ruellia (Acanthaceae)*” [Erin Tripp]
- 2003 Pennsylvania Academy of Sciences Annual Symposium, Harrisburg PA, “*The Current Status of Ruellia in Pennsylvania and Eastern North America: Natural History, Allozymes, and Morphometrics*” [Erin Tripp]
- 2002 National Conference for Undergraduate Research, Whitewater WI, “*Plant Diversity and Biogeography of the Upper Potaro Watershed in Guyana*” [Erin Tripp]
- 2002 University of North Carolina-Asheville Undergraduate Research Symposium, Asheville NC, “*Plant Diversity and Biogeography of the Upper Potaro Watershed in Guyana*” [Erin Tripp]

EXTRACURRICULAR LECTURES AND PRESENTATIONS

* indicates undergraduate author

- 2019 Lecture on “Change”, University of Colorado Library

- 2014 *What Makes A Legend?* Univ. of Colorado Library event (“CU Legends”) to honor the lifelong work of Dr. William A. Weber (12 Nov 2014)
- 2008 North Carolina Zoo Association of Horticulturists (Durham, NC), Plant Collecting and its Scientific Values
- 2006 Durham, North Carolina’s College Bound Program, Importance of Biodiversity Presentation
- 2004 City of Durham (NC) and Duke University’s School Days Program, Importance of Biodiversity Walk through Duke Greenhouses
- 2004 Falkville Elementary School (Falkville, AL), Importance of Biodiversity Presentation
- 2003 Wissahickon High School (Philadelphia, PA), Importance of Biodiversity Presentation
- 2003 University City High School (Philadelphia, PA), Importance of Biodiversity Presentation, followed by full day of service work in Wissahickon Park
- 2003 Erwin Middle School (Asheville, NC), Importance of Biodiversity Presentation

FIELD EXPERIENCE

<u>North America:</u>	Alabama, California, Colorado, Florida, Georgia, North Carolina, Pennsylvania, South Carolina, Tennessee, West Virginia
<u>Central & South America:</u>	Bolivia, Brazil, Colombia, Costa Rica, Ecuador, Guyana, Mexico, Panama, Peru, Venezuela
<u>Africa:</u>	Angola, Namibia, Ethiopia
<u>Asia:</u>	China, New Caledonia

EPONYMY

Fellhanera erinae R.C. Harris & Lendemer, published in *Opuscula Philolichenum* 6: 165 (2009).

Justicia erinae I. Darbysh., published in *Blumea* 64: 101-103 (2019).

CURATORIAL CONTRIBUTIONS, PLANTS AND LICHENS

~10,300 plant and lichen herbarium specimens collected under Tripp collection #s in: Angola, Alabama, Bolivia, Brazil, China, Colombia, Costa Rica, Panama, Ecuador, Ethiopia, Guyana, Mexico, Namibia, New Caledonia, Peru, USA, Venezuela (these housed at herbaria all over the world)

~22,000 plant and lichen herbarium specimens collected under other’s #s from worldwide locations

Duplicates Distributed to Numerous Museums Including:

BRG [University of Guyana], BRIT [Botanical Research Institute of Texas], CAS [California Academy of Science], CR [Museo Nacional de Costa Rica], DUKE [Duke University], ETH [Addis Ababa University], F [Field Museum of Natural History], GSMNP [Great Smoky Mountains National Park], GUYN [Fundación Jardín Botánico del Orinoco, Venezuela], IEB [Instituto de Ecología], INB [Instituto Nacional de Biodiversidad, Costa Rica], IVIC [Instituto Venezolano de Investigaciones Científicas], K [Royal Botanic Garden, Kew], KUN [Kunming Botanical Garden], MERC [Universidad de Los Andes], MEXU [Universidad Nacional Autónoma de México], MO [Missouri Botanical Garden], NY [New York Botanical Garden], OC [Oberlin College], PH [Academy of Natural Sciences of Philadelphia], RSA-POM [Rancho Santa Ana Botanical Garden], SICB [South China Botanical Garden], STRI [Smithsonian Tropical Research Institute], WIND [National Botanical Research Institute, Namibia], UC [University of California, Berkeley], US [Smithsonian Institution], USJ [Universidad de Costa Rica], UW [University of

Washington], UNCA [University of North Carolina, Asheville], VEN [Fundación Instituto Botánico de Venezuela].

CURATORIAL ACTIVITIES, COLO HERBARIUM

Collections Managed

Total	550,000 specimens
Vascular Plants	310,000 specimens
Bryophytes	119,000 specimens
Lichens	96,000 specimens
Algae	5,800 specimens
Other	19,200 specimens

Supervisees

Tim Hogan, Botany Collections Manager, 1989-2022

Dina Clark, Botany Collections Manager, 2011 to present

Ryan Allen, Botany Project Manager, 2012 to present

Museum Graduate Assistant, 1-2 per semester (incl. summer), 20 hours per week

Undergraduate Botany Technicians, 3-6 per semester (incl. summer), 10-20 hours each / week