

Chelsea N. Miller

www.chelseanicolemiller.com

cmill107@vols.utk.edu

EDUCATION

2020 – 2014	PhD, Ecology and Evolutionary Biology Kwit Lab Department of Ecology and Evolutionary Biology University of Tennessee, Knoxville
2020 – 2017	MS, Statistics Intercollegiate Graduate Statistics Program University of Tennessee, Knoxville
2013 – 2009	BS, Biology Biology Department University of Central Arkansas

PUBLICATIONS

(* = in prep, review, or revision; § = undergraduate coauthor)

- * C. Kwit, M. Patton, **Miller, C. N.**, and C. Lash. In Prep. Advancing the profile of quality of seed treatment by frugivores and seed dispersers in seed dispersal effectiveness.
- * **Miller, C. N.**, M. Papeş, and C. Kwit. In Prep. Geographic distribution of species in the genus *Trillium* in eastern North America.
- 4. **Miller, C. N.**, S. R. Whitehead, and C. Kwit. 2020. Effects of seed morphology and elaiosome chemical composition on attractiveness of five *Trillium* species to seed-dispersing ants. *Ecology and Evolution* 2020;00: 1–14. DOI:10.1002/ece3.6101.
- 3. **Miller, C. N.**, H. Brabazon§, I. M. Ware, N. H. Kingsley§, and J. M. Budke. 2019. Bringing an Historic Collection into the Modern Era: Curating the J. K. Underwood Seed Collection at the University of Tennessee Herbarium (TENN). *Collection Forum* 32(1-2): 14-30.
- 2. **Miller, C. N.**, and C. Kwit. 2018. Overall seed dispersal effectiveness is lower in endemic *Trillium* species than in their widespread congeners. *American Journal of Botany* 105(11): 1-11.
- 1. Valenta, K., **C. N. Miller**, S. K. Monckton, S. A. Styler, D. J. Jackson, A. D. Melin, C. A. Chapman and M. J. Lawes. 2016. Fruit ripening signals and cues in a Madagascan dry forest: haptic indicators reliably indicate fruit ripeness to dichromatic lemurs. *Evolutionary Biology*, 1-12.

PRESENTATIONS

(* = upcoming presentations; § = undergraduate coauthor)

- * **Miller, C. N.,** S. R. Whitehead, and C. Kwit. 2020. Effects of seed morphology and elaiosome chemical composition on attractiveness of five *Trillium* species to seed-dispersing ants. Invited seminar. 105th Annual Meeting of the Ecological Society of America. Salt Lake City, UT. Oral presentation.
5. **Miller, C. N.,** S. R. Whitehead, and C. Kwit. 2019. Composition of elaiosome phytochemical profiles and fatty acid concentrations drive seed disperser preference in myrmecochorous species of *Trillium*. 104th Annual Meeting of the Ecological Society of America. Louisville, KY. Poster presentation.
4. **Miller, C. N.,** S. R. Whitehead, and C. Kwit. 2019. Elaiosome chemical attributes may explain disperser preference for the seeds of widespread *Trillium* species compared to their co-occurring endemic congeners. 5th Annual Women in STEM Symposium. Knoxville, TN. Poster presentation.
3. **Miller, C. N.,** and C. Kwit. 2018. Comparisons of seed dispersal effectiveness between sympatric endemic and widespread *Trillium* congeners in the southeastern US. 103rd Annual Meeting of the Ecological Society of America. New Orleans, LA. Oral presentation.
2. **Miller, C. N.,** and C. Kwit. 2017. Ant-seed dispersal and rarity in southeastern US trilliums. 78th Annual Meeting of the Association of Southeastern Biologists Conference. Montgomery, AL. Oral presentation.
1. **Miller, C. N.,** and C. Kwit. 2015. Plant advantages in myrmecochory: redirecting directed dispersal. Natural Areas Association Conference. Little Rock, AR. Oral presentation.

AWARDS, SCHOLARSHIPS AND FELLOWSHIPS

2020	Outstanding Dissertation Award, Dept. EEB, UTK
2019 – 2020	Oscar Roy Ashley Fellowship, UTK (\$4,000)
2019	Ecological Society of America Student Section Travel Grant
2019	Graduate Student Council Travel Award, UTK
2019	Plant Research Center Travel Award, UTK
2019	Graduate Researchers in Evolutionary Biology and Ecology Travel Award, UTK
2018	Graduate Student Council Travel Award, UTK
2017 – 2018	TENN Herbarium Graduate Research Assistantship, UTK (\$10,320)

2017	Association of Southeastern Biologists Graduate Student Award
2017	Plant Research Center Travel Award, UTK
2017	Graduate Researchers in Evolutionary Biology and Ecology Travel Award, UTK
2015	Graduate Student Council Travel Award, UTK
2014 – 2020	Graduate Teaching Assistantship, UTK (\$117,500)
2012	Travel Abroad Grant, UCA (\$2,500)
2011	Travel Abroad Grant, UCA (\$3,000)
2009 – 2020	Norbert O. Schedler Honors College Scholarship, UCA (\$65,000)

GRANTS AND FUNDING (total: \$7,922.75)

5. **Miller, C. N.** Modified species distribution modeling to detect dispersal limitation in endemic *Trillium*. L.R. Hesler Herbarium Student Research Award (**\$1,822.75**)
4. **Miller, C. N.** Investigating rarity in southeastern myrmecochores using distribution modelling and a study of seed dispersal ecology. UTK EEB Departmental Funds (**\$350**)
3. **Miller, C. N.,** H. Korotkin, C. Lash, A. Bruce., C. Kwit, and B. Ownley. Does the presence of entomopathogenic fungi on myrmecochorous seeds affect seed-handling and dispersal behaviors in *Aphaenogaster* ants? Botanical Society of America Graduate Student Research Award (**\$500**)
2. **Miller, C. N.** Investigating rarity in southeastern trilliums: combining comparative *in situ* and *ex situ* approaches. UTK EEB Departmental Funds (**\$750**)
1. **Miller, C. N.** Seed biology and dispersal of rare, state-endangered southeastern trilliums: combining comparative *in situ* and *ex situ* approaches. Catherine H. Beattie Fellowship. Garden Club of America (**\$4,500**)

TEACHING

Instructor or Co-instructor

Spring 2020	University of Tennessee, Knoxville. BIOL 269: Ecology Field-Based Laboratory. Head Instructor.
Fall 2019	University of Tennessee, Knoxville. BIOL 269: Ecology Field-Based Laboratory. Head Instructor.
Summer 2019	University of Tennessee, Knoxville. BIOL 269: Ecology Field-Based

- Laboratory. **Head Instructor.**
- Spring 2019 University of Tennessee, Knoxville. BIOL 269: Ecology Field-Based Laboratory. **Co-instructor.**
- Fall 2017 University of Tennessee, Knoxville. BIOL 115: Introduction to Plant Diversity. **Co-instructor.**

Graduate Teaching Assistant

- Fall 2018 University of Tennessee, Knoxville. BIOL 260: Ecology Lecture.
- Summer 2018 University of Tennessee, Knoxville. BIOL 101: Introduction to Biology I.
- Spring 2017 University of Tennessee, Knoxville. EEB 426: Plant-Animal Interactions.
- Fall 2016 University of Tennessee, Knoxville. BIOL 101: Introduction to Biology I.
- Spring 2016 University of Tennessee, Knoxville. BIOL 102: Introduction to Biology II.
- Fall 2015 University of Tennessee, Knoxville. BIOL 150: Organismal and Ecological Biology.
- Spring 2015 University of Tennessee, Knoxville. BIOL 150: Organismal and Ecological Biology.
- Fall 2014 University of Tennessee, Knoxville. BIOL 101: Introduction to Biology I.

Guest Lectures

- Spring 2020 University of Tennessee, Knoxville. EEB 443: Plant Ecology. *Guest author to lead paper discussion.*
- Spring 2020 University of Tennessee, Knoxville. FWF 422R/522: Rare Species Biology, Conservation, and Management. *An Introduction to Species Distribution Modeling (SDM)*
- Fall 2018 University of Tennessee, Knoxville. BIOL 260: Ecology Lecture. *Introduction to Mutualism.*

RESEARCH EXPERIENCE

- | | |
|--------------------------|---|
| Dec. 2013 –
June 2014 | <p>Assistant Natural Resources Manager</p> <p>Camp Robinson Military Base, North Little Rock, AR</p> <p>I was responsible for the field and laboratory components of management/research projects being conducted by the Natural Resources Department. I performed aquatic macroinvertebrate sampling, rapid bioassessment of streams, small mammal trapping, herpetological sampling, invasive vegetation management, and game species monitoring. I participated in seasonal wild land management burns and in pest management duties.</p> |
|--------------------------|---|

May 2013 – August 2013	<p>Biological Technician</p> <p>Virginia Department of Game and Inland Fisheries, Wachapreague, VA</p> <p>I monitored populations of water and wading birds using nest, egg, chick, and incubating adult counting techniques and band resighting. Mastered use of binoculars and sighting scope in the field, bird identification skills, GPS use, and hand-capture of immature birds for banding.</p>
May 2012 – August 2012	<p>Biological Technician</p> <p>Masoala National Park, Madagascar</p> <p>Dr. Zach Farris</p> <p>I assisted in a field study of the population dynamics of endemic carnivores in the rainforests of Northeastern Madagascar. I worked with Malagasy WCS workers and civilians. Fieldwork included setting up camera trap transects, requiring knowledge of camera use, use of GPS units, and performance of standard habitat transects. I performed lemur transects and small mammal trapping.</p>
January 2009 – May 2012	<p>Biological Technician</p> <p>University of Central Arkansas, Conway, AR</p> <p>Aquatic Ecology Lab, Dr. Sally Entekin</p> <p>I participated in studies of macroinvertebrates in the sediment of Gulf streams, with emphasis on effects of natural gas fracking, recorded aquatic habitat transects, and collected aquatic samples. I also studied leaf decomposition in wetland habitats, which involved planting leaf bags, the use of HOBO loggers, and nutrient sampling techniques. I worked on a project studying the movement patterns of Cyprinidae in intermittent streams of the Sylamore River; I collected, tagged, and recorded mass, length, and sex of fish. Furthermore, I assisted in a follow-up study to the 2009 Arkansas Game and Fish snakehead eradication in Brinkley, AR, which required identification of common freshwater fishes and the use of an electroshocker.</p>

ADDITIONAL TRAINING

Aug. 5, 2018	ESA2018 ComSciCon Workshop
Jan. 25, 2018	Generalized Joint Attribute Modeling (GJAM). Dr. James Clark.
June 19 – 23, 2017	Joint MBI-NIMBioS-CAMBAM Summer Graduate Program, “Connecting Models with Biological Data.” <i>Competitive entry program.</i>
May 18, 2017	TAG (TN-AL-GA) Plant Conservation Alliance Meeting

March 31,
2016

GEOLocate Software Tutorial (Tulane University). SERNEC at
Association of Southeastern Biologists meeting.

PROFESSIONAL SERVICE AND MEMBERSHIP

Present – 2017	Member Ecological Society of America, Southeastern Chapter
2018 – 2017	Association of Southeastern Biologists
2018 – 2016	Botanical Society of America
2016 – 2015	International Primatological Society
Present – 2017	Ad-Hoc Peer Reviewer <i>Journals:</i> Ecology and Evolution, Biotropica, Perspectives in Plant Ecology, Evolution, and Systematics
2018 – 2017	President of Graduate Researchers in Evolutionary Biology and Ecology. Dept. of EEB at UTK. <i>Elected representative.</i>
2017 – 2016	Member of Engaging Knoxville in Ecology and Evolutionary Biology Dept. of EEB at UTK
2017 – 2016	Committee Member Dept. of EEB at UTK Graduate Affairs Committee. <i>Elected representative.</i>
2017 – 2016	Committee Member Dept. of EEB at UTK Undergraduate Affairs Committee. <i>Elected representative.</i>
2016 – 2015	Committee Member Dept. of EEB at UTK Seminar Committee. <i>Elected representative.</i>

VOLUNTEER AND OUTREACH SERVICE

2019	Instructor. Kids U. Vertebrate Zoology. Hands-on vertebrate zoology. 4 th – 8 th graders. University of Tennessee, Knoxville.
2018	Instructor. Kids U. Snakes Alive! Hands-on herpetology. 4 th – 8 th graders. University of Tennessee, Knoxville.
2019	Poster Judge. Southern Appalachian Science and Engineering Fair Judge, UTIA, Knoxville, TN.
2018	Poster Judge. Pittman Center Elementary Science Fair, Pittman Center, TN.

REFERENCES

1. Charles Kwit, Ph.D.
UTK Assistant Professor, Dissertation Adviser
ckwit@utk.edu
(865) 809-5337
2. Joseph Clark, Ph.D.
Supervisory Research Ecologist: Branch Chief of the U.S. Geological Survey's Southern Appalachian Field Branch
UTK Adjunct Professor, Committee Member
jclark1@usgs.gov
(865) 974-4790
3. Monica Papeş, Ph.D.
UTK Assistant Professor, Research Mentor/Collaborator
mpapes@utk.edu
(865) 974-2821
4. Jessica Budke, Ph.D.
UTK Assistant Professor & Herbarium Director, Research Advisor/Collaborator
jbudke@utk.edu
(865) 974-6204