

Katherine G. Mathews

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Education

The University of Texas at Austin
Harvard University

Ph.D. Systematic Botany, 1997
B.A. magna cum laude Fine Arts, 1992

Professional Employment

2009-present	Associate Professor of Biology & Director of the WCU Herbarium Western Carolina University, Cullowhee, NC
2003-2009	Assistant Professor of Biology & Director of the WCU Herbarium Western Carolina University, Cullowhee, NC
2003	Grant Writer, University of Tennessee at Chattanooga Development Specialist & Naturalist, Chattanooga Audubon Society
2001-2002	Assistant Professor of Biology Austin Peay State University, Clarksville, TN
1998-2001	Project Coordinator & Research Taxonomist, New York Metropolitan Flora Brooklyn Botanic Garden, Brooklyn, NY
1999-2001	Adjunct Curator, The Lewis B. and Dorothy Cullman Program for Molecular Systematics Studies, New York Botanical Garden, Bronx, NY
1997-1998	Postdoctoral Fellow Harvard University Herbaria & The Arnold Arboretum, Cambridge, MA
1993-1997	Teaching Assistant and Ph.D. candidate Curatorial Assistant, Plant Resources Center (TEX/LL herbarium) The University of Texas at Austin

Teaching Record

2003-present	Western Carolina University Principles of Biology I & II, Plants & Society, Environmental Biology, Dendrology, Evolutionary Biology, Vascular Plants, Flora of the Southern Appalachians, Principles of Systematics, Lab Methods in Molecular Systematics, Plants & Human Affairs, Research in Ecology & Evolution
2001-2002	Austin Peay State University, Clarksville, TN Introductory Biology for majors & non-majors, Plant Taxonomy, Field Botany
1993-1997	The University of Texas at Austin Angiosperm Diversity lab, Native Plants, General Botany labs, Introductory Biology lab

Selected Peer-Reviewed Publications (denotes student co-author)*

Mathews, K.G. Loganiaceae. In Flora of North America, v. 14. *Forthcoming, 2019.*

Mathews, K.G., M.S. Ruigrok*, and G. Mansion. 2015. Phylogeny and Biogeography of the Eastern North American Rose Gentians (*Sabatia*, Gentianaceae). *Systematic Botany* 40(3): 811-825.

Mathews, K.G. and B. Collins. 2014. Plant and pollinator communities of high elevation rock outcrops. *Natural Areas Journal* 34(3): 300-309.

Pate, S.J., J.A. Clement, J.H. McCoy, S.L. Lance and **K.G. Mathews**. 2012. Development and characterization of microsatellite markers for *Actaea racemosa* L. (black cohosh, Ranunculaceae). *American Journal of Botany* 99: e274-e276.

Weakley, A.S., R.J. LeBlond, B.A. Sorrie, T. Witsell, D. Estes, **K.G. Mathews**, A. Ebihara and K. Ghandi. 2011. New combinations, rank changes, and nomenclatural and taxonomic comments in the vascular flora of the southeastern United States. *J. Bot. Res. Inst. Texas* 5: 437-455.

Popovkin, A.V., **K.G. Mathews**, M.C. Molina, and L. Struwe. 2011. *Spigelia genuflexa* (Loganiaceae), a new geocarpic species from northeastern Bahia, Brazil. *Phytokeys* 6:47-65.

Collins, B. and **K.G. Mathews**. 2011. Wildflowers and Plant Communities of the Southern Appalachian Mountains and Piedmont [book review]. *Castanea* 76(4): 434-435.

Mathews, K. G., J. Huguelet*, M. Lanning*, T. Wilson*, and R. S. Young. 2009. Clonal diversity of fruiting culms within stands of *Arundinaria gigantea* (Poaceae; Bambusoideae) in western North Carolina assessed using AFLP fingerprints. *Castanea* 74(3): 213-223.

Griffith, A. D.*, D. A. Kinner, B. R. Tanner, A. Moore, R. S. Young, and **K. G. Mathews**. 2009. Nutrient and Physical Soil Characteristics of Rivercane Stands, Western North Carolina. *Castanea* 74(3): 224-235.

Mathews, K., N. Dunne, E. York*, and L. Struwe. 2009. A phylogenetic analysis and taxonomic revision of *Bartonia* (Gentianaceae-Gentianeae), based on molecular and morphological evidence. *Systematic Botany* 34: 162-172.

Struwe, L., V. A. Albert, M. F. Calió, C. Frasier, K. B. Lepis, **K. G. Mathews**, & J. R. Grant. 2009. Evolutionary patterns in neotropical Helieae (Gentianaceae): evidence from morphology, chloroplast and nuclear DNA sequences. *Taxon* 58(2): 479-499.

*Presentations and Posters (past 6 years: * denotes student co-author)*

Mathews, K.G., A. Lafferty* and D. Styers. 2018. Studying Southern Appalachian, high-elevation rock outcrop island dynamics and species distributional patterns using digitized herbarium data. Presented at Digital Data in Biodiversity Research Conference, Berkeley, CA.

Mathews, K.G., A. Lafferty* and D. Styers. 2018. Southern Appalachian, high-elevation rock outcrop island dynamics: what digitized herbarium data can tell us. Presented at the Association of Southeastern Biologists meeting, Myrtle Beach, SC.

Mathews, K.G. 2018. Taxonomy of *Diervilla* (Caprifoliaceae). Presented at the Association of Southeastern Biologists meeting, Myrtle Beach, SC.

Mathews, K.G. and H. Meeler*. 2017. *Diervilla*, our native bush-honeysuckles. Presented at the Cullowhee Native Plants Conference, Cullowhee, NC.

Mathews, K.G. and D. Richardson*. 2016. Cross-species microsatellite amplification in the *Trillium erectum* complex. Paper presented at the Association of Southeastern Biologists meeting, Concord, NC.

Mathews, K.G., M.S. Ruigrok*, and G. Mansion. 2015. Phylogeny and Biogeography of the Eastern North American Rose Gentians (*Sabatia*, Gentianaceae). Paper presented at the Botanical Society of America meetings, Edmonton, Canada.

Mathews, K. and L. Struwe. 2014. Intertribal and interspecific relationships of *Spigelia* (Loganiaceae). Paper presented at IV International Rubiaceae and Gentianales Conference, Salvador, Brazil.

Awards, Grants & Contracts (past 5 years)

2018. Academic Project Grant (\$440) awarded to undergraduate students Anna McCormick & Taylor Gray for “Detecting Hybridization in the *Trillium erectum* complex using Microsatellite Markers.”

2017-2018. Hunter Scholar Award: Creating a Montane Island Plant Digital Collection for Research, Education and Conservation.

2016-2017. Provost’s Internal Funding Support Grant, “Establishment of CATS-NGS (Consortium for the Advancement of Teaching and Scholarship through Next-Generation Sequencing) to enhance the molecular science infrastructure at WCU.” Co-PIs Brittanina Bintz, Brian Byrd, Jaime Wallen & Maria Gainey. \$14,736.

2014-2018. National Science Foundation Advancing Digitization of Biological Collections, “Digitization TCN: Collaborative Research: The Key to the Cabinets: Building and sustaining a research database for a global biodiversity hotspot”. Total grant award: \$2,500,000; WCU Collaborator/subcontractor award: \$49,734.

2013-2014. WCU Faculty Research and Creative Activities Award: Investigating the Origins of Southern Appalachian High-Elevation Rock Outcrop Flora, \$5,000.

2013. The American Chestnut Foundation, Purchasing Imaging Equipment for the WCU Herbarium, \$6,755.

2013. WCU Professional Development Grants for attending Bryophyte Identification Workshop at HBS (\$400) and teaching workshops at Botanical Society of America conference in New Orleans (\$900).

2010-2013. H.F. Cotton & Katherine P. Robinson Professorship in Biology.

Professional Memberships and Service

Southern Appalachian Botanical Society: President 2014-16, Past-President 2016-17, Member

Society of Herbarium Curators: Council Member-at-Large 2016-18, Chair of Student Grants committee, 2017-2018, Secretary, 2018-2020

American Society of Plant Taxonomists: Member.

Highlands Biological Station Scientific Board of Advisors, 2016-18

Cullowhee Native Plants Conference Steering Committee member, 2017-2019

Ad-hoc peer-reviewer for research journals, including *Castanea*, *NC Academy of Sciences*, *Journal of Biogeography*, *Molecular Phylogenetics & Evolution*, *Phytotaxon*, *Southeastern Naturalist*, *Systematic Botany*

Invited external reviewer for Western Washington University, promotion of a faculty member to Professor, 2016

Panel co-organizer & moderator, "Botany of Extreme Habitats," Society of Southeastern Biologists annual meeting, Chattanooga, TN, 2015.

Fall foliage forecaster for WCU and western North Carolina, 2005-2015. Predicted timing and quality of leaf color change each fall for 10 years as spokesperson for WCU. Interviewed for numerous newspaper articles, radio and television news shows each fall. Designed & tabled Fall Foliage booth in UC Grand Room for Tar Heel Tour: Our State, Our Time (WCU interdisciplinary theme), Feb. 12, 2015

Academic Committees and Service

University Service:

- Graduate Council (2013-2016); GC Policy Committee, 2015-2016
- Liberal Studies Committee (2016-2019)
- Hunter Scholar Award Committee (2018)

College of Arts & Sciences Service:

- Collegial Review Committee (2014-2018)
- Science Education Collegial Review Committee (2012-2017)
- Dean of A&S Research & Collaboration Committee for the new science building (2016-2017)
- Outdoor Classroom committee for the new science building (2017-present)

Biology Department Service:

Chair, New Faculty Search Committee (2018-2019); New Faculty Search Committee member (2017-2018)

Assistant Department Head (2012-2016)

Graduate Committee (2012-present)

Collegial Review Committee, 2017-present

Open House representative, Ramsey Center, multiple years