

Benjamin R. Montgomery

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University of South Carolina Upstate
Div. of Natural Sciences and Engineering
Div. of Mathematics & Computer Sciences
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Education

- University of Michigan**, Ann Arbor, MI. 2000 - 2007
Ph.D. in Biology. (Committee Chair: Dr. Beverly J. Rathcke.)
- Canterbury University**, Christchurch, New Zealand 1999 - 2000
Diploma of Science (one-year post graduate degree) in Plant and Microbial Sciences,
sponsored by a Fulbright Fellowship. (Advisor: Dr. David Kelly)
- Williams College**, Williamstown, MA. 1994 - 1998
BA with Honors in Biology. Concentration in Environmental Studies.
Summa Cum Laude & Phi Beta Kappa. Honors Thesis: Breeding System and Small-Scale
Population Genetic Structure of a Rare Plant, *Sagina nodosa* (Caryophyllaceae).

Professional Experience

- Chair, Mathematics & Computer Science**, USC Upstate July 2018 – present
- Chair, Natural Sciences & Engineering**, USC Upstate July 2018 – July 2023
- Associate Professor of Biology**, University of South Carolina Upstate 2016 – present
- Assistant Professor of Biology**, University of South Carolina Upstate 2010 – 2016
- Post-doctoral Researcher**, Indiana University, PI: Lynda Delph. 2007 – 2010
- Lecturer**, Indiana University (1 summer semester) 2007
- Graduate Student Instructor**, University of Michigan (6 semesters) 2004 – 2007
- Graduate Student Mentor**, University of Michigan (2 semesters) 2005 – 2006
- Laboratory Technician**, Cornell University 1999
- Student Conservation Association / USDA-ARS Intern**, Davies, FL 1998

Publications

- Fang Q, Zhang T, and **Montgomery BR**. 2023. Spatial variation of pollen receipt and effects of heterospecific pollen on seed set in *Salvia przewalskii*. *Ecology and Evolution*. 13(2): e9795. <https://doi.org/10.1002/ece3.9795>
- Montgomery, B.R.** and K.P. Farrah. 2021. Teaching a distance botany laboratory with online, outdoor, and hands-on exercises. *Plant Sciences Bulletin*. 67(1).
- Zhang, J.-J., **Montgomery, B. R.**, and Huang, S.-Q. 2016. Evidence for asymmetrical hybridization despite pre- and post-pollination reproductive barriers between two *Silene* species. *AOB Plants*. DOI: 10.1093/aobpla/plw032
- Montgomery, B. R.**, and C. W. Phillips. 2015. Breeding system of *Linum rigidum* and effect of heterospecific pollination by introduced *Euphorbia esula*. *Journal of Pollination Ecology*. 16: 101-107.
- Montgomery, B. R.**, M. F. Bailey, G. G. Brown, and L. F. Delph. 2014. Evaluation of the cost of restoration of male fertility in *Brassica napus*. *Botany* 92: 847-853.
- Delph, L. F., and **B. R. Montgomery**. 2014. The evolutionary dynamics of gynodioecy in *Lobelia*. *International Journal of Plant Sciences* 175: 287-295.
- Sun S. G., **B. R. Montgomery**, and B. Li. 2013. Contrasting effects of plant invasion on pollination of two native species with similar morphologies. *Biological Invasions* 15: 2165-2177.
- Montgomery, B. R.** and B. J. Rathcke. 2012. Effects of floral restrictiveness and stigma size on heterospecific pollen receipt in a prairie community. *Oecologia* 168: 449-458.
- Penny, R. H., and **B. R. Montgomery**, L. F. Delph. 2011. X Linkage of AP3A, a homolog of the Y-linked MADS-box gene AP3Y in *Silene latifolia* and *S. dioica*. *PLoS One*.
- Montgomery, B. R.**, D. M. Soper, and L. F. Delph. 2010. Asymmetrical conspecific seed-siring advantage between *Silene latifolia* and *S. dioica*. *Annals of Botany* 105 (4): 595-605.
- Montgomery, B. R.** 2009. Pollination of *Sisyrinchium campestre* (Iridaceae) in prairies invaded by the introduced plant *Euphorbia esula* (Euphorbiaceae). *American Midland Naturalist* 162 (2): 239-252
- Montgomery, B. R.** 2009. Do pollen carryover and pollinator constancy mitigate effects of competition for pollination? *Oikos*. 118: 1084-1092.
- Montgomery B. R.** 2009. Effect of introduced *Euphorbia esula* on the pollination of *Viola pedatifida*. *Botany* 87: 283-292.

Bernstein, N. P., R. W. Black, R. J. Richtsmeier, and **B. R. Montgomery**. 2007. Home range and philopatry in the Ornate Box Turtle, *Terrapene ornata ornata*, in Iowa. *American Midland Naturalist*: 153: 370-377.

Montgomery, B. R., D. Kelly, A. W. Robertson, and J. Ladley. 2003. Pollinator behaviour, not increased resources, boosts seed set of forest edges in a New Zealand Loranthaceous mistletoe. *New Zealand Journal of Botany*. 41:277-286.

Montgomery, B. R., D. Kelly, and J. Ladley. 2001. Pollinator limitation of seed set in *Fuchsia perscandens* (Onagraceae) on Banks Peninsula. *New Zealand Journal of Botany*. 39: 559-565.

Montgomery, B. R., and G. Wheeler. 2000. Antipredatory activity of the weevil *Oxyops vitiosa*: a biological control agent of *Melaleuca quinquenervia*. *Journal of Insect Behavior* 13:915-926.

Student Publications (*publications since previous review in dark font*)

Ramírez Solís, J. L. and **B. R. Montgomery**. 2022. Agricultural Service Disparities between White and Non-White Farmers Provided by the Federal Extension Service during the Jim Crow Era. USC Upstate Student Research Journal. 14.

Reznichenko, V. A. and **B. R. Montgomery**. 2017. Evolutionary divergence in flower size among yellow-flowered *Linum*. USC Upstate Student Research Journal. 10: 1 – 8.

Lech, M. and **B. R. Montgomery**. 2017. Warming temperatures result in earlier flowering of spring wildflowers in North and South Carolina.

Papers Presented at Professional Meetings (*presentations since last review in dark font*)

Montgomery, B. R. August, 2017. A Hands on Approach to Distance Education Non Majors Botany Laboratory? *Talk* at Botany (multi-society international meeting).

Montgomery, B. R. August, 2016. Large petals: an adaptation for autonomous self-pollination? *Poster* at Botany (multi-society international meeting).

Montgomery, B. R., S. Q. Huang, and A. J. Radich. 2015. Variation in pollination syndromes, mating systems and moth oviposition preferences for co-flowering *Silene* in Yunnan, China. *Talk* at Botany (international meeting).

Montgomery, B. R., B. P. Twitty, and C. W. Phillips. 2014. Petal abscission as a mechanism of delayed self Pollination in *Linum rigidum*. *Talk* at Botany (international meeting).

Montgomery, B. R., B. P. Twitty, and D. S. Dendy. 2014. Petals promote delayed self pollination in *Linum rigidum*. *Talk* at Association for Southeastern Biologists (ASB).

- Montgomery, B. R.**, and L. F. Delph. 2013. Assessment of costs of restoration in *Brassica napus*, a crop plant that exhibits cytoplasmic male sterility. *Talk* at Botany. (international meeting)
- Riley, J. and **B. R. Montgomery**. 2013. Using interactive object movies of flower dissection to visualize botanical structure. *Talk* at VR Photography Association Meeting. (international meeting)
- Delph, L. F., **B. R. Montgomery**. 2012. Evidence for balancing selection maintaining mitochondrial haplotype diversity in *Lobelia*. *Talk* at 1st Joint Congress on Evolutionary Biology. (international meeting)
- Montgomery, B. R.**, D. M. Soper, L. F. Delph. 2008. Conspecific pollen precedence in *Silene*. *Talk* at Joint meeting of Society for Study of Evolution and American Naturalist Society. (international meeting)
- Montgomery, B. R.** 2007. Patterns and effects of foreign pollen transfer from an invasive plant to simultaneously flowering species with different floral traits. *Talk* at Botany and Plant Biology Joint Congress. (international meeting)
- Montgomery, B. R.**, B. J. Rathcke. 2006. Effects of leafy spurge on the pollination of two simultaneously flowering species. *Talk* at North American Prairie Conference
- Montgomery, B. R.** 2005. Effects of pollen carryover and pollen receipt thresholds on the severity of competition for pollination. *Poster* at Ecological Society of America. (international meeting)
- Montgomery, B. R.** 2004. Effects of dispersion and heterospecific flowers on the pollination of *Anemone canadensis* (Ranunculaceae). *Talk* at Midwest Ecology and Evolution Conference.
- Blossey, B., V. Vasquez, **B. R. Montgomery**. 2000. Can a decrease in herbivore defense explain the increased competitive ability of invasive non-indigenous plants? *Talk* at Ecological Society of America. (international meeting)

Student Presentations

- Cutler, A. G. and **B. R. Montgomery**. 2017. Effect of herbarium size on geographic distribution of specimen. *Poster* at Upstate Research Symposium.
- Lech, M. E. and **B. R. Montgomery**. 2017. Warming temperatures result in earlier flowering of herbaceous plants in North and South Carolina. *Poster* at Upstate Research Symposium and Discover USC.
- Reznichenko, V. and **B. R. Montgomery**. 2017. Evolutionary divergence in herkogamy among yellow-flowered *Linum*. *Poster* at Upstate Research Symposium.
- Specht, T. and **B. R. Montgomery**. 2017. Analysis of outcrossing rate in *Linum rigidum* var. *berlandieri*. *Poster* at Upstate Research Symposium.
- Munzón, D. and **B. R. Montgomery**. 2016. Evaluation of methods to increase the duration of petal retention for *Linum rigidum*. *Poster* at SC Upstate Research Symposium 2016.

- Ortiz Aldana, A., V. Reznichenko and **B. R. Montgomery**. 2016. Morphological differences and intercompatibility between *Linum rigidum* var. *rigidum* and *Linum rigidum* var. *berlandieri*. *Poster* at SC Upstate Research Symposium 2016.
- Specht, T. and **B. R. Montgomery**. 2016. Development of Sequence Characterized Amplified Region (SCAR) markers from Randomly Amplified Polymorphic DNA (RAPD) for *Linum rigidum* var. *berlandieri*. *Poster* at SC Upstate Research Symposium 2016.
- Dey, M. N. , C. W. Phillips, and **B. R. Montgomery**. 2014. Petals abscise earlier under hot, dry conditions for *Linum rigidum*. *Poster* at Association for Southeastern Biologists (ASB) and *talk* at SC Upstate Research Symposium 2014.
- Twitty, B. P., and **B. R. Montgomery**. 2014. Factors influencing seed germination for *Linum rigidum* (yellow stiff flax). *Poster* at Association for Southeastern Biologists (ASB) Meeting & SC Upstate Research Symposium.
- Dendy, D. S., A. J. Radich, and **B. R. Montgomery**. 2013. Determination of pollen-to-ovule ratios to infer mating systems in *Silene*. *Poster* at SC Upstate Research Symposium & USC Discovery Day.
- Phillips, C. W., and **B. R. Montgomery**. 2013. Assessment of traits contributing to delayed self pollination in *Linum rigidum*. *Poster* at SC Upstate Research Symposium & USC Discovery Day.
- Twitty, B. P., K. B. White, and **B. R. Montgomery**. 2013. Assessment of timing of stigma receptivity and pollen longevity in *Linum rigidum* (Stiff Flax). *Poster* at SC Upstate Research Symposium.
- Hill, T., and **B. R. Montgomery**. 2011. Morphological variation in floral traits between co-occurring interfertile *Silene* species in Yunnan, China. *Poster* at SC Upstate Research Symposium.
- Phillips, C. W., and **B. R. Montgomery**. 2011. Morphological variation in leaf traits between co-occurring interfertile *Silene* species in Yunnan, China. *Poster* at SC Upstate Research Symposium.

Workshops Presented

- Montgomery, B. R.** and K. Farrah. July 29, 2020. **Teaching Online Botany Laboratory for Non-majors**. Virtual workshop at Botany, (international conference hosted by six societies, including Botanical Society of America).
<http://2020.botanyconference.org/engine/search/index.php?func=detail&aid=5>

Selected Research Funding

- NSF S-STEM Award**. PI: A. Rosario. Co-P.I.s **B.R. Montgomery**, C. King, S.M. Waldrop. Increasing Undergraduate Success in Science through Learning Cohorts Focused on Career Readiness. (\$749,998) 2022-2028

NSF ABCD Award: <i>Collaborative Research: The Key to the Cabinets: Building and Sustaining a Research Database for a Global Biodiversity Hotspot.</i> USC Upstate was awarded \$6,400 as part of regional award for digitization of herbarium collection. Award is for work in 2016.	2014
RISE , University of South Carolina/ USC Upstate (\$5000)	2013
Scholarly Student Assistantship Program Grant , USC Upstate (\$1,260) Award supported research of Donathan Dendy.	2012
Magellan Scholar Grant , University of South Carolina (\$3,000) Award supported research of Caleb Phillips	2012
Scholarly Start Up Package , University of South Carolina Upstate (\$4,860)	2011
National Science Foundation of China Research Fellowship for International Young Scientists (200,000 Renminbi ~ \$30,000 US)	2010 - 2011
National Science Foundation Predoctoral Fellowship	Awarded 2000
Fulbright Fellowship to New Zealand	Awarded 1999

Courses Taught at USC Upstate (*courses taught since last review in dark font*)

Lecture

BIOL 101	Introductory Biology I
BIOL 101(SA)	Introductory Biology I for high school Scholars Academy
BIOL 220	Botany & Society
BIOL 320	General Botany
BIOL 525	Plant Taxonomy
BIOL 599	Senior Seminar

Laboratory

BIOL 101L	Introductory Biology I
BIOL 101L(SA)	Introductory Biology I for high school Scholars Academy
BIOL 102L	Introductory Biology II
BIOL 110L	General Biology Laboratory
BIOL 220L	Botany & Society Laboratory
BIOL 301L	Introduction to Ecology and Evolutionary Biology
BIOL 320L	General Botany

Professional Service (*service since last review in dark font*)

Chair, Botanical Society of America Teaching Section	8/2022 - present
Vice chair, Botanical Society of America Teaching Section	8/2018 – 7/2022
Guest lecturer , Dept. of Biology & Geology, USC Aiken, Aiken, SC	2/26/2018
Field trip leader , Spartanburg Science Center. (3-hour commitment)	3/21/2017
Scientific Review Committee , Piedmont Region III Science Fair	2012 - Fall 2018
Poster judge , Discover USC, University of South Carolina, Columbia, SC	4/21/2017
Session moderator , Botany 2013 - international conference in New Orleans	2014
Poster judge , Botany (2013: New Orleans; 2014: Boise; 2015: Edmonton, Canada)	
Guest lecturer , Dept. of Mathematics, Wofford College, Spartanburg, SC	2012
Guest lecturer , Biology Department, Converse College, Spartanburg, SC	2011

Manuscript Reviews

(Numbers indicate numbers of manuscripts reviewed in that calendar year.)

2024: BMC Plant Biology (1), Ecology and Evolution (2), New Phytologist (1)

2022: New Phytologist (1), American Journal of Botany (1)

2021: New Phytologist (2), Alpine Botany (2)

2020: American Naturalist (1), Ecological Processes (1),

2019: American Naturalist (1), New Phytologist (1), Scientific Reports (1)

2018: Insect Conservation and Diversity (2), Plant Species Biology (1)

2017: Plant Species Biology (1), Annals of Botany (1), AOB Plants (1)

2016: American Midland Naturalist (1), Annals of Botany (1), Functional Ecology (1), New Phytologist (1)

2015: American Journal of Botany (1), Annals of Botany (2), Biological Invasions (1), New Phytologist (1)

2014: Annales Botanici Fennici (1), Annals of Botany (1), Ecology Letters (1), Journal of Pollination Ecology (1), Oecologia (1)

2013: American Journal of Botany (1), Annals of Botany (2), Botany (1), Oecologia (3)

2012: Acta Oecologia (1), Ecology (1), Ecology Letters (2), Journal of Evolutionary Biology (1), Plant Biology (1)

2011: Acta Oecologia (1), Annales Botanici Fennici (1), Biological Invasions (1), New Phytologist (2), Oecologia (1)
 2010: Biological Invasions (1), Oecologia (1)
 2009: Evolutionary Ecology Research (1), Oikos (1)
 2005: Ecography (1)

Professional Societies

Botanical Society of America Member 2013-2016; 2018-present

University Service

NSE Senior Seminar Committee member Fall 2023 – Spring 2024
Transfer Onboarding Team Fall 2023 - present
Institutional Biosafety Committee (USC System) 2022-present
Faculty Parliamentarian 2021-2022
Arbor Day Talk Short lecture. 12/1/2023
Search Committee, Provost & Senior Vice Chancellor for Academic Affairs Spring 2022
Distance Education Advisory Group 2021 - present
STEAM Festival Greenville 4/6/2019
 Designed and implemented outreach activity with CST
TREE Campus USA, USC Upstate 10-year anniversary. Short lecture. 4/24/2018
NSE Distance Education and Online Learning Ad Hoc Committee, USC Upstate 2017
NSE Peer review, USC Upstate 2016-2017
Upstate Research Journal Editorial Board, USC Upstate 2014 – present
Assessment Coordinator for Biology, Division of NSE, USC Upstate 2012 – Spring 2018
Assessment Committee, University of South Carolina Upstate 2012 – Spring 2018
Faculty Senate, University of South Carolina Upstate Fall 2011 – Spring 2014
Environmental Advisory Committee, University of South Carolina Upstate 2012 – 2014

Tree Committee USA , University of South Carolina Upstate	2011 – present
International Advisory Board , University of South Carolina Upstate	2010 – 2013
Advisor, University of South Carolina Upstate Ultimate Team	2010 – 2014
Physiology Search Committee , Div. of N.S.E., USC Upstate.	2012 – 2013
Honors Court , USC Upstate	2011 – 2013
Geology Search Committee , Div. of N.S.E., USC Upstate.	2010 – 2011

Community Involvement

Chandler Creek Elementary School – School Improvement Council.

Recording Secretary.	September, 2023 – May 2024
Spartanburg Area Conservancy (SPACE) – botanical consultant	August, 2022
Park Hills Neighborhood Association talk – invasive plants	April 15, 2021
Upstate Forever Volunteer – invasive plant removal	Feb 25, 2022
Hub City Farmers Market Board	2014 – 2018
Past chair: 2018; Board Chair 2017; Vice Chair 2016	
Scholars Academy Interview Team Participant (paid)	2014 – 2017
Bike Town Spartanburg Advisory Board	2013 – 2015
Kudzu Coalition Participant	2010 – 2014
Environmental Science Merit Badge Instructor	2012 – 2013
Volunteer Instructor, USC Upstate Science Summer Camp	2012
Piedmont Region III Science Fair Judge	2011 – 2012
Clinton High School Science Olympiad Mentor	2012

Continuing Education

- **HMX Fundamentals program (Harvard Medical School online learning platform) – Fundamentals Certificate of Achievement in Physiology** (10-week non-credit bearing course with certificate indicating attainment of learning outcomes). Certificate received August 19, 2022.
- **National Association of Parliamentarians Entrance Exam** -passed with grade of 100%. August 21, 2021.