

Sarah R. Supp

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Citations: <http://tinyurl.com/scholar-srsupp>

PROFESSIONAL APPOINTMENTS

- 2014-present National Science Foundation Postdoctoral Research Fellow
Intersections of Biology and Mathematical and Physical Sciences
Host Institutions: University of Maine and University of Vermont
Visiting Institution: University of Wisconsin-Madison, Department of Geography
Supporting Scientists: Brian J. McGill, Nicholas J. Gotelli, and Jack Williams
- 2013 – 2014 Postdoctoral Research Associate
Stony Brook University - Ecology and Evolution Department
Advisor: Catherine H. Graham

EDUCATION

- 2007 – 2013 Ph.D. in Ecology
Utah State University - Department of Biology & The Ecology Center
Dissertation: Local and regional drivers of biodiversity: From life-history traits to system-level properties
Advisor: S. K. Morgan Ernest
- 2007 B.S. Biology, *magna cum laude*, minors in Chemistry and Spanish
Valparaiso University - Department of Biology
Advisor: Laurie S. Eberhardt

RESEARCH EXPERIENCE

- 2014-present **National Science Foundation Postdoctoral Fellow.** Dynamic Macroecology: Globally assessing body size diversity response in plant and animal communities. NSF Postdoctoral Research Fellowship – Intersections of Mathematical, Physical, and Engineering Sciences and Biology: Sarah R. Supp, P.I.
- 2013-2014 **Postdoctoral Research Associate.** Using time-series, ecology, and physiology to predict climate change impacts on hummingbird biodiversity. NASA Biodiversity Grant: Catherine Graham, Scott Goetz, Susan Wethington, and Don Powers, P.I.s
- 2007-2013 **Graduate Research Assistant.** Long-term monitoring and manipulation of a desert ecosystem. S. K. Morgan Ernest, P.I.
- 2010 **Graduate Research Assistant.** Advancing macroecology using informatics and entropy maximization. Ethan P. White, P.I.
- 2009 **Graduate Research Assistant.** Mammalian community database. Ethan P. White, P.I.
- 2007 **ASIANetwork Research Fellow.** Water quality in east central China and northwest Indiana: issues, perceptions, and approaches for resolution. Jonathan Schoer, P.I.

PUBLICATIONS

1. Graham, C.H., **S. R. Supp**, D.R. Powers, P.A. Beck, M.C.W. Lim, A. Shankar, T.A. Cormier, S.J. Goetz, and S. Wethington. *In review*. Winter conditions influence biological response of migrating hummingbirds. *Ecology*
2. **Supp, S. R.**, D. N. Koons, and S. K. Morgan Ernest. *in review*. Using life history trade-offs to understand core-transient structuring of a small mammal community. *Ecosphere*. ([PeerJ preprint](#))
3. **Supp, S. R.**, F.A. La Sorte, T.A. Cormier, M.C.W. Lim, D.R. Powers, S.M. Wethington, S.J. Goetz, and C.H. Graham. 2015. Citizen-science data provides new insight into annual and seasonal variation in migration patterns. *Ecosphere* 6: art15. <http://dx.doi.org/10.1890/ES14-00290.1>
4. Shaw, A.K., D.E. Stanton, **S.R. Supp**, A. Budden, S. Eby, P.L. Reynolds, R. Salguero-Gómez, D.R. Scholes, and N.B. Zimmerman. 2015. Ecology postdocs in academia: primary concerns and possible solutions. *Bulletin of the Ecological Society of America* 96: 140-152.
5. Scholes, D.R., D.E. Stanton, and **S.R. Supp**. 2014. ESA's Early Career Ecologist Section: Supporting the professional development of early career ecologists in all career trajectories. *Bulletin of the Ecological Society of America* 95: 435-438.
6. **Supp, S. R.** and S. K. M. Ernest. 2014. Species-level and community-level responses to disturbance: a cross-community analysis. *Ecology* 95: 1717-1723.
7. White, E. P., E. M. Baldrige, Z. T. Brym, K. J. Locey, D. J. McGlenn, and **S. R. -Supp**. 2013. Nine simple ways to make it easier to (re)use your data. *Ideas in Ecology and Evolution*. 6: 1-10.
8. **Supp, S. R.** 2013. Local and regional drivers of biodiversity: from life-history traits to system-level properties. Graduate Dissertation. Utah State University. <http://digitalcommons.usu.edu/etd/1503>
9. **Supp, S. R.**, X. Xiao, S. K. M. Ernest, and E. P. White. 2012. An experimental test of the response of macroecological patterns to altered species interactions. *Ecology*. 93: 2505-2511.
10. Cobbold, S. M. and **S. R. Supp**. 2012. Patch shape alters spider community structure: links between microhabitat choice and sensitivity to increased edge habitat. *Journal of Insect Conservation*. 4: 581-589.
11. Thibault, K. M., **S. R. Supp**, M. Giffin, E. P. White and S. K. M. Ernest. 2011. Species composition and abundance of mammalian communities. *Ecology*. 92: 2316.
12. **Supp, S. R.** and E.P. White. 2010. Measures of journal quality should separate reviews from original research. *Ideas in Ecology and Evolution*. 3: 16-19.
13. O'Donnell, R. **S.R. Supp** and S. M. Cobbold. 2010. Hindrance of conservation biology by delays in the submission of manuscripts. *Conservation Biology*. 24: 615-620.

MANUSCRIPTS

1. Isbell, F., sDiv Biodiversity Changes Working Group. *in prep*. Assessing biodiversity change at local to global scales.
2. **Supp, S. R.**, T. A. Cormier, F. A. La Sorte, G. Bohrer, D. Powers, S. Wethington, S. Goetz, and C H. Graham. *In prep*. Citizen science and remote sensing data reveal environmental impacts on migration variation across seasons and years
3. Graham, C.H., B. Weinstein, A. Shankar, M. Lim, and **S. R. Supp**. *in prep*. Non-analog communities: taxonomic, trait, and phylogenetic diversity response to climate change.

DATA AND SOFTWARE PRODUCTS

1. MACD: Manipulated Animal Community Database. figshare. <http://dx.doi.org/10.6084/m9.figshare.969831>
2. METE: Software for Analyzing Harte et al.'s Maximum Entropy Theory of Ecology. E.P. White, D.J. McGlenn, X. Xiao, S.R. Supp, K.M. Thibault. figshare. <http://dx.doi.org/10.6084/m9.figshare.815905>

3. Portal-rodent-dispersal: Accompanies the Supp, Koons, and Ernest project examining individual-level rodent trap data for 10-year time series at the Portal Project. Includes data & code to replicate analyses and figs. S.R. Supp. GitHub <https://github.com/weecology/portal-rodent-dispersal/>
4. Experimental-rads: Accompanies the Supp and Ernest project examining change in the rank-abundance distribution (rad), species richness, total abundance, and species composition in a wide variety of manipulated terrestrial animal communities. Includes data and code to replicate analyses and figures. S.R. Supp. GitHub. <https://github.com/weecology/experimental-rads/>
5. PortalExperimentalMacroEco: Accompanies the Supp, Xiao, Ernest, and White publication in Ecology (doi: 10.1890/12-0370.1). Includes data and code to replicate analyses and figures from the paper. S.R. Supp, X. Xiao. <https://github.com/sarahsupp/PortalExperimentalMacroEco/>
6. Experiments and the Rank Abundance Distribution (Slides from 2012 Ecological Society of America Conference). S.R. Supp. Figshare. <http://dx.doi.org/10.6084/m9.figshare.95835>
7. Experimental evidence suggests that richness and total abundance primarily determine macroecological patterns (slide deck from 2011 Ecological Society of America Conference). S.R. Supp. Figshare. <http://dx.doi.org/10.6084/m9.figshare.95850>
8. Online Presence for graduate students (presentation from 7 December 2012 Utah State University Ecolunch). S.R. Supp. Prezi. <http://prezi.com/yugz4zgd03qh/onlinepresence/>

TEACHING EXPERIENCE

Courses Taught as Instructor

2015	Software Carpentry Bootcamp (Women in Science & Engineering, Univ. of Michigan)
2014	Software Carpentry Bootcamp (Data Science Center, New York University)
2013	Software Carpentry Bootcamp (Women in Science & Engineering, MIT)
2012	Software Carpentry Bootcamp (Washington University at St. Louis)
2012	Evolutionary Biology (BIOL 5250, Utah State University)

Courses Taught as Teaching Assistant

** indicates Utah State University, †Valparaiso University, ‡Utah Dept of Wildlife Resources*

2013	Software Carpentry Programming Bootcamp*
2012	Software Carpentry Programming Bootcamp*
2012	Introduction to R*‡
2010	Evolutionary Biology* (BIOL 5250)
2008	Ornithology* (BIOL 5560)
2007	Human Physiology* (BIOL 2420)
2007	Field Biology† (BIO 350)
2007	Science of the Indiana Dunes, for non-science majors† (NS 102)
2006	Ecology† (BIO 440)

Guest Lectures

2011	Macroecology, <i>Macroecology and Conservation</i> * (BIOL 4750)
2011	Evolution, <i>Speciation and Systematics</i> * (BIOL 5250)

Student Mentoring

2013	Andrea Nieto, Biology Undergraduate, University of Azuay, Ecuador
2013	Gabriela Samaniego, Biology Undergraduate, University of Azuay, Ecuador
2013-2014	Marisa Lim, Ecology and Evolution, Ph.D. Student, Stony Brook University
2013-2014	Anusha Shankar, Ecology and Evolution, Ph.D. Student, Stony Brook University
2013-2014	Ben Weinstein, Ecology and Evolution, Ph.D. Student, Stony Brook University

Outreach

2014	Grades 9-12 Discussion. <i>Female Scientists who Code</i> (Baldwin School, Bryn Mawr, PA)
2011	Grades K-6 Science Lesson. <i>What is a Scientist?</i> (District 33, Hastings, NE)

2004 – 2007 Earthtones environmental education team (Valparaiso University)

GRANTS AND AWARDS

2015 Centennial Mentoring Program, Ecological Society of America, *funded \$2,000*
2014-2016 sDiv workshop proposal, Quantifying Biodiversity Changes, *funded \$20,000*
2014-2017 National Science Foundation Postdoctoral Research Fellowship, Intersections of Biology, Mathematical and Physical Sciences. “Dynamic Macroecology: Globally assessing body size diversity response in plant and animal communities”, *funded \$207,000*
2013 Graduate Researcher of the Year Nomination, Biology, Utah State University
2012-2013 School of Graduate Studies Fellowship, Utah State University, *\$6,000*
2012-2013 Ecology Center Fellowship, Utah State University, *\$15,000*
2012 Graduate Student Senate Travel Grant, Utah State University, *\$300*
2012 Center for Women and Gender Travel Grant, Utah State University, *\$300*
2012 Ecology Center Travel Grant, Utah State University, *\$600*
2012 Ecology Center Travel Grant, Utah State University, *\$500*
2010 James A. and Patty MacMahon Scholarship, Utah State University, *\$500*
2010 Biology Department Travel Grant, Utah State University, *\$300*
2010 Ecology Center Travel Grant, Utah State University, *\$1,000*
2009 Ecology Center Travel Grant, Utah State University, *\$700*
2008 Biology Department Travel Grant, Valparaiso University, *\$200*
2008 Board of Directors’ Award, Exceptional Student Research, Valparaiso University
2007 ASIANetwork Research and Travel Grant, *\$14,000*
2007 Phi Beta Kappa, Valparaiso University
2003-2007 Presidential Scholarship, Valparaiso University

SELECTED PRESENTATIONS

1. **Supp, S.R.** August 2015. The role of open science and citizen science in assessing human impacts. Organized Oral Session: New perspectives for ecology during the Anthropocene. Ecological Society of America Annual Meeting. Baltimore, MD. *Invited presentation*
2. **Supp, S.R.** May 2015. Biodiversity trends in anthropogenically altered systems. University of British Columbia, Centre for Biodiversity. Vancouver, BC. *Invited lightning talk*.
3. **Supp, S.R.** 2015. Dynamic macroecology for a changing world. Department of Biological Sciences Seminar. Northern Illinois University. DeKalb, IL. *Invited seminar*
4. **Supp, S.R.** 2014. Species-level and community-level diversity responses to disturbance: a cross-community analysis. Biodiversity Change workshop. sDiv, German Centre for Biodiversity Research, Leipzig, Germany. *Invited presentation*
5. **Supp, S. R.,** T. A. Cormier, F. A. La Sorte, G. Bohrer, S. Goetz, D. Powers, S. Wethington, M. Lim, and C. H. Graham. 2014. Using citizen-science data to evaluate the drivers of annual and seasonal variation in hummingbird migration. Gordon Research Conference and Seminar, *Unifying Ecology Across Scales*, Biddeford, ME. *Invited poster*
6. Graham, C.G., **S. R. Supp**, D. Powers, S. Goetz, and S. Wethington. 2014. NASA Biodiversity and Ecological Forecasting Team Meeting. Silver Springs, MD. *Invited presentation, co-presented*
7. **Supp, S. R.,** T. A. Cormier, F. A. La Sorte, S. Goetz, D. Powers, S. Wethington, M. Lim, and C. H. Graham. 2014. Using citizen-science data to compare interannual variation in hummingbird migration patterns. Animal Movement Symposium. Raleigh, NC. *Oral presentation*
8. **Supp, S. R.,** T. A. Cormier, F. A. La Sorte, S. Goetz, M. Lim, D. Powers, S. Wethington, and C. H. Graham. 2014. Describing hummingbird migratory patterns and variation using eBird data. Cornell Lab of Ornithology. Ithaca, NY. *Invited presentation*

9. **Supp, S. R.** and S. K. M. Ernest. 2013. Life-history trade-offs among core and transient species regulate local diversity and community structure. Ecological Society of America Annual Meeting. Minneapolis, MN. *Oral presentation.*
10. **Supp, S. R.** 29 March 2013. Moving macroecology forward with novel experimental approaches. Utah State University, Logan, UT. *Departmental seminar*
11. **Supp, S. R.** 8 November 2012. Moving macroecology forward with novel experimental approaches. Washington University at St. Louis. *Invited seminar*
12. **Supp, S. R.**, Ernest, S.K.M. 2012. Testing the drivers of the species-abundance distribution: the relative importance of composition and state variables. Ecological Society of America Annual Meeting. Portland, OR. *Oral presentation*
13. **Supp, S. R.**, Ernest, S.K.M. 2012. Experimentally testing the drivers of the species-abundance distribution: the relative importance of composition and state variables. Gordon Research Conference, *Metabolic Basis of Ecology*, Biddeford, ME. *Invited poster*
14. **Supp, S. R.**, Ernest, S.K.M. 2012. Experimentally testing the drivers of the rank abundance distribution – sensitivity to anthropogenic change? Gordon Research Seminar, *Metabolic Basis of Ecology*, Biddeford, ME. *Invited presentation*
15. **Supp, S. R.**, Xiao, X, Ernest, S.K.M., White, E.P. 2011. Experimentally altering biotic interactions has different effects on static and dynamic macroecological patterns. Ecological Society of America Annual Meeting. Austin, TX. *Oral presentation*
16. **Supp, S. R.**, O'Donnell, R. P, Cobbold, S. M. 2010. Hindrance of conservation biology by delays in the submission of manuscripts. Student Conference on Conservation Science. Cambridge, UK. *Invited poster*
17. **Mohlman, S. R.** & Ernest, S. K. M. 2009. Predator influences on prey community structure in a long-term experimental rodent-plant system. Ecological Society of America Annual Meeting. Albuquerque, NM. *Poster*
18. **Mohlman, S. R.** & Ernest, S. K. M. 2009. Pocket mouse invasion influences desert plant community structure in place of absent Kangaroo rats. American Society of Mammalogist Annual Meeting. Fairbanks, AK. *Poster*
19. **Mohlman, S. R.**, O'Donnell, R. P., Cobbold, S. M. 2008. Is the progress of conservation biology hindered by delays in the submission of conservation manuscripts? Faculty and Graduate Student Research Symposium, Utah State University. Logan, UT. *Poster*
20. **Mohlman, S. R.**, Field, J., Schoer, J. 2008. Water quality in east central China and northwest Indiana: issues, perceptions, and approaches for resolution: Part II. ASIANetwork Annual Conference. San Antonio, TX. *Poster*
21. Eberhardt, L., **Mohlman, S. R.**, Zuercher, R., Lute-Kulaga, M. 2007. Yellow-bellied sapsucker (*Sphyrapicus varius*) feeding preferences for *Carya ovata* in relation to species diversity in Northwest Indiana woods. Indiana Dunes Research Forum. Highland, IN. *Poster*

MEDIA

O'Donnell et al. 2010 highlighted in:

1. Dolgin, E. 2009. Endangered papers. Nature. 461: 831. doi: 10.1038/nj7265-831c.
2. Dolgin, E. 2010. Research Remand. The Scientist. <http://www.the-scientist.com/?articles.view/articleNo/27889/title/Research-remand/>

RELATED PROFESSIONAL EXPERIENCE AND TRAINING

- 2015-present **Working Group Member**, Coordinating Data Intensive Science Education and Training, NCEAS, Santa Barbara, CA
- 2014-present **Co-PI and Working Group Member**, Quantifying Biodiversity Change, sChange, iDiv, Leipzig, Germany

2014-present **Working Group Member**, Understanding Recent Biodiversity Change, Canadian Institute of Ecology and Evolution, Regina, Saskatchewan

2014-present **Working Group Member**, Community Assembly and the Functioning of Ecosystems, sCAFE, iDiv, Leipzig, Germany

2014-present **Contributing Member** of International Network of Next Generation Ecologists (INNGE), Open Science working group

2013-present **Vice-Chair** of Early Career Ecologist section, Ecological Society of America

2012-present **Instructor** for the Software Carpentry Foundation and Mozilla Science Lab

2015-present **Co-organizer** for ESA Special Session, Challenges in professional development for early career ecologists, Baltimore, MD

2015-present **Program Coordinator** for ESA Centennial Mentoring Program, Baltimore, MD

2014 **Working Group Member**, Biodiversity Change workshop, German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Leipzig, Germany

2014 **Invited** participant, NIMBioS Tutorial, Computing in the Cloud, Knoxville, TN

2012-2014 **Chair** of Gordon Research Seminar, *Unifying Ecology Across Scales*, 2014

2012 Instructor Certification. Teaching Software Carpentry, teaching.software-carpentry.org – a group committed to teaching scientists how to program

2010-2011 Advanced Programming for Biologists. Utah State University

2010 Ecology Center Director Student Search Committee. Utah State University.

2009 Hantavirus Safety Training. Utah State University.

2009-2010 Ecology Seminar Series Committee Co-Chair. Utah State University.

2008-2011 Biology Department Student Representative. Utah State University.

2008-2010 Ecology Seminar Series Committee & Graduate Student Host. Utah State University.

2008-2010 Biology Graduate Student Association President. Utah State University.

2008 Introduction to ArcGIS interactive course with ESRI Certification. Utah State University.

2006 Resource Management, Invasive plant species control. Indiana Dunes National Lakeshore, Student Conservation Association.

SERVICE

Manuscript reviewer for *Methods in Ecology and Evolution*, *Journal of Biogeography*, *Ecology and Evolution*, *Ecology Letters*, *Ecological Applications*, *Ecology*

Grant reviewer for *Graduate Women in Sciences*

Conference organizer for *Gordon Research Seminar-Unifying Ecology Across Scales*, *Ecological Society of America's Centennial Mentoring Program*

Founding officer for *Ecological Society of America Early Career Ecologist Section*

Member of *International Network of Next Generation Ecologists*, *Early Career Ecologist Section*, *Software Carpentry Foundation*