Quentin D. Read

Postdoctoral Researcher

Contact information

Department of Forestry
Michigan State University
480 Wilson Road
East Lansing, MI 48824

qdr@msu.edu
quentinread.com
GitHub, StackOverflow: qdread
Twitter: @QuentinDRead

Postdoctoral research

Michigan State University, East Lansing, MI *2016-2018 (expected)*

Department of Forestry; Ecology, Evolutionary Biology, & Behavior Program
Funded by NSF EAGER grant: "Intraspecific trait variation and community structure at a continental scale"
Advisors: Dr. Phoebe Zarnetske (MSU) and Dr. Sydne Record (Bryn Mawr College)

Education

University of Tennessee, Knoxville, TN *2011-2016*

Ph.D., Ecology and Evolutionary Biology
Advisor: Dr. Nathan Sanders

University of North Carolina, Chapel Hill, NC *2005-2009*

B.S. with highest distinction, Environmental Science

Skills

Data analysis and programming in R
Parallel computing in Unix environment
Synthesizing data and theory, both in ecology and beyond
Fluent in spoken and written German; communicate effectively in spoken and written Spanish

Publications

Read, Q. D., J. M. Grady, P. L. Zarnetske, S. Record, B. Baiser, J. Belmaker, M.-N. Tuanmu, A. Strecker, L. Beaudrot, and K. M. Thibault. A thermal gradient of trait similarity across North America. *Proceedings of the Royal Society B*, in prep.

Read, Q. D., B. Baiser, J. M. Grady, P. L. Zarnetske, S. Record, and J. Belmaker. Tropical bird species have narrower body-size niches. *Biology Letters*, in review.

Read, Q. D., J. A. Henning, and N. J. Sanders. 2017. Intraspecific variation in traits reduces ability of trait-based models to predict community structure. *Journal of Vegetation Science.* DOI: 10.1111/jvs.12555

Read, Q. D., J. A. Henning, A. T. Classen, and N. J. Sanders. 2017. Aboveground resilience to species loss but belowground resistance to nitrogen addition in montane plant communities. *Journal of Plant Ecology.* DOI: 10.1093/jpe/rtx015

Read, Q. D., S. M. Hoban, M. B. Eppinga, J. A. Schweitzer, and J. K. Bailey. 2016. Accounting for

the nested nature of genetic variation across levels of organization improves our understanding of biodiversity and community ecology. *Oikos* 125:895-904. DOI: 10.1111/oik.02760 *Editor's Choice.*

Read, Q. D., L. C. Moorhead, N. G. Swenson, J. K. Bailey, and N. J. Sanders. 2014. Convergent effects of elevation on functional leaf traits within and among species. *Functional Ecology* 28:37-45. DOI: 10.1111/1365-2435.12162 *nominated for the British Ecological Society's Haldane Prize for Young Investigators*

Henning, J. A., **Q. D. Read**, N. J. Sanders, and A. T. Classen. Nitrogen, neighbors, and the ghosts of neighbors past shape the colonization patterns and plant-soil feedbacks of cooccurring root-colonizing fungal symbionts. *Journal of Ecology*, submitted.

Butler, E. E., A. Datta, ..., **Q. D. Read**, ..., and P. B. Reich. Mapping global leaf trait distributions. *Proceedings of the National Academy of Sciences,* in review.

Chisholm, C., **Q. D. Read**, D. Dimitrov, C. Antón-Fernández, R. Astrup, C. Rahbek, and N. J. Sanders. Functional traits predict growth response and competition in Norwegian boreal forests. MS in prep.

Grady, J. M., **Q. D. Read**, N. Rüger, P. L. Zarnetske, and S. Record. Asymmetric light competition and non-random mortality drive the paradox of energy equivalence in a tropical forest. MS in prep.

Hendershot, J. N*., **Q. D. Read**, J. A. Henning, N. J. Sanders, and A. T. Classen. 2017. Consistently inconsistent drivers of patterns of microbial diversity and abundance at macroecological scales. *Ecology*. DOI: http://onlinelibrary.wiley.com/doi/10.1002/ecy.1829/full.

Van Nuland, M. E., R. C. Wooliver, A. A. Pfennigwerth, **Q. D. Read**, I. M. Ware, L. Mueller, J. A. Fordyce, J. A. Schweitzer, and J. K. Bailey. 2016. Plant-soil feedbacks: connecting ecosystem ecology and evolution. *Functional Ecology*. DOI: 10.1111/1365-2435.12690.

Yoon, S. A.* and **Q. D. Read**. 2016. Consequences of exotic host use: impacts on Lepidoptera and a test of the ecological trap hypothesis. *Oecologia.* DOI: 10.1007/s00442-016-3560-2

Schussler, E. E., **Q. D. Read**, G. Marbach-Ad, K. Miller, and M. Ferzli. Preparing Biology Graduate Teaching Assistants for Their Roles as Instructors: An Assessment of Institutional Approaches. *CBE-Life Sciences Education* 14:1-11. DOI: 10.1187/cbe.14-11-0196

Gorman, C. E., **Q. D. Read**, M. E. Van Nuland, and others. 2013. Phylogenetic similarity aboveground leads to community similarity belowground through conservatism of functional traits. *Annals of Botany Plants* plt049. DOI: 10.1093/aobpla/plt049 *Editor's Choice.*

Van Nuland, M. E., E. N. Haag, J. A. Bryant, **Q. D. Read,** and others. 2013. Fire promotes pollinator visitation: implications for ameliorating declines of pollination services. *PloS One* 8:e79853. DOI: 10.1371/journal.pone.0079853

Soltoff, B. D., A. S. Powell, **Q. D. Read,** and J. S. Clark. 2012. Evidence from individual inference for high-dimensional coexistence: long term experiments on recruitment response. *PLoS One* 7:e30050. DOI: 10.1371/journal.pone.0030050

* first author is an undergraduate whom I mentored

Teaching and mentoring experience

Co-Instructor, Michigan State University

Fisheries & Wildlife 893: Metacommunity Ecology — *Spring 2017*

Graduate Teaching Assistant, University of Tennessee

Ecology & Evolutionary Biology 406: Models in Biology — *Spring 2016*

Ecology & Evolutionary Biology 484: Conservation Biology — *Spring 2015, Spring 2016*

Biology 250: General Ecology — *Fall 2012, Spring 2013, Spring 2014*

Biology 130: Introduction to Biodiversity — *Fall 2011, Spring 2012*

Guest lectures and workshops

Rocky Mountain Biological Laboratory

Wrote curriculum and led workshop on graphing with R and ggplot — *July 2015*

Co-led panel discussion on writing scientific papers — *July 2015*

Wrote curriculum and led workshops on advanced topics in statistics with R — *July 2014*

University of Tennessee

Guest lecture (led a mock trial), Conservation Biology — *Spring 2015*

Guest lecture on biogeochemistry, General Ecology — *Fall 2012 and Spring 2014*

Guest lecture on climate change and communities, General Ecology — *Spring 2013*

Curriculum development

Research assistantship, *University of Tennessee* — *Fall 2013*

Assisted Dr. Elisabeth Schussler creating recommendations to improve training and professional development for graduate teaching assistants.

Curriculum Reform in Undergraduate Biology Education, *University of Tennessee* — *2013-2014*

Member of panel developing and reforming curriculum of undergraduate introductory biology courses

Mentoring

Michigan State University

Mentored 2 undergraduates through Summer Research Opportunities Program and High Performance Computing Center — *Summer 2017*

Rocky Mountain Biological Laboratory

Mentored 8 undergraduates through RMBL and NSF programs — *2012-2015*

University of Tennessee

Mentored 3 undergraduate laboratory assistants — *2013-2015*

Honors and awards

University of Tennessee Science Alliance graduate award, for exemplary accomplishments as a graduate student, 2015 ($3000)

Outstanding Outreach and Community Service award, UT-Knoxville Department of Ecology and Evolutionary Biology, Spring 2014 (awarded for leadership of Darwin Day)

Dr. Jean H. Langenheim Endowed Graduate Fellowship in the Ecology and Evolution of Plants, Rocky Mountain Biological Laboratory, 2013-2014 ($6000)

Honorable Mention, National Science Foundation Graduate Fellowship, 2013

Dr. Lee R. G. Snyder Memorial Fellowship, Rocky Mountain Biological Laboratory, 2012

Travel awards

NSF travel grant to deliver biology education seminar at Notre Dame, March 2015

UTK Graduate Student Senate and EEB departmental travel awards to attend short course in Sweden, June 2013

Presentations

Read, Q. D., J. M. Grady, P. L. Zarnetske, S. Record, B. Baiser, J. Belmaker, M.-N. Tuanmu, A. Strecker, L. Beaudrot, and K. M. Thibault. "Intraspecific variation reflects drivers of rodent community assembly across the National Ecological Observatory Network." Ecological Society of America, August 2017.

"Individual variation in organismal traits: predicting patterns in space and time from local to global scales." Michigan State University Department of Forestry, Hanover Forest Science Seminar Series, September 2016.

Read, Q. D., N. J. Sanders, and A. T. Classen. "A globally replicated experiment shows that long-term environmental filters constrain plant response to increased temperature and loss of foundation species." Ecological Society of America, August 2015.

"C3UBE undergraduate biology curriculum reform." University of Notre Dame, Biology Education Seminar, Notre Dame, IN, March 2015.

"Roots, leaves, and soils facing global change." Rocky Mountain Biological Laboratory Seminar, Crested Butte, CO, June 2014.

"Plant traits & interactions altered by warming at different elevations." Oak Ridge National Laboratory, Environmental Sciences Division, Oak Ridge, TN, January 2014.

Research visits, short courses, and working groups

Research visits

Jason McLachlan laboratory, University of Notre Dame — *Fall 2014, Fall 2015*

Short courses

Boreal Forest Ecology, Swedish University of Agricultural Sciences, Umeå, Sweden — *June 2013*

Fundamentals of Ecosystem Ecology, Cary Institute of Ecosystem Studies, Millbrook, NY — *January 2012*

Working groups

Organized meeting with collaborators at National Ecological Observatory Network headquarters; gave presentation to NEON staff, Boulder, CO, January 2017.

Reviewer experience

Served as reviewer for the following journals: *Journal of Ecology, Global Ecology and Biogeography, Plant Ecology, Ecological Monographs, Ecology Letters, Annals of Botany Plants, Methods in Ecology and Evolution, Ecography, Biotropica, Functional Ecology* (3 times), *Journal of Plant Ecology, PeerJ* (2 times), *Ecology and Evolution, PloS One, Ecosphere, New Phytologist* (2 times), *Global Change Biology* (3 times)

Volunteering and outreach

Michigan State University

Gave public research talk, Biology On Tap — 2017

Rocky Mountain Biological Laboratory

Volunteered at Kids Nature Camp — 2015

University of Tennessee

Volunteered at Tennessee State Science Olympiad — 2015

Led Darwin Day, student-run science education event — 2014

Coordinated advertising for Darwin Day — 2013

Volunteered at Darwin Day — 2012, 2015

Discussed my research and assisted 7th-grade students with climate change research projects — 2012, 2013

Volunteered at Boo at the Zoo, a public outreach event — 2011, 2012

Created a field guide with 2nd-grade students — 2011

Relevant work experience

Wildlife Office, Kaibab National Forest, USDA Forest Service, Williams, AZ

Wildlife intern — *May 2011-July 2011*

Institute for Tropical Ecosystem Studies, UPR-Rio Piedras, Puerto Rico

Seedling census volunteer — *January 2011-April 2011*

Lab of Dr. Jim Clark, Duke University, Durham, NC

Research technician — *Summer 2008 and May 2010-January 2011*

Smithsonian Conservation Biology Institute, Front Royal, VA

Ecology intern — *January-April 2010*

North Carolina Botanical Garden, Chapel Hill, NC

Conservation and Land Management intern — *June-November 2009*

Morehead Planetarium and Science Center, UNC-Chapel Hill, Chapel Hill, NC

Summer camp counselor, educator, exhibit staffer — *May 2006-May 2008*

Undergraduate research

Biology Department, University of North Carolina — *Spring 2009*

"Morphological and anatomical characteristics of a *Pertica*-like plant of the Lower Devonian of northern New Brunswick, Canada," with Dr. Patricia Gensel

Coweeta Hydrologic Laboratory, U.S. Forest Service LTER site — *Fall 2008*

project conducted for undergraduate field site program at Highlands Biological Station

"Soil and tree ring chemistry changes in an oak forest," with Dr. Jennifer Knoepp

Undergraduate honors and awards

LeClair Award for excellence in plant studies, May 2009

Phi Beta Kappa, Spring 2008

Carolina Scholar (four-year academic merit scholarship)

References

Dr. Phoebe Zarnetske
Relationship: My postdoctoral advisor
Departments of Forestry and Fisheries & Wildlife, Michigan State University
email: plz@anr.msu.edu

Dr. Sydne Record
Relationship: My postdoctoral advisor
Department of Biology, Bryn Mawr College
email: srecord@brynmawr.edu

Dr. Nathan Sanders
Relationship: My Ph.D. advisor
Department of Biology, University of Vermont
email: nathan.sanders@uvm.edu

Dr. Aimee Classen
Relationship: Member of my dissertation committee
Department of Biology, University of Vermont
email: aimee.classen@uvm.edu

Dr. Jason McLachlan
Relationship: Hosted me as a visiting student
Department of Biology, University of Notre Dame
email: jmclachl@nd.edu