

JASON D. FRIDLEY

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Department of Biology
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EDUCATION

- 2002 Ph.D. in Biology, University of North Carolina at Chapel Hill (R.K. Peet, Advisor)
1997 BA in Biology, Bennington College, VT (K.D. Woods, Advisor)

GRANTS AND COMPETITIVELY FUNDED PROPOSALS

- 2008-2010 NSF Ecological Biology: Collaborative Research: Will climate change alter rates of old field succession across the U.S. Eastern Deciduous Forest? A cross-latitude experimental network (DEB-0742861, co-PI with Justin Wright, Duke University) \$135,000
2007-2012 NSF LTREB: Fourteen years of simulated climate change in an ancient limestone grassland: connecting responses of genotypes, species, and ecosystems (DEB-0716360, sole PI) \$447,896
2004-2007 NSF International Research Fellowship: Connecting genes to ecosystems: how does genetic diversity maintain species diversity in a species-rich pastureland? (with J.P. Grime, FRS, University of Sheffield, UK) \$103,760
2003-2006 National Parks Foundation Ecological Research Fellowship: What controls the floristic diversity of a National Park? Species turnover as a common currency for quantifying diversity patterns within the Great Smoky Mountains and among 23 National Parks. (with Peter White, UNC) \$150,000
2002-2003 NC Biotechnology Center: Characterization of plant communities surrounding North Carolina agricultural ecosystems. (with Robert Peet, UNC) \$85,000
2000-2001 NSF Doctoral Dissertation Improvement Grant: Relationships among species diversity, site fertility, resource heterogeneity, and ecosystem productivity in plant communities. \$9,345
2000, 1998 Sigma Xi GIAR. \$717, \$700
2000 Smith Research Grant, UNC Graduate School. \$500

FELLOWSHIPS AND HONORS

- 2003 John L. Harper Prize for Best Paper by a Young Author, British Ecological Society
2001 Highly Commended, Keymer Prize for Best Student Talk, British Ecological Society Winter Meeting
2001-2002 Henry H. Dearman Dissertation Fellowship, UNC Graduate School
2001-2002 Royster Society of Fellows, UNC Graduate School
1998-2001 NSF Graduate Research Fellowship
1997-1998 Mrs. W.C. Coker Fellowship, UNC Biology
1995-1997 Brockway Faculty Scholarship, Bennington College, VT

PUBLICATIONS

- Fridley, J.D.** 2009. Downscaling climate over complex terrain: high fine-scale spatial variation of near-ground temperatures in a montane forested landscape (Great Smoky Mountains, USA). *Journal of Applied Meteorology and Climatology*, in press.
- Manthey, M. and **Fridley, J.D.** 2009. Beta diversity metrics and the estimation of niche width via species co-occurrence data: reply to Zeleny. *Journal of Ecology*, in press.
- Fridley, J.D.** 2008. Of Asian forests and European fields: Eastern U.S. plant invasions in a global floristic context. *PLoS ONE* 3: e3630.
- Grime, J.P., **Fridley, J.D.**, Askew, A.P., Thompson, K., Hodgson, J.G., and Bennett, C.R. 2008. Long-term resistance to simulated climate change in an infertile grassland. *Proceedings of the National Academy of Sciences USA* 105: 10028-10032.
- Palmer, M., McGlenn, D., and **Fridley, J.D.** 2008. Artifacts and artificions in biodiversity research. *Folia Geobotanica* 43: 245-257.
- Qian, H., **Fridley, J.D.**, and Palmer, M. W. 2007. The latitudinal gradient of species-area relationships of vascular plants of North America. *The American Naturalist* 170: 690-701.
- Fridley, J.D.**, Grime, J.P., and Bilton, M. 2007. Genetic identity of interspecific neighbours mediates plant responses to competition and environmental variation in a species-rich grassland. *Journal of Ecology* 95: 908-915. [Editor's Choice of the Sept issue]
- Fridley, J.D.**, Vandermast, D.B., Kuppinger, D.M., Manthey, M., and Peet, R.K. 2007. Co-occurrence-based assessment of habitat generalists and specialists: a new approach for the measurement of niche width. *Journal of Ecology* 95: 707-722.
- Fridley, J.D.**, Stachowicz, J.J., Naeem, S., Sax, D.F., Seabloom, E.W., Smith, M.D., Stohlgren, T.J., Tilman, D., and Von Holle, B. The invasion paradox: reconciling pattern and process in species invasions. *Ecology* 88: 3-17.
- Fridley, J.D.**, Qian, H., White, P.S., and Palmer, M.W. 2006. Plant species invasions along the latitudinal gradient in the United States: comment. *Ecology* 87: 3209-3213.
- Fridley, J.D.**, Peet, R.K., van der Maarel, E., and Willems, J.H. 2006. Integration of local and regional species-area relationships from space-time species accumulation. *The American Naturalist* 168: 133-143.
- Bruno, J.F., **Fridley, J.D.**, Bromberg, K.D., and Bertness, M.D. 2005. Insights into biotic interactions from studies of species invasions. In: Sax, D.F., Gaines, S.D., and Stachowicz, J.J., eds. *Exotic species, bane to conservation and boon to understanding: ecology, evolution, and biogeography*. Sinauer, Sunderland, MA.
- Fridley, J.D.**, Peet, R.K., White, P.S., and Wentworth, T.R. 2005. Connecting fine- and broad-scale species-area relationships of southeastern U.S. flora. *Ecology* 86: 1172-1177.
- Fridley, J.D.**, Brown, R.L., and Bruno, J.F. 2004. Null models of exotic invasion and scale-dependent patterns of native and exotic species richness. *Ecology* 85: 3215-3222.
- Peet, R.K., **Fridley, J.D.**, and Gramling, J.M. 2003. Variation in species richness and species pool size across a pH gradient in forests of the Southern Blue Ridge Mountains. *Folia Geobotanica* 38: 391-401.

- Fridley, J.D.** 2003. Diversity effects on productivity in different light and nutrient environments: an experiment with communities of annual plants. *Journal of Ecology* 91: 396-406. [Winner of 2003 John L. Harper Prize]
- Brown, R.L. and **Fridley, J.D.** 2003. Control of plant species diversity and community invasibility by species immigration: seed richness versus seed density. *Oikos* 102: 15-24.
- Fridley, J.D.** 2002. Resource availability dominates and alters the relationship between species diversity and ecosystem productivity in experimental plant communities. *Oecologia* 132: 271-277.
- Fridley, J.D.** 2001. The influence of species diversity on ecosystem productivity: how, where, and why? *Oikos* 93: 514-526.
- Huston, M.A., Aarssen, L.W., Austin, M.P., Cade, B.S., **Fridley, J.D.**, Garnier, E., Grime, J.P., Hodgson, J., Lauenroth, W.K., Thompson, K., Vandermeer, J.H., and Wardle, D.A. 2000. No consistent effect of plant diversity on productivity (Technical Comment). *Science* 289: 1255a.
- Fridley, J.D.** 1998. The flora and fauna of Duke Paul's Missouri. In: Hans von Sachsen-Altenburg and Robert L. Dyer, *Duke Paul of Wuerttemberg on the Missouri Frontier: 1823, 1830 and 1851*. Pekitanoui, Boonville, MO.

PUBLISHED ABSTRACTS [1st author]

- Fridley, J.D.** and Grime, J.P. 2008. Linking genes to ecosystems: local genetic diversity drives production in species-rich limestone grassland. International Association for Vegetation Science Annual Symposium, Stellenbosch, South Africa
- Fridley, J.D.** and Grime, J.P. 2008. Genetic diversity and species diversity interact to influence the productivity of species-rich limestone grassland. Ecological Society of America Annual Meeting, Milwaukee, WI
- Fridley, J.D.** and Grime, J.P. 2007. Genetic identity of interspecific neighbours mediates plant responses to competition in a species-rich grassland. British Ecological Society Annual Meeting, Glasgow, UK
- Fridley, J.D.** and Grime, J.P. 2006. The relative impact of genetic diversity versus species diversity on ecosystem function in plant communities. Ecological Society of America Annual Meeting, Memphis, TN
- Fridley, J.D.**, Bruno, J.F., and Brown, R.L. 2005. Scale-dependent invasion patterns and null models of community assembly. Ecological Society of America Annual Meeting, Montreal
- Fridley, J.D.** 2005. Park biodiversity surveys: does vegetation science suggest where to look? George Wright Society Biennial Conference, Philadelphia, PA
- Fridley, J.D.** and Peet, R.K. 2004. Accumulation of local biodiversity in space-time. British Ecological Society Annual Meeting, Lancaster, UK
- Fridley, J.D.** and Peet, R.K. 2004. Accumulation of local biodiversity in space-time: solving Preston's riddle. Ecological Society of America Annual Meeting, Portland, OR
- Fridley, J.D.**, Gramling, J.M., Jobe, R.T., Kaplan, J.A., McKnight, M., Senft, A., Vandermast, D.B., and Peet, R.K. 2003. Fine-scale species-area relationships of the vascular flora of the Southeast. Ecological Society of America Annual Meeting, Savannah, GA
- Fridley, J.D.** 2002. Diversity effects on productivity in different environments: an experiment with communities of annual plants. Ecological Society of America Annual Meeting, Tucson, AZ
- Fridley, J.D.** 2001. Resource availability influences the relationship between plant diversity and ecosystem productivity. British Ecological Society Winter Meeting, Warwick, UK

Fridley, J.D. 2001. Relative effects of resource availability and species diversity on ecosystem productivity. Ecological Society of America Annual Meeting, Madison, WI

DISSERTATION

Fridley, J.D. 2002. The influence of species diversity on ecosystem productivity in different environments: experimental plant communities and theory. Ph.D. Dissertation. University of North Carolina, Chapel Hill, NC.

INVITED PRESENTATIONS

National Center for Ecological Analysis and Synthesis, March 2009

Yale University, Dept of Ecology & Evolutionary Biology, February 2009

Union College, Biology Department, October 2008

McGill University, Department of Biology, October 2008

University of Puerto Rico, Rio Piedras, April 2008

Virginia Tech, Department of Biology, April 2008

Bennington College, Bennington, VT, April 2007

Duke University, Graduate Program in Ecology, December 2005

University of Nebraska-Lincoln, School of Biological Sciences, February 2005

Syracuse University, Department of Biology, February 2005

University of Tennessee, Department of Ecology and Evolutionary Biology, February 2005

University of Sheffield, UK, Department of Animal and Plant Sciences, January 2005

University of Zurich, Switzerland, Institute of Environmental Sciences, November 2004

University of Jena/Max Planck Institute for Biogeochemistry, Germany, May 2004

University of Maryland Center for Environmental Science, April 2004

North Carolina State University, Department of Botany, March 2004

Cornell University, Department of Ecology and Evolutionary Biology, February 2004

The Academy of Natural Sciences, Philadelphia, PA, April 2003

Oklahoma State University, Department of Botany, March 2003

Centre for Population Biology, Silwood, Berkshire, UK, June 2002

University of Sheffield, UK, Department of Animal and Plant Sciences, December 2001

Bennington College, Bennington, VT, October 2000

TEACHING

2008, 2009 Population Biology (undergraduate), Syracuse

2008, 2009 Conservation Biology (advanced undergraduate), Syracuse

2007 Ecology (advanced undergraduate), Syracuse

2002 Understanding Biodiversity (undergraduate), Bennington College

2002 Population, Food, and Farms (undergraduate), Bennington College

- 2002 Advanced Readings Seminar in Ecology, Bennington College
 1997, 1999 Teaching Assistant, Plant Ecology (graduate/adv. undergraduate), UNC
 1998 Teaching Assistant, Animal Behavior (undergraduate), UNC

ADVISING AND GRADUATE COMMITTEES

- 2008- Catherine Ravenscroft (graduate advisor), Syracuse
 2008- Cynthia Chang (grad committee), Yale
 2007- Stephen Maheux (undergrad thesis), Syracuse
 2007- Rachel Suhl (undergrad thesis), Syracuse
 2007 Mike O'Brien (grad committee), SUNY-ESF
 2006- Kay Hayek (grad committee), SUNY-ESF
 2006- Tony Eallonardo (grad committee), SUNY-ESF
 2004-2008 Mary O'Connor (grad committee), UNC
 2004 Daniel McGlinn (undergrad thesis), UNC

PROFESSIONAL ACTIVITIES

- 2008- Editorial Board, *Ideas in Ecology and Evolution*
 2008- Editorial Board, *Contribuții Botanice* (Romania)
 2007-2009 Associate Editor, *Journal of Ecology*
 2006-2008 Editorial Board, *Journal of Vegetation Science*
 2008 Reviewer (ad hoc), Netherlands Organization for Scientific Research, NSF Advancing Theory in Biology Program, NSF Long-term Research in Environmental Biology Program
 2007 Symposium Organizer, "Beyond niche vs. neutral: what we still don't know about coexistence in plant communities", International Association for Vegetation Science Symposium, Swansea, Wales, UK
 2007 Science Program Committee, International Association for Vegetation Science Symposium, Swansea, Wales, UK
 2007 Reviewer (ad hoc), Czech Republic Academy of Sciences Grant Agency, US-Israel Binational Science Foundation
 2006 Reviewer (ad hoc), NSF Ecosystem Studies Program
 2005 Reviewer (ad hoc), Swiss Federal Institute of Technology Research Commission
 2005 Invited Participant, "The Next Generation of Biodiversity and Ecosystem Functioning Research" DIVERSITAS Workshop, Kota Kinabalu, Borneo, Malaysia
 2005 Invited Participant, "The Invasion Paradox: Reconciling Biodiversity and Invasion Patterns Across Spatial Scales" Symposium, Ecological Society of America Annual Meeting, Montreal
 2005 Symposium Organizer, "Parks for Science: Examples from the National Parks Ecological Research Program", George Wright Society Biennial Conference, Philadelphia, PA
 2005 Reviewer (ad hoc), German Research Foundation (DFG)

- 2004 Reviewer (ad hoc), USDA National Research Initiative Competitive Grants Program
- 2004 Invited Participant, 2004 Progress in Experimental Biodiversity Research Workshop, Jena, Germany
- 2003 Invited Participant, 2003 Biotic Mechanisms of Ecosystem Regulation in the Global Environment (BioMERGE) Adaptive Synthesis Workshop, St. Louis, MO
- 2002 Co-instructor, 2002 Biocomplexity and Ecoinformatics Graduate Course, National Center for Ecological Analysis and Synthesis, Santa Barbara, CA
- 1999-2007 Manuscripts reviewed for *Acta Oecologia*, *American Journal of Botany*, *The American Naturalist*, *Annals of Botany*, *Applied Vegetation Science*, *Basic and Applied Ecology*, *Biological Conservation*, *Biological Invasions*, *Botanical Bulletin of Academia Sinica*, *Canadian Journal of Forest Research*, *Conservation Biology*, *Diversity and Distributions*, *Ecography*, *Ecology*, *Ecological Monographs*, *Ecology Letters*, *Frontiers in Ecology and the Environment*, *Functional Ecology*, *International Journal of Plant Sciences*, *Journal of Ecology*, *Journal of the Torrey Botanical Society*, *Journal of Vegetation Science*, *Oecologia*, *Oikos*, *Plant Biology*, and *Plant Ecology*

PROFESSIONAL EXPERIENCE

- 2006-present Assistant Professor, Department of Biology, Syracuse University
- 2004, 2007 Visiting Scholar, University of Sheffield, UK
- 2003-2005 Postdoctoral Scholar, Department of Biology, UNC
- 2002 Visiting Faculty, Bennington College, VT
- 1997-1999 Teaching Assistant, Department of Biology, UNC
- 1994-1998 Research Assistant, Hans von Sachsen-Altenburg (historian)
- 1995-1997 Research Assistant, Kerry D. Woods, Bennington College
- 1996 Science Instructor, Long Trail School (secondary), Dorset, VT

PROFESSIONAL AFFILIATIONS

- American Association for the Advancement of Science
- British Ecological Society
- Ecological Society of America
- George Wright Society
- International Association for Vegetation Science
- Sigma Xi Scientific Research Society

UNIVERSITY SERVICE

- 2006- Biology Undergraduate Curriculum Committee, Syracuse University