

Ray Dybzinski, PhD

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Overview

Education

- 2007 **University of Minnesota, Minneapolis, Minnesota**
PhD in Ecology, Advised by David Tilman, Committee: Sarah Hobbie, Claudia Neuhauser, and Christopher Bingham
- 1998 **Northern Illinois University, DeKalb, Illinois**
BS in physics, BA in philosophy, graduated Magna cum Laude

Employment

- 2015 to Present **Assistant Professor, Loyola University Chicago, Institute of Environmental Sustainability**
- 2011 to 2015 **Associate Research Scholar, Princeton University**
Answering basic ecological questions using the PPA.v2 modeling framework and applying answers to understand global change biology.
- 2014 to 2015 **Adjunct Professor, Benedictine University, Department of Biology**
- 2013 **Adjunct Professor, DePaul University, Department of Environmental Science & Studies**
- 2007 to 2011 **Postdoctoral Researcher, Princeton University**
Researched the mechanisms that structure plant communities across resource availability gradients.
- 2006 to 2007 **Research Assistant, University of Minnesota, "Numbers Count!"**
Contributed short, modular lesson plans and exercises that will increase biomedical students' mathematical and statistical proficiency in undergraduate biology courses.
- 2003 to 2007 **Research and Teaching Assistant, University of Minnesota, EEB**
Conducted research on the mechanisms that maintain plant species diversity in tall grass prairie and the ecosystem consequences of plant species diversity. Teaching assistant for numerous Ecology and related classes, most often with significant autonomy to develop lesson plans (see below).
- 2001 to 2002 **Research Assistant, University of Illinois at Chicago, Biology Department**
Collaborated with Hormoz BassiriRad on the design of a nitrate dose-response greenhouse experiment involving nitrogen-fixing seedlings.
- 1996 to 1999 **Research Assistant, Northern Illinois University, Physics Department**
Participated in superconducting and CMR materials synthesis, testing, and analysis and coauthored eight peer-reviewed papers.

Teaching

Courses

- 2017 **ENVS326 – Agroecosystems** In this hands-on, intensive 3-week course, students built knowledge and skills in agriculture and ecology through work in greenhouse, laboratory, classroom, and field settings. Students examined challenges of food production, management decisions, and environmental change facing agroecosystems both locally and abroad. Tours of area farms and class Skype meetings with sustainable agriculture institutes broadened perspectives.
- 2015, 2016, 2017 **ENVS280 – Principles of Ecology** Fostered an in-depth understanding of ecology, the study of relationships between organisms and the environment at organizational scales ranging from genes, individuals, and populations to communities, ecosystems, and landscapes. Topics included population dynamics, species interactions, community dynamics, food webs, ecosystem functions, and landscape ecology with a strong emphasis on scientific inquiry and data interpretation.
- 2015, 2016 **ENVS286 – Principles of Ecology Lab** Students developed skills and analytical techniques commonly employed in ecological studies. The course will emphasized field work, laboratory technique, data analysis, and hypothesis testing in terrestrial and aquatic ecosystems.
- 2014 **Ecology Lab** Led a course that taught advanced undergraduates at Benedictine University, Lisle about ecological thinking, data collection, statistics, and formal science writing.
- 2013 **Ecological and Environmental Modeling** Developed and led a course that taught advanced undergraduates at DePaul University, Chicago about mathematical models commonly used in ecological and environmental science. Students learned the basics of modeling with sufficient depth to critically evaluate models in the literature and to construct and analyze novel models of ecological

or environmental phenomena of their choosing. These independent projects culminated in research papers and oral presentations.

Teaching Assistantships

- 2003 to 2007* **Distance Learning Ecology and Society** (for non-biology majors), 1 year: instructed and assessed 34 self-directed students via email and phone
- Ecology*** (for biology majors), 4 terms: led 2-3 sections of ~25 students each in ecological experiments and observational studies; discussion of primary literature; student-designed, independent projects; and lecture review
- Ecology and Society*** (for non-biology majors), 1 term: led 2 sections of ~20 students each in reading discussions and active learning exercises to reinforce lectures
- Ecosystem Ecology***, 1 term: led one section of 12 graduate students and one section of 20 undergraduate students in discussion of primary literature and active learning exercises to reinforce lectures
- Theoretical Ecology**, 1 term: led 12 graduate and advanced undergraduate students in a recitation that focused both on using mathematical software to understand theoretical ecology and on the construction and interpretation of student-designed, independent modeling projects
- General Biology**, 1 term: led four sections of 20 students each in active learning exercises to reinforce lectures
- *In all three of these classes, I had almost complete autonomy in the day-to-day structure of the laboratories and recitations. I designed the active learning exercises and assessments.
- 1997 to 1998* Graded homework and tutored students for Mathematical Methods of Physics and Analytical Mechanics II

Training

- 2017* LiCor Photosynthesis Training Course
- 2016* Loyola University Chicago Focus on Teaching and Learning, 1-day multi-session workshop/seminar
- 2015* Loyola University Chicago Focus on Teaching and Learning, 1-day multi-session workshop/seminar
- 2006* Preparing Future Faculty (3-credit class for graduate students and postdoctoral faculty focused on undergraduate teaching and learning, University of Minnesota)
- 2003* Center for Teaching and Learning, "Preparing Future Faculty" (Retreat, Minneapolis, MN)
- 2002* The Collaboration for the Advancement of College Teaching and Learning, "Prizing Diversity: Practical Approaches to Engagement in a Multicultural World" (Conference, Bloomington, MN)

Honors

- 2017* **Nominated for Faculty of the Year, Loyola University Chicago**
- 2017* **Nominated for Langerbeck Faculty Mentor Award**
- 2003* **Award for Outstanding Performance as a Teaching Assistant**
After winning the award in my very first semester, I was no longer eligible in subsequent semesters
- 2002 to 2003* **University of Minnesota Graduate Student Fellowship**

Invited Lectures

- 2017* Introduction to Ecology for First Star Scholars at-risk teens
- 2017* The myth of the balance of nature – or – If a species is trashing the planet, why humans are the best-case scenario, Principles of Ecology Lecture for Brian Ohsowski
- 2017* "Speaking Green" panel discussion at Patagonia, downtown Chicago
- 2006* Mechanisms of Coexistence, given in Ecology for David Tilman
- 2005* Biodiversity and Invasions, given in Ecosystem Ecology for Sarah Hobbie
- 2005* Resource Competition, given in Ecology for Don Alstad

Undergraduate Research Projects Mentored

- 2017* Ellie Eccles (Loyola University Chicago) – "Growing Mushrooms on Soybean Waste Compost"
- 2017* Ainsley McGrath (Loyola University Chicago) – "Of Waffles, Pies, Planes, Trains, Teslas, and Trees"
- 2016* Ellicia Sanchez (Loyola University Chicago) – "Competitive root over-proliferation in common crop species"
- 2007* Allison Louthan (Grinnell College, IA) – "The effects of the tree canopy on seedling germination and establishment"

- 2006 Maria Jost (University of Puget Sound, WA) – “Soil enemy effects across an experimental biodiversity gradient”
- 2006 Samantha Hensley (Metropolitan State University, MN) – “Seedhead production across an experimental biodiversity gradient”
- 2005 David DeVetter (University of Minnesota, MN) – “Effects of oomycete removal on seedlings in prairie plots”
- 2005 Lynn Knutson (University of Minnesota, MN) – “*In situ* effects of natural enemies on seedling biomass across and experimental plant species diversity gradient”
- 2005 Amy Quandt (University of Puget Sound, WA), Erin Brault (Villanova University, PA), and Emily Brault (Villanova University, PA) – “Insect predation of *vicia villosa* at Cedar Creek”
- 2004 Carla Essenberg (University of Minnesota, MN), Leah Spellen (Oakwood College, AL), and Agwu Nnanna (Benedict College, SC) – “Biodiversity and invasion”
- 2004 Jodi-Ann Hudgson (Oakwood College, AL) – “The influence of plant species diversity on soil fertility”
- 2004 Kari Eichstaedt – Mentored through the College of Biological Sciences mentoring program. Kari subsequently earned her M.S. degree from the Department of Agronomy and Plant Genetics at the University of Minnesota
- 2003 Kathleen George (Benedict College, SC) – “Soil heterogeneity and species richness”
- 2003 Ja’Copo Wiggins (St. Augustine’s College, NC) – “Selective granivory and the outcome of grass competition”
- 2003 Steph Swanson (Viterbo University, WI) and Jason Schatz (Iowa State University, IA) – “Effects of biodiversity on species invasion and success”
- 2003 Sarah Roley (Bemidji State University, MN) – “Effects of grasshopper herbivory on grass competition”

Research

Publications

1. Weng, E, CE Farrior, **R Dybzinski**, SW Pacala. 2017. Predicting vegetation type through physiological and environmental interactions with leaf traits: evergreen and deciduous forests in an earth system modeling framework. *Global Change Biology* 23, 2482–2498.
2. Landrum, N, **R Dybzinski**, A *Smajlovic*, B M Ohsowski. 2016. Managing for Resilience: Lessons from Ecology. *Journal of Management for Global Sustainability* 3: 75-99.
3. Weng, E, S Malyshev, J W Lichstein, C E Farrior, **R Dybzinski**, T Zhang, E Shevliakova, S W Pacala. 2015. Scaling from individual trees to forests in an Earth system modeling framework using a mathematically tractable model of height-structured competition. *Biogeosciences* 12: 2655-2694. DOI:10.5194/bg-12-2655-2015
4. Farrior, C E, I Rodriguez-Iturbe, **R Dybzinski**, S Levin, and S Pacala. 2015. Decreased water limitation under elevated CO₂ amplifies potential for forest carbon sinks. *PNAS* 112 DOI:10.1073/pnas.1506262112
5. **Dybzinski**, R, C E Farrior, and S W Pacala. 2015. Increased forest carbon storage with increased atmospheric CO₂ despite nitrogen limitation: A game-theoretic allocation model for trees in competition for nitrogen and light. *Global Change Biology* 21. DOI:10.1111/gcb.12783
6. **Dybzinski***, R, N Beckman*, and D Tilman. 2014. Neighborhoods have little effect on pre-dispersal fungal or insect seed predation in a grassland biodiversity experiment. *Oecologia* 174: 521–532. doi 10.1007/s00442-013-2788-3
7. Farrior, C E, D Tilman, **R Dybzinski**, P B Reich, and S W Pacala. 2013. Resource limitation in a competitive context determines complex plant responses to experimental resource additions. *Ecology* 94: 2505–2517.
8. **Dybzinski**, R, C Farrior, S Ollinger, and S Pacala. 2013. Interspecific versus intraspecific patterns in leaf nitrogen of forest trees across nitrogen availability gradients. *New Phytologist* 200: 112-121. doi: 10.1111/nph.12353
9. Craine, J and **R Dybzinski**. 2013. Mechanisms of plant competition for nutrients, water and light. *Functional Ecology* 27: 833-840. doi: 10.1111/1365-2435.12081
10. **Dybzinski***, R and G McNickle*. 2013. Game theory and plant ecology. *Ecology Letters* 16: 545-555. doi: 10.1111/ele.12071

11. Farrior, C, **R Dybzinski**, S Levin, and S Pacala. 2013. Competition for water and light in closed-canopy forests: a tractable model of carbon allocation with implications for carbon sinks. *The American Naturalist* 181: 314-330. doi: 10.1086/669153 (**Faculty of 1000 Recommended and awarded the American Naturalist's Presidential Award for best paper of 2013**)
12. Franklin, O, J Johansson, R Dewar, U Dieckmann, R McMurtrie, Å Brännström, and **R Dybzinski**. 2012. Modeling carbon allocation in trees –a search for principles. *Tree Physiology* 32: 648-666. doi: 10.1093/treephys/tp138
13. **Dybzinski, R** and D Tilman. 2012. Seed and microsite limitation in a late-successional old field: the effects of water, adults, litter, and small mammals on seeds and seedlings. *Plant Ecology* 213: 1003-1013. doi: 10.1007/s11258-012-0060-2
14. **Dybzinski, R**, C Farrior, A Wolf, P Reich, and S Pacala. 2011. Evolutionarily stable strategy carbon allocation to foliage, wood, and fine roots in trees competing for light and nitrogen: an analytically-tractable, individual-based model and quantitative comparisons to data. *The American Naturalist* 177: 153-166. doi: 10.1086/657992 (**Faculty of 1000 Recommended**)
15. **Dybzinski, R** and D Tilman. 2009. Competition and coexistence in plant communities. Pages 186-195 in S. A. Levin, editor. *The Princeton Guide to Ecology*. Princeton University Press, Princeton & Oxford.
16. **Dybzinski, R**, J Fargione, D Zak, D Fornara, and D Tilman. 2008. Soil fertility increases with plant species diversity in a long-term biodiversity experiment. *Oecologia* 158: 85-93.
17. **Dybzinski, R**, and D Tilman. 2007. Resource use patterns predict the long-term outcome of plant competition for nutrients and light. *The American Naturalist* 170: 305-318.
18. Fargione, J, D Tilman, **R Dybzinski**, J Hille Ris Lambers, C Clark, S Harpole, J Knops, PB Reich, and M Loreau. 2007. From selection to complementarity: Shifts in the causes of biodiversity-productivity relationships in a long-term biodiversity experiment. *Proceedings of the Royal Society B: Biological Sciences* 274: 871-876.
19. Tilman, D, J Hille Ris Lambers, S Harpole, **R Dybzinski**, J Fargione, C Clark, and C Lehman. 2004. Does metabolic theory apply to community ecology? It's a matter of scale. *Ecology* 85 (7): 1797-1799.
20. Dabrowski, B, L Gladczuk, A Wisniewski, Z Bukowski, **R Dybzinski**, A Szewczyk, M Gutowska, S Kolesnik, CW Kimball, and H Szymczak. 2000. Magnetostriiction study of structural and magnetic transitions in $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ ($0.1 < x < 0.2$). *Jour. App. Phys.* 87(6):3011-3017.
21. Klamut, PW, B Dabrowski, **R Dybzinski**, Z Bukowski, A Shengelaya, R Khasanov, S Dottinger, and H Keller. 2000. Muon-spin rotation study of the magnetic correlations in $\text{La}_{2x}\text{Ca}_{1-x}\text{Cu}_2\text{O}_{6+d}$ superconductors. *J. Appl. Phys.* 87:5558-5560.
22. Dabrowski, B, **R Dybzinski**, Z Bukowski, O Chmaissem, JD Jorgensen. 1999. Oxygen content and structures of $\text{La}_{1-x}\text{Ca}_x\text{MnO}_{3+d}$ as a function of synthesis conditions. *Jour. Sol. St. Chem.* 146:448-457.
23. Dabrowski, B, PW Klamut, Z Bukowski, **R Dybzinski** and JE Siewenie. 1999. Effective oxygen content and properties of $\text{La}_{0.74}\text{Ca}_{0.26}\text{MnO}_{(3+d)}$. *J. Sol. State Chem.* 144:461-466.
24. Dabrowski, B, X Xiong, Z Bukowski, **R Dybzinski**, PW Klamut, JE Siewenie, O Chmaissem, J Shaffer, CW Kimball, J Jorgensen, and S Short. 1999. Structure-properties phase diagram for $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ ($0.1-x-0.2$). *Phys. Rev. B* 60:7006-7017.
25. Xiong, X, B Dabrowski, O Chmaissem, Z Bukowski, S Kolesnik, **R Dybzinski**, CW Kimball, and JD Jorgensen. 1999. Correlation between coherent Jahn-Teller distortion and magnetic spin orientation in $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$. *Phys. Rev. B* 60:10186-10192.
26. Dabrowski, B, K Rogacki, X Xiong, PW Klamut, **R Dybzinski**, and J Shaffer. 1998. Synthesis and properties of the vacancy-free $\text{La}_{1-x}\text{Ba}_x\text{MnO}_3$. *Phys. Rev. B* 58:2716-2723.
27. Shengelaya, A, CM Aegerter, S Romer, H Keller, PW Klamut, **R Dybzinski**, B Dabrowski, J Klamut, D Kaczorowski, and IM Savic. 1998. Muon-spin-rotation measurements of the penetration depth in $\text{YBa}_2\text{Cu}_4\text{O}_8$ family superconductors. *Phys. Rev. B* 58:3457-3460.

*contributed equally; *italics* = *undergraduates*

Popular Media

The New York Times. 3 January 2011. "Competitive Nature That Is Nurtured in Soil" by Sindya N. Bhanoo

Grant Reviewer

National Science Foundation, Department of Energy, NSF Long Term Ecological Studies

Manuscript Reviewer

PNAS, Trends in Ecology and Evolution, The American Naturalist, Ecology Letters, Ecology, Journal of Ecology, Ecological Monographs, New Phytologist, Oecologia, Oikos, Biogeosciences, Theoretical Ecology, Ecosystems, Ecological Modelling, Ecological Research, Biotropica, International Journal of Plant Sciences, Journal of Plant Ecology, *The Ecological and Social Consequences of Changes in Biodiversity*, Canadian Journal of Botany, European Journal of Soil Biology, The Journal of the Torrey Botanical Society, Journal of Management for Global Sustainability

Funding

- 2016 **Loyola Faculty Development Summer Research Stipend.** \$7000 “Moving critical empirical research in fossil carbon sequestrations and sustainable agriculture forward with a flexible game theoretic model of plant interactions.”

Professional Activities

Invited Talks

- 2017 The myth of the balance of nature – or – If a species is trashing the planet, why humans are the best-case scenario, Teen Conservation Leadership Conference, IIT, IL
- 2017 UIC Biological Sciences undergraduates award day: Keynote Address, UIC, IL
- 2017 The myth of the balance of nature – or – If a species is trashing the planet, why humans are the best-case scenario, Wild Things Conference, UIC, IL
- 2017 Speaking Green (panelist), Patagonia, Chicago, IL
- 2017 From the greenhouse to the globe: some big surprises about how best to model nitrogen uptake in coupled CN Earth system models, Purdue University, IN
- 2017 How gamey is your sink? Game theoretic versus conventional analyses of fossil carbon sequestration by forests, Purdue University, IN
- 2016 Understanding the strategies of plants in the context of global change and sustainable agriculture, Loyola University Chicago, IL
- 2014 Linking vital rates and traits in a generalized forest model, Ecological Society of Japan, Hiroshima
- 2014 Thuggish, selfish trees and global climate change, Indiana University, IN
- 2013 Trees as thugs and the fate of the land carbon sink, Illinois Institute of Technology, IL
- 2012 Plants are heartless: incorporating an obvious, but frequently ignored fact in forestry models, Boston University, MA
- 2011 The structure of plant communities across resource availability gradients: insights from physiologically-based, game-theoretic models of competition, Cary Institute of Ecosystem Studies in Millbrook, NY
- 2011 The structure of plant communities across resource availability gradients: insights from physiologically-based, game-theoretic models of competition, University of Wisconsin at Milwaukee, WI
- 2011 If a tree falls in a forest and no one is around to hear it, can I still model it?, Pennsylvania State University in State College, PA
- 2011 The structure of plant communities across resource availability gradients: insights from physiologically-based, game-theoretic models of competition, University of Illinois at Chicago, IL
- 2010 Understanding the competitive strategies of trees, Carleton College in Northfield, MN
- 2010 Seeing the forest for the trees: Understanding community-level patterns by scaling up individual-level physiology in the context of light and nitrogen competition, Iowa State University in Ames, IA
- 2009 Seeing the forest for the trees: Understanding community-level patterns by scaling up individual-level physiology in the context of light and nitrogen competition, Washington University in St. Louis, MO
- 2007 Identifying the mechanisms that promote local plant species diversity in a tall grass community, Cedar Creek LTER, MN
- 2005 Identifying the mechanisms that maintain plant species diversity, Augsburg College, MN

Presentations at Meetings

- 2017 **Dybzinski, R.** Forest productivity and carbon storage under climate change: A game-theoretic perspective (Ecological Society of America oral presentation, Portland, OR)
- 2017 Rostamza, M, P Orlando, **R Dybzinski**, A Iyer-Pascuzzi, and G McNickle. The functional form of resource uptake and tissue cost equations have important implications for terrestrial net primary productivity (Ecological Society of America oral presentation, Portland, OR)
- 2017 Panock, S, A Kelvakis, J. McCabe, L Vasarhelyi, and **Dybzinski, R.** An empirical method for determining nitrogen uptake rate as a mathematical function of root mass and nitrogen availability (Climate Change Conference poster presentation, Loyola University Chicago)
- 2017 Panock, S, A Kelvakis, J. McCabe, L Vasarhelyi, and **Dybzinski, R.** An empirical method for determining nitrogen uptake rate as a mathematical function of root mass and nitrogen availability (Weekend of Excellence poster presentation, Loyola University Chicago)
- 2014 **Dybzinski, R.**, B Sulman, C Farris, and S Pacala. Beyond the transient: A simple model demonstrates that the rhizosphere priming effect can cause sustained increases in the nitrogen mineralization rate (Ecological Society of America poster presentation, Sacramento, CA)
- 2013 **Dybzinski, R.**, C Farris, and S Pacala. Additional carbon storage under elevated CO₂ is not diminished – and may even be amplified – by nitrogen limitation (Ecological Society of America oral presentation, Minneapolis, MN)
- 2012 **Dybzinski, R.**, C Farris, and S Pacala. Untangling intraspecific and interspecific changes in leaf nitrogen across nitrogen availability gradients in forests (Ecological Society of America oral presentation, Portland, OR)
- 2012 Farris, C, **R Dybzinski**, S Keel, and S Pacala. Competitive plant responses to elevated CO₂ may significantly decrease a potential carbon sink (Ecological Society of America oral presentation, Portland, OR)
- 2011 **Dybzinski, R.**, C Farris, and S Pacala. Roots are weapons: Game theory of fine-root investment from a whole-plant perspective; theoretical predictions and empirical challenges (Ecological Society of America oral presentation, Austin, TX)
- 2011 Farris, C, D Tilman, P Reich, **R Dybzinski**, and S Pacala. Evolutionarily stable strategies explain complex plant responses to simple resource addition experiments (Ecological Society of America oral presentation, Austin, TX)
- 2011 **Dybzinski, R.**, C Farris, A Wolf, P Reich, and S Pacala. Understanding the ecology of photosynthate allocation to leaves, roots, and stems in closed-canopy forests: insights from an individual-based, analytically-tractable mechanistic model of nitrogen and light competition and comparisons to data (Annual Symposium of the British Ecological Society oral presentation, University of Cambridge, UK)
- 2010 **Dybzinski, R.**, C Farris, A Wolf, P Reich, and S Pacala. ESS allocation to foliage, wood, and fine roots in trees competing for light and nitrogen: An analytically-tractable, individual-based model and quantitative comparisons to data (Ecological Society of America oral presentation, Pittsburgh, PA)
- 2010 Pacala, S, **R Dybzinski**, C Farris, and E Shevliakova. Global consequences of competition for light, water, and nitrogen among individual plants (Ecological Society of America oral presentation, Pittsburgh, PA)
- 2010 Farris, C, **R Dybzinski**, and S Pacala. Role of competition in vegetation change (Ecological Society of America oral presentation, Pittsburgh, PA)
- 2009 **Dybzinski, R.**, C Farris, and S Pacala. Forest structure and species interactions in an analytically-tractable, yet mechanistically-rich model of nitrogen and light competition (Ecological Society of America oral presentation, Albuquerque, NM)
- 2009 Farris, C, **R Dybzinski**, S Levin, and S Pacala. Solving the tragedy of the commons for water use in plants (Ecological Society of America oral presentation, Albuquerque, NM)
- 2008 **Dybzinski, R.** and D Tilman. Seed limitation aggravated by establishment limitation in an unsaturated late-successional old field: The effects of water, adults, litter, and small mammals on seeds and seedlings (Ecological Society of America oral presentation, Milwaukee, WI)
- 2007 **Dybzinski, R.**, S Hensley, and D Tilman. A Janzen-Connell diversity-maintaining mechanism in temperate grasslands: Pre-dispersal seed predation by fungi and insects (Ecological Society of America oral presentation, San Jose, CA)
- 2007 **Dybzinski, R.** Patterns in the long-term Cedar Creek old-field data: Insights, speculations, and (most importantly) the case for more species trait data (Cedar Creek Long-Term Ecological Research Symposium oral presentation, Bethel, MN)
- 2007 **Dybzinski, R.** Mechanisms of establishment limitation in native prairie vegetation (Cedar Creek Long-Term Ecological Research Symposium oral presentation, St. Paul, MN)
- 2006 **Dybzinski, R.**, J Fargione, and D Tilman. The fertility effect: resource supply increases across an experimental plant species diversity gradient (LTER All Scientists Meeting poster presentation, Estes Park, CO)

- 2006 **Dybzinski, R**, The effects of plant species diversity, seed predators, and their interaction on undispersed seeds (Cedar Creek Long-Term Ecological Research Symposium oral presentation, Bethel, MN)
- 2005 **Dybzinski, R**, Plant species coexistence and the effects of plant propagule dispersal, enemy dispersal, and enemy host-specificity in a spatially explicit Janzen-Connell model (Ecological Society of America oral presentation, Montreal, Canada)
- 2005 **Dybzinski, R**, Cedar Creek Overview (Long Term Ecological Research Network Graduate Student Meeting oral presentation, Andrews, OR)
- 2004 **Dybzinski, R**, D Tilman, Resource use patterns predict long-term plant competition outcomes (Ecological Society of America oral presentation, Portland, OR)
- 2004 **Dybzinski, R**, Resource use patterns predict long-term plant competition outcomes (Cedar Creek Long-Term Ecological Research Symposium oral presentation, Bethel, MN)
- 2003 **Dybzinski, R**, Coexistence and exclusion in a long term grass competition experiment, outcomes and possible mechanisms (Cedar Creek Long-Term Ecological Research Symposium oral presentation, Bethel, MN)
- 2002 **Dybzinski, R**, H BassiriRad, H Sehtiya, Negative effects of nitrate loading on the physiological responses of a nitrogen-fixing tree, *Robinia pseudoacacia* (Ecological Society of America poster presentation, Tucson, AZ)

Workshops

- 2015 **Department of Energy Trait Modeling Workshop**
Washington DC

Service

- 2016 to Present **Founder and organizer of Odd-Tuesdays Sustainability Reading Club**
Facilitate discussion of papers on sustainability with interested students
- 2016 to Present **Academic Council**
Institute of Environmental Sustainability, Loyola University Chicago
- 2017 **Tabled for Institute of Environmental Sustainability at Loyola Academy (high school)**
- 2017 **Ecology Lab BS Committee**
Institute of Environmental Sustainability, Loyola University Chicago
- 2017 **IES Fellowship Application Reviewer**
Institute of Environmental Sustainability, Loyola University Chicago
- 2016 **Long-Term Ecological Research (LTER) Synthesis Review**
Reviewed proposals
- 2016 **Volunteer client for Statistical Consulting (Stat 401)**
Loyola University Chicago
- 2016 **Search Committee: Instructor, NTT, 1-year**
Institute of Environmental Sustainability, Loyola University Chicago
- 2016 **IES Fellowship Application Reviewer**
Institute of Environmental Sustainability, Loyola University Chicago
- 2016 **Organismal Curriculum Committee**
Institute of Environmental Sustainability, Loyola University Chicago
- 2012 to 2015 **DePaul University Institutional Animal Care and Use Committee (IACUC)**
Committee Member
- 2012 to 2015 **DePaul University Institute Biosafety Committee (IBC)**
Committee Member
- 2006, 2007 **College of Biological Sciences Teaching Assistant Award Committee (twice)**
Reviewed nominees and voted to decide who would receive the award. I was invited to serve on this committee because I was a previous winner and had continued to demonstrate my capability and dedication as a TA.
- 2005 to 2006 **Graduate Student Seminar Series Organizer**
Worked with a team of other graduate students to organize and run a weekly seminar series in the Ecology, Evolution, and Behavior Department. I was in charge of composing creative and informative emails and flyers to advertise the talks.
- 2005 **Cedar Creek Natural History Area Symposium Organizer**
Worked with one other graduate student to organize and run an all-day seminar focused on research at Cedar Creek, with talks given by PI's, post-docs, and graduate students from around the country
- 2005 **Graduate Student "Welcome Weekend" Organizer**
A faculty member and I organized a visit of approximately twenty prospective graduate students from around the country for meetings, activities, and socializing with the Ecology, Evolution, and Behavior Department

- 2003 to 2007* **Cedar Creek LTER-Network Graduate Student Representative**
Liaison between the LTER Network office and the Cedar Creek graduate student community
- 2003 to 2006* **Cedar Creek Natural History Area Prescribed Burn Program**
Helped control prescribed prairie and savanna burns
- 2003 to 2004* **Ecology, Evolution, and Behavior Graduate Student President**
- 2002 to 2003* **Ecology, Evolution, and Behavior Ethics and Aesthetics Committee Member**
Organized six lectures and activities to stimulate thought and discussion on ethics and professional skills that were of interest to students and faculty in the department

Outreach

- 2015 - Present* **Helen Peirce International Studies Elementary School Science Fair Judge**
Judged and provided feedback to fourth through eighth grade students who had conducted independent research
- 2008* **New Jersey High School Science Olympiad Supervisor**
Created, administered, and scored an ecology test for 17 teams of regional high school students competing in the Science Olympiad
- 2006* **Hopkins Science Fair Judge**
Judged and provided feedback to high school students who had conducted independent research related to the environment
- 2006* **Minnesota Academy of Science Undergraduate Oral Presentation Judge**
Judged and provided feedback to undergraduates who had conducted independent research in the fields of Ecology and Macro Biology
- 2005* **Common X Change, K-12 Outreach**
Participated in a program with the St. Paul Public Schools to pair scientists with K-12 teachers for lessons with K-12 students. I worked with a hydrologist and two SPPS teachers to construct a lesson plan that taught the water cycle, plant biology, and the scientific method to at risk 3rd and 4th grade students. We met with the students three times, once for an extended 4-hour lesson in the field.