Amy E. Kendig

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Education

PhD in Ecology, Evolution, and Behavior 2011–2017
University of Minnesota, St. Paul, MN
Minor in Risk Analysis for Introduced Species and Genotypes

BS in Biology 2007–2011
Georgia Institute of Technology, Atlanta, GA

Additional Training
NSF Cyber Carpentry: Data Life-Cycle Training, Chapel Hill, NC July 2019
Enhancing Linkages between Math and Ecology, Kellogg Biological Station, MI June 2013
Ecology and Evolution of Infectious Diseases Workshop, Ann Arbor, MI May 2012

Professional Experience

Postdoctoral Research Associate
Agronomy Department, University of Florida, Gainesville, FL 2018–present

PhD Candidate
Graduate Research Assistant, Minnesota Invasive Terrestrial Plants and Pests Center 2017
Graduate Teaching Assistant, College of Biological Sciences 2014–2017
Graduate Program Fellow, Department of Ecology, Evolution, and Behavior 2016
NSF Graduate Research Fellow 2013–2014
NSF IGERT Fellow in Risk Assessment of Introduced Species and Genotypes 2011–2013

Undergraduate Researcher
Department of Biology, Georgia Institute of Technology, Atlanta, GA 2009–2011
NSF REU, St. Olaf College, Northfield, MN 2010
NSF REU, University of California, Santa Barbara, CA 2009
SURE Fellow, Emory University, Atlanta, GA 2008

Peer-Reviewed Publications

*undergraduate mentee

Kendig, A. E.†, V. J. Svahnström†*, A. Adhikari, P. F. Harmon, and S. L. Flory. Emerging fungal pathogen of an invasive grass: Implications for competition with native plant species. *Accepted* for *PLOS ONE*. https://doi.org/10.1101/2020.08.06.239319 †co-first authors

Kazanski, C., J. Cowles, S. Dymond, A. Clark, A. David, J. M. Jungers, **A. E. Kendig**, C. Riggs, J. Trost, and X. Wei. Water availability modifies productivity response to biodiversity and nitrogen in long-term grassland experiments. *Accepted* for *Ecological Applications.*

Phan, Tin, B. Pell, **A. E. Kendig**, E. T. Borer, and Y. Kuang. 2021. Rich dynamics of a simple delay host-pathogen model of cell-to-cell infection for plant virus. *Discrete and Continuous Dynamical Systems-B* 26: 515539. https://doi.org/10.3934/dcdsb.2020261

Kendig, A. E., E. R. Spear, S. C. Daws, S. L. Flory, and E. A. Mordecai. 2021. Native perennial and non-native annual grasses shape pathogen community composition and disease severity in a California grassland. *Journal of Ecology* 109: 900–912**.** https://doi.org/10.1111/1365-2745.13515

Kendig, A. E., E. T. Borer, E. N. Boak*, T. C. Picard*, and E. W. Seabloom. 2020. Host nutrition mediates interactions between plant viruses, altering transmission and predicted disease spread. *Ecology* 101: e03155*.* https://doi.org/10.1002/ecy.3155

Goss, E. M., **A. E. Kendig**, A. Adhikari, B. Lane, N. Kortessis, R. D. Holt, K. Clay, P. F. Harmon, and S. L. Flory. 2020. Disease in invasive plant populations. *Annual Review of Phytopathology* 58: 15.1–15.2. https://doi.org/10.1146/annurev-phyto-010820-012757

Pell, B., **A. E. Kendig**, E. T. Borer, and Y. Kuang. 2019. Modeling nutrient and disease dynamics in a plant-pathogen system. *Mathematical Biosciences and Engineering* 16: 234–264. https://doi.org/10.3934/mbe.2019013

Kendig, A. E., E. T. Borer, C. E. Mitchell, A. G. Power, and E. W. Seabloom. 2017. Characteristics and drivers of plant virus community spatial patterns in US west coast grasslands. *Oikos* 126: 1281–1290. https://doi.org/10.1111/oik.04178

Seabloom, E. W., E. T. Borer, K. Gross, **A. E. Kendig**, C. Lacroix, C. E. Mitchell, E. A. Mordecai, and A. G. Power. 2015. The community ecology of pathogens: coinfection, coexistence and community composition. *Ecology Letters* 18: 401–415. https://doi.org/10.1111/ele.12418

MacDougall, A. S., J. R. Bennett, J. Firn, E. W. Seabloom, E. T. Borer, E. M. Lind, J. L. Orrock, W. S. Harpole, Y. Hautier, P. B. Adler, E. Cleland, K. Davies, B. Melbourne, S. M. Prober, J. D. Bakker, P. A. Fay, V. L. Jin, **A. Kendig**, K. J. La Pierre, J. Moore, J. Morgan, and C. J. Stevens. 2014. Anthropogenic-based regional-scale factors most consistently explain plot-level exotic diversity in grasslands. *Global Ecology and Biogeography* 23: 802–810. https://doi.org/10.1111/geb.12157

Peer-Reviewed Book Chapter

Kendig, A. E., S. L. Flory, E. M. Goss, R. D. Holt, K. Clay, P. F. Harmon, B. R. Lane, A. Adhikari, and C. M. Wojan. The Role of Pathogens in Plant Invasions. 2020. Anna Traveset and David M. Richardson, editors. Plant Invasions: The Role of Biotic Interactions. CAB International Press. Wallingford, UK.

Datasets

Kendig, A. E., V. J. Svahnström, A. Adhikari, P. F. Harmon, and S. L. Flory. 2021. Emerging fungal pathogen of an invasive grass: Implications for competition with native plant species (Version v1.0). Environmental Data Initiative. https://doi.org/10.6073/pasta/c85303b29d66e7deb3387215a07015be

Kendig, A. E., E. R. Spear, S. C. Daws, S. L. Flory, & E. A. Mordecai. 2020. Dataset from: Native perennial and non-native annual grasses shape pathogen community composition and disease severity in a California grassland (Version v1.0). Journal of Ecology. Zenodo. http://doi.org/10.5281/zenodo.4062434

Kendig, A. E., E. T. Borer, E. N. Boak, T. C. Picard, and E. W. Seabloom. 2020. Soil nitrogen and phosphorus effects on plant virus density, transmission, and species interactions (Version v2.0). Environmental Data Initiative. https://doi.org/10.6073/pasta/00a35cbd4a9b2a007433c3d2be0d1742

Grants and Awards

Army Corps of Engineers: Using Long-Term Datasets to Understanding Impacts of Aquatic Plant Management in Florida; Co-PI ($348,416)	2020
Travel Award, NSF Cyber Carpentry Workshop: Data Life-Cycle Training ($682)	2019
Thompson Earth Systems Institute Outreach Grant ($665)	2018
Travel Award, Dept. of EEB, UMN (3 awards, $2,068)	2013–2018
Alexander and Lydia Anderson Research Grant, UMN ($3,000)	2015
Research Award, Dept. of EEB, UMN (2 awards, $3,944)	2014–2015
National Science Foundation Graduate Research Fellowship Program ($30,000)	2013–2014
Research and Stipend Award, HHMI Research Mentor Program, UMN ($3,000)	2014
Research Award, ISG-IGERT Program, UMN ($2,000)	2013
Travel Award, Enhancing Linkages between Math and Ecology (travel, room, and board)	2013
Travel Award, Ecology and Evolution of Infectious Diseases Workshop ($526)	2012
National Science Foundation Integrative Graduate Education and Research Traineeship (IGERT) in Risk Assessment of Introduced Species and Genotypes (ISG) ($60,000)	2011–2013
Georgia HOPE Scholarship (full undergraduate tuition)	2007–2011
William-Walls Life Science Award ($500)	2011
Travel Award, ACC Meeting of the Minds (travel, room, and board)	2011
President's Undergraduate Research Award ($1000)	2010
Ryder Roundtable Scholarship ($10,000)	2007

Invited Presentations

Panelist, Community Coding Groups, ResBaz (Research Bazaar), Gainesville, FL	2019
Seminar, Department of Plant Pathology, University of Minnesota, St. Paul, MN	2018
Seminar, INRA Plant Pathology Unit, Avignon, France	2017
Brown Bag Seminar, Kellogg Biological Station, Michigan State University, Hickory Corners, MI	2017
Interview, University of Florida, Gainesville, FL	2017
Interview, Stanford University, Stanford, CA	2017

Five Minute Thesis Presentation, UMN SIAM Minneapolis, MN 2016

Co-Organized Symposia

Invasive Species and Infectious Diseases: Interactive Effects in Ecological Communities. 2020
Symposium, Ecological Society of America (ESA) Annual Meeting: virtual.

When a Raindrop is a Tsunami: Impacts of Disturbance on Plant-Associated Microbial Communities. 2018
Organized Oral Session, ESA Annual Meeting: New Orleans, LA.

The Introduction of Microbes: For Better or for Worse. 2013
University of Minnesota ISG-IGERT Annual Symposium: St. Paul, MN

Contributed Presentations

Generalist fungal pathogens may increase the impacts of an invasive understory grass on native grasses. 2020
ESA Annual Meeting: virtual (talk)

Effects of pathogen accumulation on native-invasive plant interactions. 2019
ESA Annual Meeting: Louisville, KY (talk)

Pathogen accumulation on an invasive species: Implications for native-invasive interactions. 2019
Florida Exotic Pest Plant Council Annual Symposium: Daytona Beach Shores, FL (poster)

Pathogen accumulation on an invasive species: Implications for native-invasive interactions. 2019
Emerging Pathogens Institute Research Day: Gainesville, FL (poster)

EDDMapS Plant Damage: Using citizen science to understand drivers of invasive plant disease and herbivory. North American Invasive Species Management Association/Upper Midwest Invasive Species Joint Conference: Rochester, MN (talk) 2018

Native and invasive grasses share foliar fungal pathogens. 2018
ESA Annual Meeting: New Orleans,LA (talk)

Plant size-virus richness relationships depend on host species and nitrogen inputs. 2018
Population Biology of Vector-borne Diseases Symposium: Athens, GA (poster)

Soil nutrients and within-host niche differentiation mediate plant virus interactions. 2017
Jacques Monod Conference: Roscoff, France (talk)

Nutrient mediation of within-host and among-host plant virus dynamics. 2016
ESA Annual Meeting: Ft. Lauderdale, FL (talk)

The power of analogy: Unifying principles of infectious disease. 2015
5th International Conference on Infectious Disease Dynamics: Clearwater Beach, FL (poster)

Using spatial patterns to infer disease processes in a multi-host, multi-pathogen system. 2013
ESA Annual Meeting: Minneapolis, MN (talk)

Productivity and soil characteristics as indices of tallgrass prairie success. 2011
ESA Annual Meeting: Austin, TX (poster)

Characterization of the chemical defenses of Sagittaria graminea*, a freshwater plant, against crayfish herbivory*. ACC Meeting of the Minds: Miami, FL (poster) 2011

The impact of paternal involvement on patterns of brain activity to male and female speech. 2008
Georgia State University Psychology Undergraduate Research Conference: Atlanta, GA (poster)

Teaching and Mentoring

Instructor, Data Carpentry, The Carpentries 2020–present
Guest Lecture, Biological Invaders, University of Florida 2018
Teaching Assistant, Toward Conquest of Disease, University of Minnesota (2 semesters) 2016–2017
Teaching Assistant, Ecology, University of Minnesota (2 semesters) 2015–2016
Teaching Assistant, Foundations of Biology II, University of Minnesota (1 semester) 2014
Teaching Assistant, Honors Biological Principles, Georgia Tech (1 semester) 2010
Teaching Assistant, Freshman Seminar, Georgia Tech (1 semester) 2009

University of Florida undergraduate mentees 2018–2020

Liliana Benitez (NSF REU, New College of Florida), Zobia Chanda, Trevor Green, Mariam Higginbotham, Zadok Jollie, Daniela Menendez, David Notman, Teresa Orosa, Shannon Regan, Penny Reif, Callie San Antonio, Vida Svahnström (NSF REU, Univsersity of St. Andrews), Ryan Truesdell

University of Minnesota undergraduate mentees 2013–2017
Emily Boak (directed research), Ryan Campbell, Nicholas Cupery (honors thesis), Casey Easterday (NSF REU), Jessica Lettelleir, Timothy Martin, Tashina Picard (HHMI Transfer Student Program, UROP Program), Kurra Renner, Luc Robichaud, Alexis Rogers

Science Outreach and Education

Organizer, *EDDMapS Disease Detectives* 2018–present
Collect citizen science data on invasive plant infectious diseases with EDDMapS.org.

Speaker, *UF CPET Climate Change Resiliency Program* 2020
Taught a virtual lesson on invasive species and infectious disease to high school students.

Organizer, *Coding in the Environmental Sciences Workshops* 2017–2019
K-12 students to learn about environmental science research and basic coding.

Volunteer, *Collaborative Curriculum Design for Invasive Species Education* 2019
Helped Florida K-12 teachers design lesson plans that incorporate authentic science.

Volunteer, *Girls Who Code* 2016–2017
Mentored K-12 students learning how to code and build a smartphone app.

Curriculum Developer and Teacher, *Market Science* 2015–2017
Science demonstrations at local farmer's markets and events.

Guest Teacher, *Heritage Middle School* and *Southside Family Charter School* 2011–2017
Taught lessons on plant disease, population growth, and DNA extraction.

Science Fair Judge (5x) 2012–2016

Service and Leadership

Manuscript reviewer: *The American Naturalist, Biological Invasions, Ecology and Evolution, Ecology Letters, Fungal Ecology, Journal of Animal Ecology, Journal of Applied Ecology*, *Journal of Ecology*, *Journal of Environmental Management*, *Land Degradation and Development, New Phytologist, Proceedings of the Royal Society B*

Co-Organizer, R-Ladies Gainesville 2019–present
Sessions led: book club discussion, Introduction to R, Docker and RStudio, Tidy Tuesday
Invasion Ecology Student Presentation Award Judge, Ecological Society of America 2018
Undergraduate Research Opportunities Program Committee, UMN 2016
Friday Noon Seminar Planning Committee, UMN Department of EEB 2013–2014, 2016
Sexual Harassment Complaint Liaison, UMN Department of EEB 2015–2016
Volunteer Coordinator, UMN TeachingSMART 2012–2014
Graduate Student President Committee, UMN Department of EEB 2012–2013
Travel Grant Committee, UMN Department of EEB 2012
Council of Graduate Students Representative, UMN Department of EEB 2011–2012
Executive Committee Student Representative, UMN IGERT 2011–2012