# Amy E. Kendig

#### Education

PhD in Ecology, Evolution, and Behavior University of Minnesota, St. Paul, MN Minor in Risk Analysis for Introduced Species and Genotypes	2011–2017			
BS in Biology Georgia Institute of Technology, Atlanta, GA	2007–2011			
Additional Training NSF Cyber Carpentry: Data Life-Cycle Training, Chapel Hill, NC Enhancing Linkages between Math and Ecology, Kellogg Biological Station, MI Ecology and Evolution of Infectious Diseases Workshop, Ann Arbor, MI	July 2019 June 2013 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 Graduate Teaching Assistant, College of Biological Sciences Graduate Program Fellow, Department of Ecology, Evolution, and Behavior NSF Graduate Research Fellow NSF IGERT Fellow in Risk Assessment of Introduced Species and Genotypes	2017 2014–2017 2016 2013–2014 2011–2013			
Undergraduate Researcher Department of Biology, Georgia Institute of Technology, Atlanta, GA NSF REU, St. Olaf College, Northfield, MN NSF REU, University of California, Santa Barbara, CA SURE Fellow, Emory University, Atlanta, GA	2009–2011 2010 2009 2008			

## **Peer-Reviewed Publications**

- Benitez, L.\*, **A. E. Kendig**, A. Adhikari, K. Clay, R. D. Holt, E. Goss, S. Luke Flory. Invasive grass litter suppresses a native grass species and promotes disease. *Ecosphere*: in press. https://doi.org/10.1101/2021.04.07.437244
- Easterday, C.\*, **A. E. Kendig**, C. Lacroix, E. W. Seabloom, and E. T. Borer. 2022. Long-term nitrogen enrichment mediates the effects of nitrogen supply and co-inoculation on a viral pathogen. *Ecology & Evolution*: e8450. <a href="https://doi.org/10.1002/ece3.8450">https://doi.org/10.1002/ece3.8450</a>
- Kazanski, C., J. Cowles, S. Dymond, A. Clark, A. David, J. M. Jungers, **A. E. Kendig**, C. Riggs, J. Trost, and X. Wei. 2021. Water availability modifies productivity response to biodiversity and nitrogen in long-term grassland experiments. *Ecological Applications* 31: e02363. https://doi.org/10.1002/eap.2363
- **Kendig, A. E.**<sup>†</sup>, V. J. Svahnström<sup>†\*</sup>, A. Adhikari, P. F. Harmon, and S. L. Flory. 2021. Emerging fungal pathogen of an invasive grass: Implications for competition with native plant species. *PLoS ONE* 16: e0237894. <a href="https://doi.org/10.1371/journal.pone.0237894">https://doi.org/10.1371/journal.pone.0237894</a>
- Phan, T., 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. <a href="https://doi.org/10.1111/1365-2745.13515">https://doi.org/10.1111/1365-2745.13515</a>
- **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. <a href="https://doi.org/10.1002/ecy.3155">https://doi.org/10.1002/ecy.3155</a>

<sup>\*</sup>undergraduate mentee †contributed equally

- 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. <a href="https://doi.org/10.1146/annurev-phyto-010820-012757">https://doi.org/10.1146/annurev-phyto-010820-012757</a>
- 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. <a href="https://doi.org/10.3934/mbe.2019013">https://doi.org/10.3934/mbe.2019013</a>
- **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. <a href="https://doi.org/10.1111/geb.12157">https://doi.org/10.1111/geb.12157</a>

# **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.

## **Preprints**

**Kendig, A. E.**<sup>†</sup>, S. Canavan<sup>†</sup>, P. J. Anderson, S. L. Flory, L. A. Gettys, D. R. Gordon, B. V. Iannone III, J. M. Kunzer, T. Petri, I. A. Pfingsten, and D. Lieurance. Scanning the horizon for invasive plant threats to Florida, USA. *ARPHA Preprints*. <a href="https://doi.org/10.3897/arphapreprints.e76705">https://doi.org/10.3897/arphapreprints.e76705</a>

#### **Datasets**

- Easterday, C.\*, **A. E. Kendig**, C. Lacroix, E. W. Seabloom, and E. T. Borer. 2021. Long-term nitrogen enrichment mediates the effects of nitrogen supply and co-inoculation on a viral pathogen (Version v1.0). Environmental Data Initiative. https://doi.org/10.6073/pasta/5620600a9d7d7bec7855ba1999a37ded
- **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. <a href="https://doi.org/10.5281/zenodo.4062434">https://doi.org/10.5281/zenodo.4062434</a>
- **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 Understand 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) Georgia HOPE Scholarship (full undergraduate tuition) William-Walls Life Science Award (\$500) Travel Award, ACC Meeting of the Minds (travel, room, and board) President's Undergraduate Research Award (\$1000) Ryder Roundtable Scholarship (\$10,000)	2011–2013 2007–2011 2011 2011 2010 2007
Invited Presentations	
Guest Lecture, Invasion Ecology, Auburn University, virtual Panelist, Community Coding Groups, ResBaz (Research Bazaar), Gainesville, FL Guest Lecture, Biological Invaders, University of Florida, Gainesville, FL Seminar, Department of Plant Pathology, University of Minnesota, St. Paul, MN Seminar, INRA Plant Pathology Unit, Avignon, France Brown Bag Seminar, Kellogg Biological Station, Michigan State University, Hickory Corners, MI Interview, University of Florida, Gainesville, FL Interview, Stanford University, Stanford, CA Five Minute Thesis Presentation, UMN SIAM Minneapolis, MN	2021 2019 2018 2018 2017 2017 2017 2017 2016
Co-Organized Symposia	
Invasive Species and Infectious Diseases: Interactive Effects in Ecological Communities.  Symposium, Ecological Society of America (ESA) Annual Meeting: virtual.	2020
When a Raindrop is a Tsunami: Impacts of Disturbance on Plant-Associated Microbial Communities.  Organized Oral Session, ESA Annual Meeting: New Orleans, LA.	2018
The Introduction of Microbes: For Better or for Worse. University of Minnesota ISG-IGERT Annual Symposium: St. Paul, MN	2013
Contributed Presentations	
Evaluating the long-term effects of aquatic invasive plant management on Florida plant communities.  Aquatic Plant Management Society Annual Meeting: virtual (poster)	2021
Generalist fungal pathogens may increase the impacts of an invasive understory grass on native grasses. ESA Annual Meeting: virtual (talk)	2020
Effects of pathogen accumulation on native-invasive plant interactions. ESA Annual Meeting: Louisville, KY (talk)	2019
Pathogen accumulation on an invasive species: Implications for native-invasive interactions. Florida Exotic Pest Plant Council Annual Symposium: Daytona Beach Shores, FL (poster)	2019
Pathogen accumulation on an invasive species: Implications for native-invasive interactions. Emerging Pathogens Institute Research Day: Gainesville, FL (poster)	2019
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. ESA Annual Meeting: New Orleans, LA (talk)	2018
Plant size-virus richness relationships depend on host species and nitrogen inputs. Population Biology of Vector-borne Diseases Symposium: Athens, GA (poster)	2018
Soil nutrients and within-host niche differentiation mediate plant virus interactions.  Jacques Monod Conference: Roscoff, France (talk)	2017
Nutrient mediation of within-host and among-host plant virus dynamics. ESA Annual Meeting: Ft. Lauderdale, FL (talk)	2016
The power of analogy: Unifying principles of infectious disease.  5th International Conference on Infectious Disease Dynamics: Clearwater Beach, FL (poster)	2015
Using spatial patterns to infer disease processes in a multi-host, multi-pathogen system. ESA Annual Meeting: Minneapolis, MN (talk)	2013
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Productivity and soil characteristics as indices of tallgrass prairie success. ESA Annual Meeting: Austin, TX (poster)	2011
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.  Georgia State University Psychology Undergraduate Research Conference: Atlanta, GA (poster)	2008
Teaching and Mentoring	
Instructor, Data Carpentry, The Carpentries Teaching Assistant, Toward Conquest of Disease, University of Minnesota (2 semesters) Teaching Assistant, Ecology, University of Minnesota (2 semesters) Teaching Assistant, Foundations of Biology II, University of Minnesota (1 semester) Teaching Assistant, Honors Biological Principles, Georgia Tech (1 semester) Teaching Assistant, Freshman Seminar, Georgia Tech (1 semester)	2020-present 2016-2017 2015-2016 2014 2010 2009
University of Florida undergraduate mentees 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	2018–2020
University of Minnesota undergraduate mentees 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 Progra Kurra Renner, Luc Robichaud, Alexis Rogers	
Science Outreach and Education	
Organizer, EDDMapS Disease Detectives Collect citizen science data on invasive plant infectious diseases with EDDMapS.org.	2018-present
Speaker, <i>UF CPET Climate Change Resiliency Program</i> Taught a virtual lesson on invasive species and infectious disease to high school students.	2020
Organizer, Coding in the Environmental Sciences Workshops K-12 students to learn about environmental science research and basic coding.	2017–2019
Volunteer, Collaborative Curriculum Design for Invasive Species Education Helped Florida K-12 teachers design lesson plans that incorporate authentic science.	2019
Volunteer, <i>Girls Who Code</i> Mentored K-12 students learning how to code and build a smartphone app.	2016–2017
Curriculum Developer and Teacher, <i>Market Science</i> Science demonstrations at local farmer's markets and events.	2015–2017
Guest Teacher, Heritage Middle School and Southside Family Charter School Taught lessons on plant disease, population growth, and DNA extraction.	2011–2017
Science Fair Judge (5x)	2012–2016
Curriculum Developer and Teacher, <i>Cedar Creek Ecosystem Science Reserve</i> Single day field research experience about plant diversity for middle school students.	2015
Service and Leadership	
Manuscript reviewer: The American Naturalist, Biological Invasions, Ecology and Evolution, Ecological Monographs, 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, Plant Ecology, Proceedings of the Royal Society B	
UF Early Career Inclusivity Action Plan Committee Member Co-Organizer, R-Ladies Gainesville	2020-present 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	2019 <b>–</b> present

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