

RACHEL M. PENCZYKOWSKI

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RESEARCH INTERESTS AND APPROACHES

I study effects of ecosystems on infectious diseases, and effects of diseases on ecosystems.
My research integrates concepts from population, community, and evolutionary ecology.

Questions that I'm particularly interested in include:

1. How does **winter climate** affect the viability of parasites with environmental stages? What are the effects of winter conditions on **(a)** spatial and temporal patterns of disease prevalence, **(b)** the genetic diversity and traits of hosts and parasites, and **(c)** host–parasite coevolution?
2. How do parasites drive **flows of energy & nutrients** through food webs and ecosystems?

To address these questions, I study natural populations of common herbaceous plants and their fungal pathogens across variation in environmental conditions, including winter climate. My research involves a combination of modeling approaches, field observations, field experiments, greenhouse studies, laboratory assays, and molecular analyses.

ACADEMIC APPOINTMENTS

Assistant Professor Sept 2017 – Present
Department of Biology
Division of Biology & Biomedical Sciences (DBBS) program affiliations: Evolution, Ecology & Population Biology (EEPB), Plant & Microbial Biosciences (PMB)
Washington University in St. Louis (WashU), MO, USA

Postdoctoral Research Associate April 2016 – Aug 2017
Department of Integrative Biology
University of Wisconsin, Madison (UW-Madison), WI, USA
Advisor: Anthony R. Ives | arives@wisc.edu

Postdoctoral Researcher Oct 2013 – April 2016
Metapopulation Research Centre
University of Helsinki, Finland
Advisor: Anna-Liisa Laine | anna-liisa.laine@ieu.uzh.ch

EDUCATION

Ph.D. in Biology 2008 – 2013
Georgia Institute of Technology (Georgia Tech), Atlanta, GA, USA
Advisor: Meghan A. Duffy | duffymeg@umich.edu
Dissertation: “Interactions between ecosystems and disease in the plankton of freshwater lakes”
Minor: Quantitative Ecology

B.S., with Distinction 2003 – 2007
University of Wisconsin, Madison, WI, USA
Majors: Biology and Music Performance
Research Advisor: Stephen R. Carpenter | steve.carpenter@wisc.edu

GRANTS

- Tyson Faculty Seed Grant for Interdisciplinary Research (\$20,000), Title: Electromechanical Design for Ecological Research. Lead PI: J. Jackson Potter. **Co-PI: Rachel M. Penczykowski**. 2020-2021
- Tyson Faculty Seed Grant for Interdisciplinary Research (\$20,000), Title: Effects of a fungal foliar pathogen on nutrient dynamics in a model food web. **Lead PI: Rachel M. Penczykowski**. Co-PIs: David A. Fike and Amanda M. Koltz. 2018-2021
- Living Earth Collaborative (\$22,775), Working group: Quantifying effects of parasites on ecosystem nutrient cycling. Lead PI: Amanda M. Koltz. **Co-PIs: Rachel M. Penczykowski**, Vanessa O. Ezenwa, Sharon L. Deem. 2018-2021
- InCEES (\$30,000), Title: Does climate change affect the interplay between soil microbes and aboveground plant enemies? Lead PI: Scott A. Mangan. **Co-PIs: Rachel M. Penczykowski** and Claudia Stein. 2017-2021

FELLOWSHIPS

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| National Science Foundation Graduate Research Fellowship | 2010 – 2013 |
| Georgia Tech President's Fellowship | 2008 – 2012 |

HONORS AND AWARDS

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| Best Student Talk Award, Georgia Tech School of Biology retreat | 2012 |
| P.E.O. Scholar Award | 2012 |

PEER-REVIEWED PUBLICATIONS

*Penczykowski is corresponding author, undergraduate mentored by Penczykowski

24. **Penczykowski***, **R. M.** and R. D. Sieg. 2021. *Plantago* spp. as models for studying the ecology and evolution of species interactions across environmental gradients. In press at *American Naturalist*.
23. Duffy, M. A., C. Garcia-Robledo, S. Gordon, N. A. Grant, D. A. Green II, A. Kamath, **R. M. Penczykowski**, M. Rebolleda Gómez, N. Wale, and L. Zaman. 2021. Model systems in ecology, evolutionary biology, and behavior: A call for diversity in our model systems and discipline. In press at *American Naturalist*.
22. **Penczykowski***, **R. M.**, S. R. Hall, M. S. Shocket, J. Housley Ochs, B. C. P. Lemanski, H. Sundar, and M. A. Duffy. 2021. Virulent disease epidemics can increase host density by depressing foraging of hosts. In press at *American Naturalist*.
21. Ezenwa, V. O., D. J. Civitello, B. T. Barton, D. J. Becker, M. Brenn-White, A. T. Classen, S. L. Deem, Z. E. Johnson, S. Kutz, M. Malishev, **R. M. Penczykowski**, D. L. Preston, J. T. Vannatta, A. M. Koltz. 2020. Infectious diseases, livestock, and climate: a vicious cycle? *Trends in Ecology & Evolution*, 35:959–962.
20. Halliday*, F. W., **R. M. Penczykowski***, B. Barrès, J. L. Eck, E. Numminen, and A.-L. Laine. 2020. Facilitative priority effects drive pathogen community assembly in a wild-plant pathosystem. *Nature Ecology & Evolution*, 4:1510–1521. (*co-first / co-corresponding authors)
19. Ives, A. R., B. T. Barton, **R. M. Penczykowski**, J. P. Harmon, K. L. Kim, K. Oliver, and V. C. Radeloff. 2020. Self-perpetuating ecological-evolutionary dynamics in an agricultural host-parasite system. *Nature Ecology & Evolution*, 4:702–711.

18. **Penczykowski***, R. M., S. R. Parratt, B. Barrès, S. K. Sallinen, and A-L Laine. 2018. Manipulating host resistance structure reveals impact of pathogen dispersal and environmental heterogeneity on epidemics. *Ecology*, 99:2853–2863.
17. Hite, J. L., **R. M. Penczykowski**, M. S. Shocket, K. Griebel, A. T. Strauss, M. A. Duffy, C. E. Cáceres, and S. R. Hall. 2017. Allocation, not male resistance, increases male frequency during epidemics: a case study in facultatively sexual hosts. *Ecology*, 98:2773–2783.
16. **Penczykowski***, R. M., B. M. Connolly, and B. T. Barton. 2017. Winter is changing: trophic interactions under altered snow regimes. *Food Webs*, 13:80–91.
15. Parratt, S. R., B. Barrés, **R. M. Penczykowski**, and A-L Laine. 2017. Local adaptation at higher trophic levels: Contrasting hyperparasite-pathogen infection dynamics in the field and laboratory. *Molecular Ecology*, 26:1964–1979.
14. Strauss, A. T., M. S. Shocket, D. J. Civitello, J. L. Hite, **R. M. Penczykowski**, M. A. Duffy, C. E. Cáceres, and S. R. Hall. 2016. Habitat, predators, and hosts regulate disease in *Daphnia* through direct and indirect pathways. *Ecological Monographs*, 86:393–411.
13. Hite, J. L., **R. M. Penczykowski**, M. S. Shocket, A. T. Strauss, P. A. Orlando, M. A. Duffy, C. E. Cáceres, and S. R. Hall. 2016. Parasites destabilize host populations by shifting stage-structured interactions. *Ecology*, 97:439–449.
12. **Penczykowski***, R. M., A-L Laine, and B. Koskella. 2016. Understanding the ecology and evolution of host–parasite interactions across scales. *Evolutionary Applications*, 9:37–52.
11. Civitello, D. J., **R. M. Penczykowski**, A. Smith, M. S. Shocket, M. A. Duffy, and S. R. Hall. 2015. Resources, key traits, and the size of fungal epidemics in *Daphnia* populations. *Journal of Animal Ecology*, 84:1010–1017.
10. **Penczykowski***, R. M., E. Walker, S. Soubeyrand, and A-L Laine. 2015. Linking winter conditions to regional disease dynamics in a wild plant-pathogen metapopulation. *New Phytologist*, 205:1142–1152.
9. **Penczykowski***, R. M., B. C. P. Lemanski, R. D. Sieg, S. R. Hall, J. Housley Ochs, J. Kubanek, and M. A. Duffy. 2014. Poor resource quality lowers transmission potential by changing foraging behaviour. *Functional Ecology*, 28:1245–1255.
8. **Penczykowski***, R. M., S. R. Hall, D. J. Civitello, and M. A. Duffy. 2014. Habitat structure and ecological drivers of disease. *Limnology & Oceanography*, 59:340–348.
7. Auld, S. K. J. R., **R. M. Penczykowski**, J. Housley Ochs, D. C. Grippi, S. R. Hall, and M. A. Duffy. 2013. Variation in costs of parasite resistance among natural host populations. *Journal of Evolutionary Biology*, 26:2479–2486.
6. Civitello, D. J., **R. M. Penczykowski**, J. L. Hite, M. A. Duffy, and S. R. Hall. 2013. Potassium stimulates fungal epidemics in *Daphnia* by increasing host and parasite reproduction. *Ecology*, 94:380–388.
5. Duffy, M. A., J. Housley Ochs, **R. M. Penczykowski**, D. J. Civitello, C. A. Klausmeier, and S. R. Hall. 2012. Ecological context influences epidemic size and parasite-driven evolution. *Science*, 335:1636–1638.
4. Duffy, M. A., J. M. Housley, **R. M. Penczykowski**, C. E. Cáceres, and S. R. Hall. 2011. Unhealthy herds: indirect effects of predators enhance two drivers of disease spread. *Functional Ecology*, 25:945–953.
3. Thomas, S. H., J. M. Housley, A. N. Reynolds, **R. M. Penczykowski**, K. H. Kenline, N. Hardegree, S. Schmidt, and M. A. Duffy. 2011. The ecology and phylogeny of oomycete infections in *Asplanchna* rotifers. *Freshwater Biology*, 56:384–394.
2. **Penczykowski***, R. M., S. E. Forde, and M. A. Duffy. 2011. Rapid evolution as a possible constraint on emerging infectious diseases. *Freshwater Biology*, 56:689–704.

1. Kamarainen, A. M., **R. M. Penczykowski**, M. C. Van de Bogert, P. C. Hanson, and S. R. Carpenter. 2009. Phosphorus sources and demand during summer in a eutrophic lake. *Aquatic Sciences*, 71:214–227.

INVITED SEMINARS AND COLLOQUIA (*via Zoom)

- April 21, 2021: Disease Evolutionary Ecology Group, Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin, Germany*
- 2021: Ecology, Evolution, and Behavior Group, Department of Biology, University of Maryland, College Park, MD*
- 2021: Biology Department, University of Missouri - St. Louis, St. Louis, MO*
- 2020: Department of Biology, Washington University in St. Louis, St. Louis, MO*
- 2020: Ecology and Evolution of Infectious Disease Seminar Series, University of California, Berkeley, Berkeley, CA*
- 2019: Department of Biological Sciences, Purdue University, West Lafayette, IN
- 2019: Department of Biological Sciences, University of Pittsburgh, Pittsburgh, PA
- 2019: Department of Biology, St. Louis University, St. Louis, MO
- 2018: Donald Danforth Plant Science Center, St. Louis, MO
- 2018: Department of Biological Sciences, Southern Illinois University Edwardsville, Edwardsville, IL
- 2018: School of Biological Sciences, University of Nebraska, Lincoln, NE
- 2017: Departments of Zoology and Botany, University of Wisconsin - Madison, Madison, WI
- 2016: Department of Biology, Washington University in St. Louis, St. Louis, MO
- 2015: Department of Biological Sciences, University of Alabama, Tuscaloosa, AL
- 2015: Biological Sciences Department, Dartmouth University, Hanover, NH
- 2015: Department of Botany and Plant Pathology, Purdue University, West Lafayette, IN
- 2014: Department of Plant Pathology, University of Wisconsin-Madison, Madison, WI
- 2014: Department of Ecology and Evolutionary Biology, University of Helsinki, Finland

INVITED TALKS

- 2021: American Society of Naturalists Vice Presidential Symposium, Virtual Asilomar meeting
- 2019: Wild Plant Pathosystems, Frankfurt, Germany
- 2019: Symposium, Ecological Society of America, Louisville, KY
- 2014: Experimental Evolution and Community Dynamics Symposium, Helsinki, Finland

TALKS AT MEETINGS

- Aug 2021: Ecological Society of America
- 2019: St. Louis Plant-Microbe and Microbiome Meetup Event, St. Louis, MO
- 2018: Ecological Society of America, New Orleans, LA
- 2018: Bioforum presentation, Washington University, Department of Biology, St. Louis, MO
- 2017: St. Louis Ecology, Evolution, and Conservation (SLEEC) Annual Retreat, St. Louis, MO
- 2016: Wild Plant Pathosystems, Helsinki, Finland (poster)
- 2016: Ecological Society of America, Ft. Lauderdale, FL
- 2015: Ecological Society of America, Baltimore, MD
- 2014: Spatial Evolutionary Epidemiology, Montpellier, France (poster)
- 2014: Nordic Oikos, Stockholm, Sweden
- 2013: Ecological Society of America, Minneapolis, MN
- 2013: Ecology and Evolution of Infectious Disease, State College, PA (poster)
- 2012: Georgia Tech, School of Biology Retreat, Helen, GA
- 2012: Ecological Society of America, Portland, OR
- 2011: Ecological Society of America, Austin, TX

2010: American Society of Limnology and Oceanography, Santa Fe, NM (poster)
 2009: Ecological Society of America, Albuquerque, NM
 2008: University of Wisconsin-Madison, Center for Limnology, Madison, WI

PUBLIC TALKS

2020: WashU Women in STEM, The Leading Women Research Symposium, St. Louis, MO

WORKSHOP AND WORKING GROUP PARTICIPATION

2018 & 2019: WashU LEC working group, parasites & ecosystem nutrient cycling, St. Louis, MO
 2018: British Ecological Society Spatial Statistics workshop, Glasgow, Scotland
 2014: Spatial Evolutionary Epidemiology workshop, Montpellier, France
 2011: Ecology and Evolution of Infectious Diseases modeling workshop, Santa Barbara, CA
 2010: Enhancing Linkages between Math & Ecology workshop, Kellogg Biological Station, MI

CONTRIBUTIONS OF DATA TO SCIENTIFIC NETWORKS

2020: Contributed soil and air temperature data to SoilTemp: a global database of soil and near-surface temperatures, <https://soiltemp.weebly.com/>
 2019 & 2020: Contributed annual census data to PlantPopNet: a spatially distributed model system for population ecology, <https://www.plantpopnet.com/>

SEMESTER-LONG COURSES TAUGHT AT WASHINGTON UNIVERSITY

Course	Description	Credits	Role	Students	Semester
BIOL 4195	Disease Ecology	4	Course master	20 undergrad + 2 grad	SP 2021
BIOL 580	Seminar in Ecology & Evolution	1	Course master	12 grad	FL 2020
BIOL 4195	Disease Ecology	4	Course master	23 undergrad + 7 grad	SP 2020
BIOL 580	Seminar in Ecology & Evolution	1	Course master	11 grad	FL 2019
BIOL 4195	Disease Ecology	4	Course master; developed new course	18 undergrad + 3 grad	SP 2019
BIOL 580	Seminar in Ecology & Evolution	1	Course master	7 grad	FL 2018

GUEST LECTURES TAUGHT WHILE AT WASHINGTON UNIVERSITY

Course	Description	Role	Students	Date
BIOL 181	First-Year Opportunity: Introduction to Cutting-Edge Research in Biology	Guest lecturer	74 undergrad	Nov 2020
Fontbonne BIO 325	Disease Ecology at Fontbonne University	Guest lecturer	14 undergrad	Oct 2020
COVID Course	The Pandemic: Science and Society	Guest lecturer	>1300	Aug 2020
BIOL 3220	Woody Plants of Missouri	Guest lecturer	10	April 2020
BIOL 181	First-Year Opportunity: Introduction to Cutting-Edge Research in Biology	Guest lecturer	49 undergrad	Oct 2019

BIOL 181	First-Year Opportunity: Introduction to Cutting-Edge Research in Biology	Guest lecturer	48 undergrad	Oct 2018
BIOL 524	Ecology & Environmental Science for K-12 Science Teachers at Tyson Research Center	Guest lecturer & leader of lab activity	28 science teachers	July 2018

TEACHING EXPERIENCE AT UNIVERSITY OF HELSINKI

Course Co-Coordinator, Population Biology in Fragmented Landscapes, FL 2014

HIGH SCHOOL STUDENTS MENTORED

Washington University in St. Louis (*Tyson Environmental Research Fellow)

Bernadette Bergman SM 2019*
Vlada Gladun SM 2019*
Kate Pogue SM 2019*

UNDERGRADUATES MENTORED

Washington University in St. Louis (*Tyson Undergraduate Fellow; †BIOL 200/500 research)

Kane Koubsky, WashU SP 21
Jamie Lin, WashU SP 21
Rida Qureshi, WashU SP 21
Aaron Morris, WashU SP 21†
Keiko Farah, WashU SM 20*, FL 20, SP 21
Olivia Shaw, WashU SM 20*, FL 20
Joshua Helle, Lawrence University SM 20
Michelle Pollowitz, WashU SP 20†, SM 20*, FL 20†, SP 21†
Selaam Dollisso, WashU FL 19, SP 20
Taewon Lee, WashU SM 19*, FL 19, SP 20
Armando Sanchez-Conde, WashU SM 19†, FL 19†, SP 20†, SM 20†, FL 20, SP 21
Laura Goh, WashU SM 19*
Elly Grant, WashU (senior thesis SP 20) SP 19, SM 19*, FL 19†, SP 20†
Emma Waltman, WashU SP 19†, SM 19*, FL 19, SP 20
Akosua Sarfo, WashU SP 19†, FL 19, SP 20
Jack Steffy, WashU SP 19
Imani Jones, WashU FL 18, SP 19, FL 19, SP 20
Sabrina Talir, Mount Holyoke College SM 18*, SM 19, Dec 19 - Jan 20
Arjun Puri, WashU SM 18*
Sheena Stevens, Univ. Missouri St. Louis SM 18*
Rachel Fan, WashU FL 17†, SP 18†, FL 18†, SP 19†
Austin Chen, WashU FL 17, SP 18, SM 18*, FL 18, SP 19, FL 19, SP 20

University of Wisconsin-Madison

Manika Luhano, UW-Madison, BIO 152 Independent Research FL 2016 – SP 2017

University of Helsinki

Suvi Sallinen, Ecological Training Program & M.Sc. Thesis Research SM 2014 – FL 2016

Georgia Tech

Brian C. P. Lemanski, Colgate University, NSF REU Program SM 2012
Alison E. Burger, Georgia Tech SP 2011
Hema Sundar, Georgia Tech SP 2011 – SP 2012

Abigail N. Reynolds, Georgia Tech SP 2009 – FL 2010
Grace M. Wilkinson, St. Olaf College, NSF REU Program SM 2009

PHD STUDENTS MENTORED

Mahal Bugay, WashU, EEPB FL 2020 – Present
Quinn Fox, WashU, EEPB FL 2020 – Present
Rachel Becknell, WashU, EEPB SP 2019 – Present
Philippa Tanford, WashU, EEPB FL 2019 – Present

PHD ROTATION STUDENTS MENTORED

Ryan Valdez, WashU, PMB SP 2020
Mahal Bugay, WashU, EEPB FL 2019
Quinn Fox, WashU, EEPB SM – FL 2019
Philippa Tanford, WashU, EEPB SP – SM 2019
David Henderson, WashU, EEPB FL 2018
Rhiannon Vargas, WashU, EEPB FL 2018

PHD THESIS ADVISORY COMMITTEES

Elizabeth Green, University of North Carolina at Chapel Hill FL 2020 – Present
Rhiannon Vargas, WashU, EEPB FL 2020 – Present
David Henderson, WashU, EEPB FL 2020 – Present
Winston Anthony, WashU, Molecular Cell Biology FL 2018 – Present
James Lucas, WashU, EEPB FL 2018 – Present
Rachel Becknell, WashU, EEPB FL 2017 – Present
Christopher Catano, WashU, EEPB SP 2018 – SP 2019
Dilys Vela, WashU, EEPB SP 2018 – SP 2019
Holly Bernardo, WashU, EEPB SP 2018 – SM 2018

QUALIFYING EXAM COMMITTEES (WASHINGTON UNIVERSITY EEPB)

Emma Frawley SP 2021
David Henderson SP 2020
Rhiannon Vargas SP 2020
P. M. Shreenidhi SP 2019
James Medina FL 2018
James Lucas FL 2018

ADDITIONAL INTERDISCIPLINARY ACTIVITIES AT WASHINGTON UNIVERSITY

Environmental Studies affiliated faculty member
Living Earth Collaborative Biodiversity Fellow
Co-organizer of Urban Ecology and Evolution working group (LEC funded), SP 2020 – Present
Participant/Co-organizer of St. Louis Plant-Microbe & Microbiome (PMM) Meet-up group, SP 2019
Project mentor for MEMS 411 Mechanical Engineering Design Project, FL 2018

SERVICE AT WASHINGTON UNIVERSITY

Department of Biology

Biology Inclusion Committee SP 2019 – Present
Organizer/Moderator, "COVID-19 & the WashU Community" panel discussion 3/2020
Organizer, seminar and discussion on "Mental Health Disparities for BIPOC" 12/2020
Environmental Biology Major Advisor FL 2018 – Present

Biology Major Advisor	FL 2018 – Present
Judge for BioSURF applications	SP 2019
Judge for Marian Smith Spector Prize for Undergraduate Senior Honors Thesis	SP 2018
Spector/Quatrano Award Committee	2019 – 2020
Mentor for undergraduate researchers	FL 2017 – Present
Environmental Biology Major Steering Committee	FL 2017 – Present
Environmental Biology Curriculum Committee	FL 2020 – Present

Evolution, Ecology & Population Biology Program (Div. of Biology & Biomedical Sciences)

EEPB Spring Symposium Planning Committee	2020 - 2021
EEPB Qualifying Exam Committee	2018 – 2019
EEPB Graduate Program Improvement Sub-committee	SP 2018 – Present
EEPB Admissions Committee	FL 2017 – Present
EEPB Steering Committee	FL 2017 – Present

Plant & Microbial Biosciences Program (Div. of Biology & Biomedical Sciences)

PMB Breakfast Faculty Presentation	FL 2018
Interviewer for PMB PhD applicants	SP 2019, SP 2020, SP 2021

Tyson Research Center (College of Arts & Sciences)

Mentor for student presentations at WashU Undergraduate Research Symposium FL 2018 (1 poster), FL 2019 (4 posters), FL 2020 (1 poster)	
Mentor for summer undergraduate research fellows ("Plant Disease Team") 2018 (4 students), 2019 (4 students), 2020 (3 students)	
Participant in undergraduate recruitment events (annual; fall semester)	FL 2017 – Present

Living Earth Collaborative

Living Art Collaborative Design Committee	SP 2019
Postdoctoral Selection Committee	FL 2018

SERVICE AT GEORGIA TECH

Judge for Georgia Tech Undergraduate Research Spring Symposium	2013
School of Biology Scientific Retreat Planning Committee	2010
Co-President, Biology Graduate Student Association	2010

PROFESSIONAL SERVICE

Reviewer for: *American Naturalist*, *BMC Ecology*, *Conservation Biology*, *Ecology*, *Ecology and Evolution*, *Ecology Letters*, *Environmental Microbiology*, *Evolution*, *Evolutionary Applications*, *Food Webs*, *Freshwater Biology*, *Hydrobiologia*, *Journal of Animal Ecology*, *Journal of Ecology*, *Limnology and Oceanography*, *Molecular Ecology*, *Nature Ecology and Evolution*, *New Phytologist*, *Oecologia*, *Oikos*, *PLOS ONE*, *PNAS*, *Proceedings B*, *Trends in Ecology & Evolution*

External grant reviewer for National Science Foundation and European Research Council
Panelist for NSF DEB program (in-person panel FL 2019)

OUTREACH ACTIVITIES

Washington University in St. Louis

Market Fresh Science at Ferguson Farmers Market (FL 2019)
Panelist, Tyson Research Ctr. career panel for undergraduate & high school students (SM 2018)

University of Wisconsin-Madison

Guest Scientist, Junior Science Café, led science career discussions and activities with 5-7th graders (3 x 1.5-hr sessions, SP 2017)

Workshop Leader, 'College for Kids' limnology workshop for 6th graders (3 wks, SM 2008)

University of Helsinki

Activity Leader, 'Tiede Tulee Tarhaan' ('Science Goes Kindergarten') biology workshop for kindergarteners (2-3 days each in FL 2013, 2014, and 2015)

Georgia Tech

Activity Leader, 'Plankton Day' at Piedmont Park Summer Camp. Led urban aquatic ecology activities for children ages 5-11 (SM 2009, 2010, 2011)

Guest Scientist, 5th grade class, Warren T. Jackson Elementary School. Led plankton identification activities and discussions about freshwater ecosystems (FL 2008)

Guest Scientist, I.B. biology class, Marietta High School. Gave short lectures and guided students in designing urban aquatic ecology group projects (SP 2011 and SP 2013)

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Ecological Society of America

American Phytopathological Society

500 Women Scientists