

Biology Department • Washington University in St. Louis
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RELEVANT INTERESTS AND SKILLS

Basic and applied ecology of invasive and rare plants; evolutionary ecology and population genetics; ecological experiments; demographic modeling; GIS; mentoring student research; TA training

EDUCATION

2006 Ph.D., Plant Biology, University of Georgia (Advisor J. L. Hamrick)
1999 B.S., Biology and English, The College of William and Mary
1998 Tropical Ecology and Diversity, Council on International Educational Exchange, Costa Rica

PROFESSIONAL APPOINTMENTS

2006– Postdoctoral Research Associate, Biology Department, Washington University in St. Louis (Advisor T. M. Knight)

AWARDS AND HONORS

2005 Excellence in Teaching Award, UGA. \$1000 award
2004 TA Mentorship Program for outstanding teaching assistants, UGA. \$1000 award
2004 Outstanding Teaching Assistant, UGA

GRANT AND FELLOWSHIP AWARDS

2008 NSF: Interactive roles of predation and hybridization on population dynamics of an endangered *Lupinus* species. Co-PI: TM Knight (\$445,000 for 2008-2011, DEB Population and Evolutionary Processes Cluster)
2007 WUSTL Lennette Undergraduate Research Fellowship supporting BJ Teller (\$3700)
2006 WUSTL HHMI Undergraduate Research Fellowship supporting BJ Teller (\$3700)
2003 UGA Plant Biology Palfrey Fund Research Grant (\$1000)
2003 Georgia Native Plant Society (\$500)
2001 UGA Plant Biology Palfrey Fund Research Grant (\$380)
2001 UGA Center for Latin American and Caribbean Studies Field Research Award (\$800)

PUBLICATIONS (*Manuscripts available upon request; **undergraduate collaborator*)

EM Dangremond**, **EA Pardini**, and TM Knight. Apparent competition with an invasive plant threatens the population viability of an endangered plant. *Submitted to Ecology*.

Pardini, EA, JM Drake, JM Chase, and TM Knight. 2008. Complex population dynamics and control of the invasive biennial, *Alliaria petiolata* (garlic mustard). *Ecological Applications*. *In press*.

Pardini, EA, BJ Teller**, and TM Knight. 2008. Consequences of density dependence for management of a stage-structured invasive plant (*Alliaria petiolata*). American Midland Naturalist. *In press*.

Pardini, EA and JL Hamrick. 2008. Inferring recruitment history from spatial genetic structure within populations of the colonizing tree, *Albizia julibrissin* (Fabaceae). Molecular Ecology 17: 2865-2879.

Pardini, EA and JL Hamrick. 2007. Hierarchical patterns of paternity in crowns of *Albizia julibrissin* (Fabaceae). American Journal of Botany. 94 (1): 111-118.

Pardini, EA, DP Domizi, DA Forbes, and GM Pettis. 2005. Parallel note-taking: A strategy for effective use of Webnotes. Journal of College Reading and Learning. 35 (2): 38-55.

Manuscripts in preparation:

EM Dangremond**, **EA Pardini**, and TM Knight. The present status of the federally endangered *Lupinus tidedstromii*—censuses and threats.

Pardini, EA and JL Hamrick. Differentiation for phenological timing across a latitudinal gradient in the introduced range of the invasive tree species, *Albizia julibrissin* (Fabaceae).

Pardini, EA, JM Drake, and TM Knight. Modeling spread rate of the invasive plant garlic mustard (*Alliaria petiolata*).

PRESENTATIONS AT PROFESSIONAL MEETINGS (***undergraduate collaborator*)

2008 **Pardini, EA**, JM Drake, and TM Knight. Optimal control of garlic mustard, a biennial weed with strong density dependence and limited dispersal, Ecological Society of America (Milwaukee, WI)

EM Dangremond**, **EA Pardini**, and TM Knight. The effects of invasive species and apparent competition on the population dynamics of the federally endangered *Lupinus tidedstromii*, Ecological Society of America (Milwaukee, WI)

BJ Teller**, **Pardini, EA**, TM Knight, and JM Chase. Why is the World Greener? Invasive species alter trophic structure in a temperate forest understory, Ecological Society of America (Milwaukee, WI)

Waselkov, K, **EA Pardini**, and TM Knight. An evaluation of the distribution of ecological information on *Alliaria petiolata* (garlic mustard) to invasive species managers in Missouri and Illinois, Botanical Society of America (Vancouver, Canada)

2007 **Pardini, EA**, JM Drake, and TM Knight. Using a spatially explicit model to predict population spread of an invasive plant, Ecological Society of America (San Jose, CA)

BJ Teller**, **EA Pardini**, TM Knight. Consequences of intraspecific competition for management of a stage-structured invasive plant (*Alliaria petiolata*), Ecological Society of America (San Jose, CA)

Pardini, EA. Transpiration: An inquiry-based adaptation of a traditional cookbook lab, Association for Biology Laboratory Education (Lexington, KY)

Knight, TM, **EA Pardini**, and JM Drake. Population dynamics of density-dependent garlic mustard populations. Weed Science Society (San Antonio, TX)

2006 **Pardini, EA** and JL Hamrick. Geographic genetic variation for early growth traits in an introduced, weedy tree species, Ecological Society of America (Memphis, TN)

- 2005 **Pardini, EA** and JL Hamrick. Hierarchical paternity in crowns of mimosa (*Albizia julibrissin*), Ecological Society of America (Montreal, Canada)
- Pardini, EA**, DP Domizi, DA Forbes, and GM Pettis. Parallel note-taking: A strategy for effective use of Webnotes, Ecological Society of America (Montreal, Canada)
- 2004 **Pardini, EA** and JL Hamrick. Fine-scale genetic structure in colonizing populations of a weedy tree species (*Albizia julibrissin*), Society for the Study of Evolution (Ft. Collins, CO)
- 2003 **Pardini, EA** and JL Hamrick. Patterns of paternity in crowns of mimosa (*Albizia julibrissin*). Association for Southeastern Biologists (Alexandria, VA)

INVITED SEMINARS

- 2008 Hybridization threatens an endangered, coastal dune plant. Point Reyes National Seashore
- 2007 Using population modeling to design best management practices for a density dependent, invasive plant. University of Missouri at Columbia (Graduate student invited speaker)
- Using a teaching portfolio to document teaching effectiveness. Washington University Ecology and Evolution Graduate Student Professional Development Group
- 2006 Evolutionary ecology of plant invasions. Southern Illinois University at Edwardsville
- Multi-scale genetic diversity within and among populations of an introduced, weedy tree species (*Albizia julibrissin*). Ecology and Evolution Program, Washington University
- 2005 Survival strategies for effective notetaking and reading in college classes. Georgia Native Plant Communities Class, C. Peterson and J. L. Hamrick, UGA Department of Plant Biology
- Documenting graduate teaching experience in a teaching portfolio. UGA Crop and Soil Science Graduate Student Association
- Take note: A new strategy for note-taking and opportunities for the scholarship of teaching in graduate school. UGA Department of Plant Biology Annual Student Symposium
- Strategies for the first weeks of class. UGA TA Orientation
- 2004 Balancing roles: TAs as students, teachers, and researchers. UGA TA Orientation

RESEARCH EXPERIENCE

- 2006– Postdoctoral Research Associate, Biology Department, Washington University in St. Louis (TM Knight): Optimal control of density dependent garlic mustard populations; interactive roles of predation and hybridization on population viability of endangered, coastal dune plants.
- 2000–06 Graduate Research, Department of Plant Biology, University of Georgia (JL Hamrick): Multi-scale genetic diversity in populations of an introduced tree species (*Albizia julibrissin*).
- 2000 Laboratory Technician, Department of Botany, National Museum of Natural History, Smithsonian Institution (WJ Kress): Assisted with allozyme analyses of genetic diversity in tropical plant populations and curation of plant specimens.
- 1998–99 Laboratory Technician, Phytoplankton Ecology, Virginia Institute of Marine Science, The College of William and Mary (WO Smith): Identified and estimated biomass of Antarctic phytoplankton using microscopy and digital image analysis; collected experimental data on phytoplankton cell lysis during algal blooms in the Chesapeake Bay.

- 1998 Undergraduate Research, CIEE Tropical Ecology and Conservation Program, Costa Rica (A Masters): Tradeoffs between chemical and mechanical defenses and implications for herbivory in a tropical vine (*Passiflora* sp.).
- 1994–95 Mentorship Intern, Department of Botany, National Museum of Natural History, Smithsonian Institution (JN Norris): Identified red algal specimens from Taiwan to extend the distributional ranges of two species and collected data on comparative developmental morphology for a systematic treatment of the red algal genus *Galaxaura*.

TEACHING EXPERIENCE

Additional information can be found at: <http://biology4.wustl.edu/pardini/teaching.htm>

Washington University in St. Louis, 2006–current

- Guest Lecturer/TA – Population Ecology (lecture, computer lab, and discussion with 24 grad/undergrad)
- Guest Instructor – Life Sciences for a Global Community Masters Program for High School Teachers (national field and lab course for 30 high school teachers)

The University of Georgia, 2000–2006

- Instructor – Learning-to-Learn-in-Biology Seminar: Strategies for effective learning and studying in biology (two sections of 24 undergraduates)
- Teaching Intern – Ecology and Evolution Unit, Introduction to Plant Biology (one section of 100 undergraduates)
- Teaching Assistant – Plant Variation and Evolution (lecture, lab, and discussion with 16 graduates)
 – Introduction to Plant Biology Lab (two sections of 16 undergraduates)
 – Introduction to Organismal Plant Biology Lab (one section of 16 undergraduates)
 – Plant Taxonomy Lab (one section of 16 grad/undergrad)
 – Evolution (discussion section of 45 undergraduates)
 – Introduction to Cellular and Molecular Biology (four labs of 24 undergraduates)
- Lab Coordinator – Plant Taxonomy (four labs of 16 grad/undergrad)
 – Introduction to Plant Biology (four labs of 16 undergraduates)
- Lab Curriculum Development – Introduction to Plant Biology Lab
 – Introduction to Organismal Plant Biology Lab

MENTORING EXPERIENCE

Undergraduate students, Washington University in St. Louis

- 2008 Z. Marine (Co-Advisor), 2008 Lennette Fellow
- 2006–08 B. Teller (Advisor), 2007 Lennette Fellow, 2006 HHMI Undergraduate Research Fellow
- 2007–08 E. Dangremond (Thesis Committee), 2007 HHMI Undergraduate Research Fellow

Graduate student peer mentoring

- 2004–05 TA Mentor, UGA Center for Teaching and Learning TA Mentor Program
- 2003 TA Mentor, UGA Plant Biology International Graduate Student TA Apprentice Program

DEPARTMENTAL, UNIVERSITY, AND COMMUNITY SERVICE

Washington University in St. Louis

- 2007–08 Organizer: Invasive Plant Ecology Outreach for St. Louis area high school students
2006–08 Volunteer: Women–in–Science Day for high school girls from St. Louis Public Schools
2006 Co-organizer: Plant population biology reading group

The University of Georgia

- 2005 Contributor: Center for Teaching and Learning TA Mentor Resources Website
2004, 02 Co-organizer: Annual Plant Biology Student Research Symposium
2004 Student representative: Plant Biology Teaching Website Committee
2003–04 Peer Teaching Coordinator: Plant Biology Graduate Student Association

Extramural service

- 2006– Reviewer: *Evolution, Journal of Heredity, National Science Foundation Population and Evolutionary Processes*
2006 Volunteer: KWMU, St. Louis NPR radio station

PROFESSIONAL DEVELOPMENT

- 2007 ESA Workshop: Quantitative Approaches in Ecological Research Using R
2007 ESA Workshop: Demography and dispersal: The analysis of invasion wave speeds
ABLE Workshop: Case studies in classrooms
Course: Advanced GIS. Washington University
2006 Course: Introduction to GIS. Washington University
ESA Workshop: Innovative teaching and active learning in the biological sciences
ESA Workshop: Using bean beetles in inquiry-based undergraduate laboratories
2005 Conference: Service learning: Linking academic study, civic engagement and scholarship.
Annual UGA Public Service and Outreach Conference
2002 Course: Advanced Learning–to–Learn Seminar, UGA Division of Academic Enhancement
2001 Course: Tropical Dendrology, Tropical Science Center, Costa Rica

PROFESSIONAL MEMBERSHIPS

Association for Biology Laboratory Education
Botanical Society of America
Ecological Society of America
Sigma Xi
Society for the Study of Evolution