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## Education

Ph.D	University of Connecticut <i>Ecology and Evolutionary Biology</i>	Storrs, Connecticut	2007
	Institute for Ecosystem Studies Fundamental of Ecosystem Ecology	Milbrook, New York	2003
	Stable Isotopes in Ecology	Salt Lake City, UT	2002
	Organization for Tropical Studies Tropical Biology: An Ecological Approach	Costa Rica	2000
B.A.	Colgate University <i>Geology</i> (High Honors)		1993

## Grants and Awards

### Environmental Protection Agency

*Science To Achieve Results (STAR) Fellowship* 2004-2007 \$125,000

### National Science Foundation

*Doctoral Dissertation Improvement Grant* 2004 \$12,000

### University of Connecticut

*Bamford Research Award* (EEB) 2005 \$1500

*Department Fellowship* (EEB) 2004 \$1000

*Center for Conservation and Biodiversity* 2004 \$750

*Bamford Endowment Research Award* (EEB) 2004 \$1493

*Bamford Endowment Research Award* (EEB) 2003 \$1000

*Extraordinary Expense Award* (Graduate school) 2004 \$499

### Ecological Society of America

*Best Student Poster Award-Physiological Ecology* 2003 \$500

## Experience

Post-doctoral researcher	Rowland Institute at Harvard	2008-2009
Post-doctoral researcher	Ecosystems Center MBL / Woods Hole	2008
Graduate Research Assistant	EPA STAR Fellowship,	2004-2007
Graduate Research Assistant	Advisor supervised, UCONN	2001-2003
Teaching Assistant	General Ecology, UCONN	2002-2003
Research Assistant	Mellon Foundation/ Zoe Cardon	2001-2002
Research Assistant	Guanacaste National Park, Costa Rica	2000
Teach for America	Teacher – Franklin High School, LA	1996-1999
Carpenter	New Bedford, MA	1995-1996

## Publications

**Herron, P.M.**, C. Arango Pinedo, Z. Haider, D. J. Gage, and Z.G. Cardon. (In Prep). Better to light a candle than curse the darkness: Luciferase expressing biosensors detecting carbon availability in the rhizosphere.

**Herron, P.M.**, J.M. Stark, and Z.G. Cardon (In Review). Microbial growth efficiencies across a moisture gradient in soil assessed using  $^{13}\text{C}$ -acetic acid vapor and  $^{15}\text{N}$ -ammonia gas.

Gage, D.J., **P.M. Herron**, C. Arango-Pinedo, Z.G. Cardon (2008) Live reports from the soil grain -- the promise and challenge of microbiosensors. *Functional Ecology*. 22: 983-989.

Martine, C.T., S. Leicht-Young, **P. Herron** and A. Latimer. (2008) Fifteen woody plants with potential for invasiveness in New England. *Rhodora*. 110: 354-358

**Herron, P.M.**, C.T. Martine, A. Latimer and S. Leicht. (2007) Invasive plants and their ecological strategies: prediction and explanation of woody plant invasion in New England. *Diversity and Distributions*. 13: 633-644

Cardon, Z. G., and **Herron, P. M.** (2005) Sweeping water, oozing carbon: long distance transport and patterns of rhizosphere resource exchange. IN: *Vascular Transport in Plants*. Holbrook, N.M. and Zwieniecki, M.A. (eds). Academic Press, San Diego, pp. 257-276.

Adams, P., **Herron, P.**, and Meletis, E.I. (1998) First Order Spin- paramagnetic transition and tricritical point in ultrathin Be films. *Phys. Rev. B* 58,6

#### **Published Abstracts**

Zoe Cardon, Daniel Gage, John Stark, **Patrick M. Herron**, Catalina Arango Pinedo. 2007. Better to light a candle than to curse the darkness: lux expressing biosensors in the rhizosphere. Abstracts-Ecological Society of America Meeting . San Jose, CA (August 2007)

**Patrick M. Herron**, Catalina Arango Pinedo, Zane Haider, Daniel Gage and Zoe Cardon. 2007. Water flux in the rhizosphere: structuring cycling of C and N. Abstracts-Ecological Society of America Meeting . San Jose, CA (August 2007)

Christopher T. Martine, **Patrick M. Herron**, Andrew M. Latimer and Stacey A. Leicht Young. 2007. Invasive plants and their ecological strategies: a model-based approach to prediction and explanation of woody plant invasion in New England. Abstracts-Botanical Society of America Meeting . Chicago, IL (July, 2007)

**Patrick Herron**, Carson Holt, John Stark and Zoe Cardon. 2006. Injections of  $^{13}\text{C}$ -Acetic Acid vapor and  $^{15}\text{N}$ -Ammonia gas into soil to track the fate of nutrients without disturbing soil water status: applications in an investigation of hydraulic redistribution under *Artemisia tridentata* . Abstracts-Soil Science Society of America Meetings , Indianapolis, Indiana

Zoe Cardon, **Patrick Herron**, Catalina Arango Pinedo, Zane Haider and Daniel Gage. 2006. Live reports from the soil grain --- the promise and challenge of microbiosensors. Abstracts-Soil Science Society of America Meetings , Indianapolis, Indiana

**Patrick Herron**, Daniel Gage and Zoe Cardon. 2005. Patterns of water potential gradients around roots in soil as reported by microbiosensors. Abstracts-Ecological Society of America Meeting , Montreal, Canada

Zoe Cardon, Daniel Gage, **Patrick Herron**, and Frank Moussy. 2005. Microbiosensors and miniaturized enzyme based sensors for soil research. Abstracts-Ecological Society of America Meeting , Montreal, Canada

Chris Martine, **Patrick M. Herron**, Andrew M. Latimer, Stacey A. Leicht, and E.S. Mosher. 2005. Predicting the next woody invasive in New England: a model-based approach to identifying future threats. Austin, Texas (Poster)

**Patrick Herron**, Daniel Gage and Zoe Cardon. 2003. Divining rods: *Pseudomonas putida* as a microbiosensor of fine scale osmotic potentials in soil. Abstracts-Ecological Society of America Meeting. Savannah, Georgia (Poster)

**Patrick Herron**, Michelle Rosado, Ryan Bringhurst, Dan Gage, and Zoe Cardon. 2002. Speedometer bacteria: A proxy for carbon availability in the rhizosphere. Abstracts-Ecological Society of America Meeting. Tucson, Arizona

Ryan Bringhurst, Zoe Cardon, **Patrick Herron**, and Daniel Gage. 2001. A biosensing strain of *Sinorhizobium meliloti* used to monitor release of a-galactosides into the rhizosphere. Abstracts-American Society for Microbiology Meeting ,

### **Undergraduate Mentoring Experience**

<i>Carson Holt</i> - Application of stable isotopes to soil microbial ecology problems Recipient of Undergraduate Research Award based on work	2004-2006
<i>Corie Cann</i> - Studies on the ability of <i>Z. mays</i> to perform hydraulic redistribution	2003-2005

### **Outreach**

PlantingScience.org	Mentor scientist for high school students studying plants	2009
Environmental Leadership Program (ELP)	<i>New England Region- Senior Fellow</i>	2008-2009
Worcester Ecotarium	- consulting and contributing to exhibit on soil organisms	2008
Bioblitz	- Biodiversity Curriculum Implementation for Connecticut 6 <sup>th</sup> graders	2007
Bioblitz (Sponsored by CT Museum of Natural History)	New London, CT	2003
Greenhouse Guide	Ecology and Evolutionary Biology, UCONN	2002- 2007
Teach for America	Recruitment volunteer	2001- 2008

### **Professional affiliations**

Ecological Society of America (2001-2007)  
Soil Science Society of America (2006)  
Botanical Society of America (2005-2006)