

# Dustin L. Herrmann

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## EDUCATION

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2014 PhD, Ecology, University of California-Davis, Davis, CA  
*Dissertation:* Nitrogen retention in urban lawns, *Advisor:* Dr. Mary L. Cadenasso  
2008 B.S., Biology, Illinois State University, Normal, IL

## PROFESSIONAL EXPERIENCE

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2015-Present, Postdoctoral Fellow, ORISE Research Program at the US EPA, Cincinnati, OH  
2009-2014, Researcher and PhD Student, Plant Sciences, University of California-Davis  
2009, Researcher and NSF-REU organizer, Plant and Soil Ecology Lab, Bradley University, Peoria, IL  
2008, NSF Undergraduate Research Fellow, Illinois State University, Normal, IL  
2007, NSF-REU Fellow, Bradley University, Peoria, IL

## TEACHING EXPERIENCE

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2017-2018, Adjunct Professor, Environmental Studies, University of Cincinnati  
2015-2016, Adjunct Professor, Environmental Science, Northern Kentucky University  
2013-2014, Teaching Assistant, Evolution and Ecology, University of California-Davis

## AWARDS

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ORISE Postdoctoral Fellowship, 2015-2018  
Plant Science Graduate Student Fellowship, University of California-Davis, 2009-2014  
Western Ag Innovations Research Award, 2012  
Jastro Shields Research Award, University of California-Davis, 2010, 2011, 2012

## PUBLICATIONS

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16. Shuster, WD, R Darner, LA Schifman, and **DL Herrmann**. In press. Factors contributing to the hydrologic effectiveness of a rain garden network (Cincinnati, OH USA). *Infrastructures*.
15. **Herrmann, DL**, and ML Cadenasso. 2017/Online First. Nitrogen retention in unfertilized lawns across a light gradient. *Urban Ecosystems* 10.1007/s11252-017-0684-z
14. **Herrmann, DL**, WD Shuster, and AS Garmestani. 2017. Vacant urban lot soils and their potential for ecosystem services. *Plant and Soil* 413:45-57. doi:10.1007/s11104-016-2874-5
13. Berland, A, S Shiflett, WD Shuster, AS Garmestani, H Goddard, **DL Herrmann**, and ME Hopton. 2017. The role of trees in urban stormwater management. *Landscape and Urban Planning* 162:167-177. doi: 10.1016/j.landurbplan.2017.02.017
12. **Herrmann, DL**, K Schwarz, WD Shuster, A Berland, AS Garmestani, ME Hopton, and BC Chaffin. 2016. Ecology for the shrinking city. *BioScience* 66:965-973. doi: 10.1093/biosci/biw062

11. Chaffin, BC, AS Garmestani, DG Angeler, **DL Herrmann**, CA Stow, M Nyström, J Sendzimir, ME Hopton, J Kolasa, and CR Allen. 2016. Biological invasions, ecological resilience and adaptive governance. *Journal of Environmental Management* 183(2):399-407. doi:10.1016/j.jenvman.2016.04.040
10. **Herrmann DL**, WD Shuster, AL Mayer, and AS Garmestani. 2016. Sustainability for shrinking cities. *Sustainability* 8(9), 911. doi:10.3390/su8090911
9. Schwarz, K, and **DL Herrmann**. 2016. The subtle, yet radical, shift to ecology for cities. *Frontiers in Ecology and the Environment* 14(6): 296-297. doi: 10.1002/fee.1288
8. Berland, A, ME Hopton, and **DL Herrmann**. 2016. National assessment of Tree City USA participation according to geography and socioeconomic characteristics. *Arboriculture & Urban Forestry* 42(2):120-130.
7. Pearse, IS, JH Baty, **DL Herrmann**, R Sage, and W Koenig. 2015. Leaf phenology mediates provenance differences in herbivore populations on valley oaks in a common garden. *Ecological Entomology* 40(5): 525-531.
6. Berland, A, K Schwarz, **DL Herrmann**, and ME Hopton. 2015. How environmental justice patterns are shaped by place: Terrain and tree canopy in Cincinnati, Ohio. *Cities and the Environment* 8(1): Article 1.
5. Schwarz, K, **DL Herrmann**, and MR McHale. 2014. Abiotic drivers of ecological structure and function in urban systems. In R. A. McCleery, N. Peterson, and C. Moorman, editors. *Urban Wildlife: Theory and Practice*.
4. **Herrmann, DL**, IS Pearse, and JH Baty. 2012. Drivers of specialist herbivore diversity across 10 cities. *Landscape and Urban Planning* 108:123-130.
3. Morris, SJ, **DL Herrmann**, J McClain, J Anderson, and KD McConnaughay. 2012. The impact of garlic mustard on sandy forest soils. *Applied Soil Ecology* 60:23-28.
2. **Herrmann, DL**, JE Jannot, A Ko, and SA Juliano. 2010. Geographic variation in size and oviposition depths of *Romalea microptera* (Orthoptera: Acrididae) are associated with different soil conditions. *Annals of the Entomological Society of America* 103:227-235.
1. Jannot, JE, A Ko, L Skinner, **DL Herrmann**, E Butzen, O Akman, and SA Juliano. 2009. Density-dependent polyphenism leads to geographic variation in size among two populations of lubber grasshoppers. *Ecological Entomology* 34:644-651.

*In review*

Zipper, SC, KH Smith, B Breyer, J Qiu, A Kung, and **DL Herrmann**. Socio-environmental drought response in a mixed urban-agricultural watershed: synthesizing biophysical and governance responses.

Schifman, LA, **DL Herrmann** (co-lead author), WD Shuster, A Ossola, AS Garmestani, and ME Hopton. Situating green infrastructure in context: A framework for adaptive socio-hydrology in cities.

Ossola, A, **DL Herrmann**, LA Schifman, AS Garmestani, K Schwarz, and ME Hopton. The provision of urban ecosystem services throughout the private-social-public domain: A conceptual framework.

Schwarz, K, A Berland, and **DL Herrmann**. Green but not just? Rethinking environmental justice outcomes for shrinking cities.

*In preparation (drafts available upon request)*

**Herrmann, DL**, W-C Chuang, K Schwarz, TM Bowles, AS Garmestani, WD Shuster, T Eason, ME Hopton, and CR Allen. Ecological management and smallholder livelihoods for urban transformations.

**Herrmann, DL** and ML Cadenasso. Nitrogen retention and loss across a light gradient in fertilized lawns.

*Dissertation*

Herrmann, DL. Nitrogen retention and loss in urban lawns. Dissertation. December 2014. Advisor: Dr. Mary L. Cadenasso. Archived at <http://gradworks.umi.com/36/85/3685231.html>.

PRESENTATIONS \*mentee, \*\*organized symposium

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*Upcoming*

30. **Herrmann DL**, Schifman LA, WD Shuster, and K Schwarz. December 2017. The vertical structure of urban soils and their convergence across cities. Will be presented at American Geophysical Union Fall Meeting, New Orleans, LA.

29. WD Shuster, Schifman LA, and **DL Herrmann**. December 2017. The hydrologic implications of unique urban soil horizon sequencing on the functions of passive green infrastructure. Will be presented at American Geophysical Union Fall Meeting, New Orleans, LA.

28. Schifman LA, **DL Herrmann**, and WD Shuster. December 2017. Patterning between urban soil coloring and carbon stocks. Will be presented at American Geophysical Union Fall Meeting, New Orleans, LA.

*Completed*

27. Schifman LA, **DL Herrmann**, and WD Shuster. August 2017. Situating green infrastructure in context. Resilience Conference, Stockholm, Sweden.

26. Schwarz, K, A Berland, and **DL Herrmann**. August 8, 2017. Green but not just? Rethinking environmental justice outcomes in shrinking cities. Ecological Society of America Annual Meeting, Portland, OR.

25. **Herrmann DL**, LA Schifman, WD Shuster, and S Dadio. August 8, 2017. The vertical structure of urban soils. Ecological Society of America Annual Meeting, Portland, OR.

24. **\*\*Herrmann DL** and K Schwarz. June 19, 2017. Agroecology for the shrinking city. International Symposium on Society and Resource Management, Umea, Sweden.

23. **DL Herrmann**. May 2, 2017. An ecosystem perspective of urban soils for the sustainable city era. Presented as a webinar to the US Department of Agriculture Natural Resources Conservation Service's National Soil Survey Center, Washington, DC.

22. **DL Herrmann**. April 13, 2017. A systems ecology approach to achieving environmental protections and desirable amenities in U.S. cities. US Environmental Protection Agency, Sustainable Technologies Division Science Forum, Cincinnati, OH.

21. **\*\*DL Herrmann**, K Schwarz, TM Bowles, W-C Chuang, AS Garmestani, T Eason, and WD Shuster. April 8, 2017. An agroecological approach to managing for resilience in shrinking cities. Presented as part of the organized session *Framing urban sustainability: Smart, efficient, green, or just?* Association of American Geographers Annual Meeting, Boston, MA.

20. \*Mullane, J, WD Shuster, and **DL Herrmann**. November 7, 2016. Pedogenesis and hydrologic function in an established rain garden. Soil Science Society of America Annual Meeting, Phoenix, AZ.
19. \*\***Herrmann, DL**, WD Shuster, AL Mayer, and AS Garmestani. June 23, 2016. Transitioning to sustainable trajectories in shrinking cities. International Symposium on Society and Resource Management, Houghton, MI.
18. \*\*WD Shuster, **Herrmann, DL**, AL Mayer, and AS Garmestani. June 23, 2016. A coming of age for vacant lots as urban service providers. International Symposium on Society and Resource Management, Houghton, MI.
17. \*\***Herrmann, DL**, WD Shuster, AS Garmestani, and R Haefner. November 4, 2015. Management of urban green infrastructure for ecosystem services and the imperative for field data support. Geological Society of America Annual Meeting, Baltimore, MD.
16. Darner, R, WD Shuster, HW Reeves, C Hoard, S Beeler, and **DL Herrmann**. November 2, 2015. Investigating the groundwater component of managed urban water cycles. Geological Society of America Annual Meeting, Baltimore, MD.
15. \*\***DL Herrmann**, WD Shuster, A Berland, AS Garmestani, K Schwarz, BC Chaffin, and ME Hopton. August 12, 2015. Ecology for the shrinking city. 100<sup>th</sup> Ecological Society of America Annual Meeting, Baltimore, MD.
14. \*\*Schwarz, K, A Berland, **DL Herrmann**, and ME Hopton. July 6, 2015. The role of geographical context in the distribution of urban tree canopy cover: implications for environmental justice and urban sustainability planning. 9<sup>th</sup> International Association of Landscape Ecology World Congress, Portland, OR.
13. **DL Herrmann**, WD Shuster, AS Garmestani, A Knerl, and K Gilkey. July 9, 2015. Soils of shrinking cities: properties and potential for multiple ecosystem services. 9<sup>th</sup> International Association of Landscape Ecology World Congress, Portland, OR.
12. Schwarz, K, A Berland, **DL Herrmann**, and ME Hopton. April 21, 2015. How does place shape environmental justice patterns: terrain and tree canopy in Cincinnati, OH. Association of American Geographers Annual Meeting, Chicago, IL.
11. **Herrmann, DL** and ML Cadenasso. August 14, 2014. When light is the limiting resource: Quantifying inter- and intra-annual variability in carbon and nitrogen cycling in a lawn chronosequence. 99<sup>th</sup> Ecological Society of America Annual Meeting, Sacramento, CA.
10. **Herrmann, DL** and ML Cadenasso. August 7, 2013. Multiple ecosystem services in urban lawns: Nitrogen retention and aesthetics. 98<sup>th</sup> Ecological Society of America Annual Meeting, Minneapolis, MN.
9. Soon, E\*, S Claudio\*, **DL Herrmann**, and ML Cadenasso. May 11, 2013. High soil pH in your Mediterranean climate yard: Causes, consequences and remediation. 1<sup>st</sup> Annual Women of Color Conference, University of California, Davis, CA.
8. Baty, JH, **DL Herrmann**, and IS Pearse. May 4, 2013. Drivers of specialist herbivore diversity across 10 California cities. 15<sup>th</sup> Annual Bay Area Conservation Biology Symposium, Davis, CA.
7. **Herrmann DL**, ML Cadenasso. August 6, 2012. Tipping the balance between ecosystem service and disservice: Considering light availability and soil carbon effects on carbon cycling in urban lawns. 97<sup>th</sup> Ecological Society of America Annual Meeting, Portland, OR.

6. Mullikin, J\*, **DL Herrmann**, KD McConnaughay, and SJ Morris. April 18, 2012. Effects of *Alliaria petiolata* (garlic mustard) on soil dynamics at Sand Ridge State Forest. Bradley University Student Exposition 2012, Peoria, IL.
5. Pearse, IS, **DL Herrmann**, and JH Baty. February 19, 2011. Retention of oak gall communities on urban trees. 4<sup>th</sup> Annual Graduate Student Symposium in Ecology, University of California, Davis, CA.
4. Uchtmann, N\*, **DL Herrmann**, and SJ Morris. August 2009. How altering nutrient availability affects garlic mustard proliferation. Bradley University Summer Intern Symposium, Peoria, IL.
3. **Herrmann DL**, SJ Morris, KD McConnaughay, S Tun, J McClain, and DS O'Keefe. July 15, 2009. Exotic plant *Alliaria petiolata* associated with changes in soil resource availability and soil biota abundance and function. Soil Ecology Society Meeting, Burlington, VT.
2. **Herrmann DL**, S Tun, J McClain, DS O'Keefe, SJ Morris, and KD McConnaughay. August 6, 2008. Facilitation of garlic mustard invasion through favorable soil microenvironments in a primarily pine forest stand. 93<sup>rd</sup> Ecological Society of America Annual Meeting, Milwaukee, WI.
1. **Herrmann DL**. August 15, 2007. Does nitrogen-fixing black locust facilitate garlic mustard invasion. Bradley University Summer Intern Symposium, Peoria, IL.

#### *Community presentations*

Meeting the public amenity and ecosystem service goals for Lindsay Street Park. Presented to Atlanta office of *Conservation Fund* on January 28, 2016.

#### INVITED LECTURES

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Environmental justice and the shrinking city (guest lecturer). Northern Kentucky University. February 2017.

Urban greening and shrinking cities (guest lecturer). University of Cincinnati. October 6, 2016.

Multiple ecosystem services of urban lawns (guest lecturer). University of California, Davis. February 26, 2013.

Urban sustainability and the built environment (guest lecturer). Northern Kentucky University. September 26, 2012.

#### SEMINAR AND WORKSHOP CONTRIBUTIONS

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Participant. Workshop "Computational Institute" at the National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD. September 14-16.

Participant. "Green Infrastructure in Detroit" at University of Michigan Water Center, Ann Arbor, MI. May 4, 2016.

External expert. Working group "Learning from surprise: social and environmental adaptation to recurring drought or flood" at the National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD. November 2014 – January 2016.

Participant. Northern Kentucky LGBTQ Ally Training. May 28, 2015.

Fellow. Earth Stewardship Initiative 2014: Operationalizing Earth Stewardship through the Application of Ecological Science at the Design Phase of Green Infrastructure. Led by Alexander J. Felson, Yale University. Project website: <<http://www.earthstewardshipesa2014.com/>>.

Participant. "Teaching about Socio-Environmental Synthesis with the Case Study Method." July 23-26, 2013. National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD. Submitted case study for publication on SESYNC website titled "What's the buzz? A case study on pollinators in Chicago" <<http://www.sesync.org/pollinators-in-chicago-case-study-3>>.

Organizer and Graduate Student Leader. "Human Dominated Ecosystems: A Graduate Student Seminar." 2011. University of California-Davis.

#### PROFESSIONAL SOCIETY MEMBERSHIPS

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Ecological Society of America  
International Association for Society and Natural Resources  
American Geophysical Union

#### STUDENTS MENTORED

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Graduate: Nicholas Sisco (University of Cincinnati, current)

Undergraduates: Emily Keener (Northern Kentucky University), Michelle Rampulla (University of California Davis, UCD), Serena Claudio (UCD), Abhiram Maturi (UCD), Kelley Liang (UCD), Evonne Soon (UCD), Joshua Heasall (UCD), Nightingale Uchtmann (NSF-REU/Bradley University)

#### MANUSCRIPT/PROPOSAL REVIEWER

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*Publications/grant agencies reviewed for*

Sustainable Cities and Society, Community Development, Urban Ecosystems, Sustainability, Journal of Environmental Management, Environmental Management, Landscape and Urban Planning, BioScience, Ecology and Society, Diversity, Forests, Encyclopedia of Soil Science, International Journal of Geo-Information, Sustainability, Ecosystems, Journal of Environmental Quality, SeaGrant