

# Christina M. Locke

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## Education

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| <i>Sep 2009 – Aug 2014</i><br><i>(anticipated)</i>   | University of Wisconsin – Madison<br>Advisor: Dr. Adena Rissman<br>PhD: Forest & Wildlife Ecology ▪ Land Use Policy<br>Cumulative GPA: 3.91/4.0 |
| <i>Sep 2003 – May 2007</i><br><i>summa cum laude</i> | University of Wisconsin – Eau Claire<br>Advisor: Dr. Rudy Buiser<br>BS: Biology ▪ Environmental Science<br>Cumulative GPA: 3.92/4.0             |

## Research Experience

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| <i>Sep 2009 – present</i>      | University of Wisconsin – Madison, Rissman Lab.  |
| <i>Feb 2008 – Aug 2009</i>     | University of California – Berkeley, Kremen Lab. |
| <i>Apr 2007 – Dec 2007</i>     | University of Wisconsin – Madison, Raffa Lab.    |
| <i>Summers 2005 &amp; 2006</i> | Princeton University, Kremen Lab.                |

## Publications

- Locke, C.M.** and Rissman, A.R. Evidence for the pollution haven hypothesis: frac sand mines are preferentially sited in unzoned rural jurisdictions. In prep (fully drafted).
- Locke, C.M.** and Rissman, A.R. Landownership patterns influence zoning effects on rural housing growth and fine-scale development patterns. In prep (fully drafted).
- Locke, C.M.** and Rissman, A.R. Uneven effects of zoning on housing growth rates and forest fragmentation across a rural-urban gradient. In prep (fully drafted).
- Locke, C.M.** and Rissman, A.R. Factors influencing zoning ordinance adoption in rural and exurban townships. Manuscript submitted for publication.

Rissman, A.R., Bihari, M., Hamilton, C., **Locke**, C., Lowenstein, D., Motew, M., Price, J. and Smail, R. 2013. Land management restrictions and options for change in perpetual conservation easements. *Environmental Management*. 52:277-288.

**Locke**, C.M. and Rissman, A.R. 2012. Unexpected Co-benefits: Forest Connectivity and Property Tax Incentives. *Landscape and Urban Planning*. 104:418-425.

## Oral Presentations

- 2014 "Uneven effects of zoning on housing growth rates and forest fragmentation across a rural-urban gradient." North American Congress for Conservation Biology, Missoula, MT
- 2014 "Institutional changes needed for conserving biodiversity and water resources in novel social-ecological systems." (Panel and Discussion) North American Congress for Conservation Biology, Missoula, MT
- 2013 "Factors influencing zoning ordinance adoption in rural townships." International Symposium on Society and Resource Management (ISSRM), Estes Park, CO
- 2012 "Land-Use Management in the Northwoods: Local Governments and the Politics of Smart Growth." University of Kentucky Dimensions of Political Ecology Conference, Lexington, KY
- 2011 "Unexpected Co-benefits: Forest Connectivity and Property Tax Incentives." International Symposium on Society and Resource Management (ISSRM), Madison, WI
- 2011 "Social and Legal Dimensions of Conservation in a Changing Climate: Results from a Six-University Distributed Graduate Seminar." (Panel and Discussion) International Symposium on Society and Resource Management (ISSRM), Madison, WI
- 2011 "Unexpected Co-benefits: Forest Connectivity and Property Tax Incentives." US Regional Association of the Int'l Association of Landscape Ecology (US-IALE), Portland, OR

## Poster Presentations

- 2012 "Overlapping Public Policies for Private Forest Conservation." North American Congress for Conservation Biology, Oakland, CA
- 2012 "Unexpected Co-benefits: Forest Connectivity and Property Tax Incentives." Wisconsin Ecology Spring Symposium, Madison, WI

- 2011 “Unexpected Co-benefits: Forest Connectivity and Property Tax Incentives.” UW-Madison GIS Day, Madison, WI
- 2011 “Unexpected Co-benefits: Forest Connectivity and Property Tax Incentives.” Wisconsin Department of Natural Resources Science Services poster session, Madison, WI
- 2010 “Mapping Conservation Acquisitions: Local and Landscape Trends.” Wisconsin Land Information Association Annual Meeting, Appleton, WI

## Service & Outreach

<i>Peer Review</i>	<p>Conservation Letters</p> <p>Nature Communications</p> <p>Environmental Management</p> <p>Forests</p> <p>Land</p> <p>Society and Natural Resources</p>
<i>Scientific Memberships</i>	<p>Society for Conservation Biology</p> <p>International Association for Society Natural Resources</p> <p>International Association of Landscape Ecologists</p>
<i>Committees</i>	<p>Graduate representative for Wisconsin Ecology at UW-Madison, 2011–present</p> <p>Member of the Graduate and Undergraduate Programs Committee, Forestry Department, UW-Madison, 2011 – 2013</p> <p>Leader of the Forestry Department Graduate Student Association at UW-Madison, 2011-2013</p> <p>Member of the Graduate Women in Science Beta and National chapters, 2010-2011</p>
<i>Outreach</i>	<p>Volunteer at Gathering Waters Conservancy in Madison, WI, Sept. 2013 – present: Technical and scientific assistance</p> <p>Annual Wisconsin Ecology Undergraduate Job Fair volunteer coordinator, annually 2012-2014</p> <p>Volunteer projects in ecological restoration, controlled prairie burns, and campus events.</p>

## Teaching & Mentoring

<i>Mentoring</i>	Mentored undergraduate students on independent study projects, research methods and presentation skills (2 years).
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<i>Tutoring</i>	Tutored undergraduates in biology, chemistry, math and physics at the Academic Skills Center, University of Wisconsin, Eau Claire (3 years). Tutored middle school students in science, math and social studies for the Madison Urban League Schools of Hope program (1 year).
<i>Training</i>	Trained undergraduates and citizen scientists from diverse backgrounds on research methods and field and lab protocols (2 years).
<i>Teaching</i>	Teaching Assistant. Introductory Biology, UW – Madison. Fall 2014. Guest lecturer. Natural Resources Policy, UW – Madison. Guest Discussion Leader. Introduction to Ecology Research, UW – Madison. Guest Discussion Leader. Summer Research Program for Undergraduates, UW – Madison. Essay grader. Introductory Biology, UW – Madison. Spring 2012.

## Interests & Skills

<i>Research Interests</i>	Land Use/Land Cover Change, Land Use Planning and Policy, Conservation Biology, Landscape Ecology, Applied Statistics, Spatial Analysis, Applied Social Science
<i>Field &amp; Lab Techniques</i>	<p>Spatial Analysis (8 years): GPS use, GIS digitization and mapping, neutral landscape models, cluster and hotspot analysis, landscape fragmentation metrics, supervised and unsupervised classification of aerial photos and satellite images, python scripting for processing.</p> <p>Qualitative and quantitative social science methods (3 years): Document analysis; interviewing, transcription and coding; survey method basics.</p> <p>Insect Monitoring (4 years): trapping using pans, pits, pheromones and sticky cards; netting (sweep and individual); behavioral observations and nest identification of pollinators; transect counts; pinning and curation.</p> <p>Vegetation Monitoring (5 years): field identification, transect and quadrat counts, tree height and DBH measurements, herbarium specimen preparation.</p> <p>Microscope Work (2 years): pollen analysis using compound microscopes, insect identification using dissecting scopes.</p>
<i>Statistical Methods</i>	Causal inference, matching techniques, hierarchical (nested) models, mixed effects models, multiple regression, binomial logistic regression, ANOVA, econometric panel models and difference-in-difference (before-after-control-impact) estimations.

<i>Software</i>	R, ArcGIS, ArcPy, FRAGSTATS, MaxEnt, ENVI, Adobe Acrobat, Microsoft Office Suite (Excel, Word, PowerPoint, Publisher, Access), WordPress, Adobe Dreamweaver, Weebly
<i>Personal Interests</i>	Rock climbing, trail running, dancing, fiddle playing, camping, facing fears and trying new things

## Awards, Grants & Certificates

2014	North American Congress for Conservation Biology Best Student Presentation Award, \$250
2014	National Science Foundation IGERT collaborative incentive grant, \$6,400 (co-author)
2012	USDA AFRI-NIFA Pre-Doctoral Graduate Fellowship, \$75,000
2012	USDA McIntire-Stennis Formula Grant, \$90,000 (A. Rissman PI)
2012	North American Congress for Conservation Biology Best Poster Award, \$200
2010 & 2011	National Science Foundation Graduate Research Fellowship Program, honorable mention
2009	UW-Madison Biological Sciences Division Award recipient, \$2000
2007	Outstanding Senior Award recipient
2007	Super Six Award, nominee for outstanding achievement in academics and sport
2006 & 2007	Student Leadership Award nominee
2006	College Reading and Learning Association certificate for tutoring
2006	Phi Kappa Phi Honor Society inductee
2003 – 2007	UW-Eau Claire Diversity Scholar Award recipient, full tuition remission
2003 – 2007	Academic Distinction, UW-Eau Claire

## Workshops Attended

2014	Advances in Conservation Impact Evaluation and Causal Inference, short course with Dr. Paul Ferraro. Missoula, MT.
2014	Mellon-Wisconsin Dissertation Writing Camp. Madison, WI.
2014	Structural Equation Modeling Workshop for Ecologists with Dr. James Grace (USGS). Madison, WI.
2012	Conservation Leaders for Tomorrow national workshop for hunting awareness and training. Dundee, IL.
2011	American Evaluation Association professional development workshop series on evaluation and applied research methods.

2007 Tropical Biology course in the Osa Peninsula, Costa Rica.