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## CURRENT POSITION

2015- NSF Math Biology Postdoctoral Fellow, Tufts University, Department of Biology & The Arnold Arboretum of Harvard University  
Biology Mentors: Dr. Elizabeth Crone, Tufts University; Dr. Elizabeth Wolkovich, Harvard University  
Statistical Mentor: Dr. Jeffrey A. Royle U.S. Geological Survey Patuxent Wildlife Research Center

## RESEARCH POSITIONS

2014-2015 Putnam Fellow, The Arnold Arboretum of Harvard University  
2013-2014 Postdoctoral Researcher, Tufts University, Department of Biology  
Advisor: Dr. Elizabeth Crone

## EDUCATION

2007-2013 **PhD, Biology Department, University of Washington**  
Dissertation: *Testing the Limits: Understanding How Climate & Competition Affect Species' Ranges in a Warming World.*  
Advisor: Dr. Janneke HilleRisLambers,  
Committee: Drs. Martha Groom, Thomas Hinckley, Joshua Lawler, Joshua Tewksbury  
1997-2001 **BS, Environmental Science, Brown University**  
Honors thesis: *Conservation of a rare Block Island wildflower: herbivory, seed predation, & Allee effects in northern blazing star (Liatris scariosa var. novae-angliae).*  
Advisors: Drs. Johanna Schmitt & Steven Hamburg

## PUBLICATIONS

1. Burgess, H.K.\*, L.B. DeBey\*, H.E. Froehlich, N. Schmidt, E.J. Theobald, **A.K. Ettinger**, J. HilleRisLambers, J. Tewksbury, & J.K. Parrish In Press. Perceived & real barriers to the use of citizen science in scientific research: A quantitative assessment in biodiversity science. *Biological Conservation*. \*These authors contributed equally to this work.
2. HilleRisLambers, J., L.D.L. Anderegg, I. Breckheimer, K.M. Burns<sup>1</sup>, **A.K. Ettinger**, J.F. Franklin, J.A. Freund, K.R. Ford & S.J. Kroiss. Implications of climate change for turnover in forest composition. In press. *Northwest Science*.
3. Theobald, E.J.\* & **A.K. Ettinger\***, H. Burgess, L. DeBey, N. Footen, H. Froehlich, C. Wagner, J. Tewksbury, J. HilleRisLambers & J. Parrish. 2015. Global change & local solutions: tapping the unrealized potential of citizen science for biodiversity research. *Biological Conservation*. \*These authors contributed equally to this work.
4. Wolkovich, E. M. & **A.K. Ettinger**. 2014. Back to the future for plant phenology research. *New Phytologist* 203: 1021–1024.
5. **Ettinger, A.K.** & J. HilleRisLambers. 2013. Climate isn't everything: competitive interactions & variation by life stage will also affect range shifts in a warming world. *American Journal of Botany* 100: 1344-1355.
6. Ford, K.R., **A.K. Ettinger**, J. Lundquist, M. Raleigh, & J. HilleRisLambers. 2013. Spatial heterogeneity in ecologically important climate variables at coarse & fine scales in a high-snow mountain landscape. *Plos One* 8: 1-13.

7. HilleRisLambers, J., **A.K. Ettinger**, K.R. Ford, D.C. Haak, M. Horwith, B. Miner, H.S. Rogers, K.S. Sheldon, J.J. Tewksbury, S.M. Waters, S. Yang. 2013. Accidental Experiments: Ecological & Evolutionary Insights & Opportunities Derived from Anthropogenic Change. *Oikos* 122: 1649-1661.
8. HilleRisLambers, J., M.A. Harsch, **A.K. Ettinger**, K.R. Ford, E.J. Theobald. 2013. How will biotic interactions influence climate change-induced range shifts? *Climate Change & Species Interactions: Ways Forward* 1297, 112-125
9. Lawler, J.J., C.A. Schloss & **A.K. Ettinger**. 2013. Climate change: anticipating & adapting to the impacts on terrestrial species. In: Levin S.A. (ed.) *Encyclopedia of Biodiversity, second edition*, Volume 2, pp. 100-114. Waltham, MA: Academic Press.
10. O'Brien<sup>1</sup>, A.M., **A.K. Ettinger** & Janneke HilleRisLambers. 2012. Conifer growth & reproduction in urban forest fragments: predictors of future response to global change? *Urban Ecosystems* 15: 879-891.
11. **Ettinger, A.K.**, K.R. Ford & J. HilleRisLambers. 2011. Climate determines upper, but not lower, altitudinal range limits of Pacific Northwest conifers. *Ecology* 92: 1323–1331.
12. Tewksbury, J.J., K.S. Sheldon & **A.K. Ettinger**. 2011. Moving faster & farther. News & Views, *Nature Climate Change* 1: 1-2.
13. **Kane, A.** & J. Schmitt. 2001. *Liatris borealis* Nuttall ex MacNab (Northern Blazing Star) Conservation & Research Plan. New England Wild Flower Society. Framingham, MA.

In Prep/Revision (Available upon request)

14. **Ettinger, A.K.** & J. HilleRisLambers. In review. Asymmetric range shift dynamics under climate change: the roles of competition & facilitation.
15. Crone, E.E. & **A.K. Ettinger**. In review at *Ecosphere*. Jensen's inequality and the interpretation of parameters in GLMMs.
16. **Ettinger, A.K.**, B. Lee<sup>1</sup> & S. Montgomery<sup>1</sup>. In prep. Barriers to conifer regeneration in Seattle's urban forests.
17. K. Alahuhta, E.E. Crone, **A.K. Ettinger**, H. Hens, A. Jäkäläniemi & J. Tuomi. In prep. Instant death, slow death, and the consequences of assumptions about dormancy for plant population dynamics.

## GRANTS, FELLOWSHIPS, & AWARDS

- |      |   |
|------|---|
| 2014 | National Science Foundation Postdoctoral Fellowship in Biology (\$207,000)  |
| 2014 | Putnam Fellowship, Arnold Arboretum of Harvard University (\$45,800)  |
| 2011 | Huckabay Teaching Fellowship, UW. Urban ecology: conducting & communicating science in the city (\$9,666).  |
| 2011 | Garden Club of America Zone VI Fellowship in Urban Forestry. Investigating barriers to conifer regeneration in Seattle's urban forests (\$4,000).                               |
| 2011 | Washington Research Foundation-Hall Fellowship, Biology Department, UW (\$9,666).   |
| 2010 | National Park Service George Melendez Wright Climate Change Fellowship (\$6,627).   |
| 2010 | National Science Foundation Doctoral Dissertation Improvement Grant. Testing the limits: effects of climate & competition on conifer distributions at Mount Rainier (\$14,197). |
| 2009 | Ecological Society of America SERDP Student Travel Award (\$500).   |
| 2009 | Experimental Ecological Award, Biology Department, University of Washington (\$2,070).  |
| 2008 | National Science Foundation Graduate Research Fellowship. How climate & competition interact to determine species distributions (\$121,500).                                    |
| 2008 | Botanical Field Research Award, Biology Department, University of Washington (\$1,799).   |
| 2002 | Atkinson Conservation Fellowship, New England Wild Flower Society   |
| 2000 | John Wald Science Grant, The Nature Conservancy- Rhode Island (\$4,000).  |
| 2000 | Rhode Island Wild Plant Society Scholarship (\$500).  |

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<sup>1</sup> Undergraduate student mentee

## RECENT RESEARCH PRESENTATIONS

### Invited seminars

- 2015 Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY
- 2013 Arnold Arboretum, Harvard University, Jamaica Plain, MA
- 2013 Harvard University Herbaria, Cambridge, MA
- 2013 Wellesley College, Wellesley, MA.
- 2013 American Association for the Advancement of Science Annual Meeting, Boston, MA.

### Selected Contributed Talks

- 2014 Ecological Society of America Meeting, Sacramento, CA. "Climate isn't everything! Life stage, biotic interactions, & seed origin will also affect tree range shifts in a warming world." By **A.K. Ettinger**, with J. HilleRisLambers.
- 2012 Ecological Society of America Meeting, Portland, OR. "Testing the Limits: Effects of climate & competition on conifer distributions." By **A.K. Ettinger**, with J. HilleRisLambers.
- 2012 Conserving Plant Biodiversity in a Changing World Conference, Seattle, WA. "Impacts of climate & competition on altitudinal range limits of Pacific Northwestern conifers." By **A.K. Ettinger**, with J. HilleRisLambers.
- 2011 International Congress for Conservation Biology, Auckland, New Zealand. "A management framework for large scale conservation." By J. Hoekstra, with **A.K. Ettinger**, K. Anderson, A. Ramos, L. Mease, C. Penalba, P. Kareiva.
- 2011 Ecological Society of America Meeting, Austin, TX. "Impacts of climate & competition on altitudinal range limits of Pacific Northwestern conifers." By **A.K. Ettinger**, with K.R. Ford, J. HilleRisLambers.
- 2011 George Wright Society Meeting, New Orleans, LA. "Effects of climate on conifer distributions in Mt. Rainier National Park." By **A.K. Ettinger**, with K.R. Ford, J. HilleRisLambers.
- 2010 Biology Department Graduate Student Symposium, Seattle, WA. By **A.K. Ettinger**, with J. HilleRisLambers
- 2010 Northwest Science Association Meeting, Centralia, WA. By **A.K. Ettinger**, with K.R. Ford, J. HilleRisLambers.

### Selected Posters

- 2013 Ecological Society of America Meeting, Minneapolis, MN. "Impact of climate & biotic interactions on growth of *Abies lasiocarpa* at altitudinal range limits." By Kathleen Burns<sup>1</sup>, with **A.K. Ettinger**, K.R. Ford, A. Wilson, L.D.L. Anderegg, & J. HilleRisLambers.
- 2012 Ecological Society of America Meeting, Portland, OR. "A lost generation of trees: Investigating the causes of low tree recruitment in urban coniferous forests." By B.R. Lee<sup>2</sup> with S.M. Montgomery<sup>1</sup>, **A.K. Ettinger**, J. HilleRisLambers.
- 2011 Ecological Society of America Meeting, Austin, TX. "Decrease in growth preceding death in *Abies amabilis* (Pacific Silver Fir)." By E.M. Curtis<sup>1</sup>, with **A.K. Ettinger**, R. Konrady<sup>1</sup>, J. HilleRisLambers.
- 2010 Ecological Society of America Meeting, Pittsburgh, TX. "The effect of temperature, soil nitrogen & gastropods on *Thuja plicata* growth & reproduction." By A. O'Brien<sup>1</sup>, J. HilleRisLambers & **A. Ettinger**.

## OUTREACH & PUBLIC TALKS

- 2015 What Climate Change Means to the Home Gardener. URI Master Gardeners Association, Warren, RI.
- 2014- Tree mobs, Arnold Arboretum, Boston, MA.
- 2014 Ecological impacts of climate change in Maine. Josselyn Botanical Society, Lewiston, ME.
- 2013 Ecological impacts of climate change in New England. Course for New England Wild Flower Society.
- 2009-11 Ecology & natural history of Mt. Rainier's forests. UW's Educational Outreach program.
- 2010-11 National Lab Day: Climate change, forests & tree rings. Activity for fifth grade students.
- 2010 Climate change & forests at Mt. Rainier National Park. Presentation for Park Service staff & volunteers.
- 2010 Climate change & forests of the Pacific Northwest. Presentation for Master Urban Naturalist Program.
- 2008-10 Botany & natural history of Seward Park. Seward Park Environmental & Audubon Center, Seattle, WA.
- 2007-09 Botany & natural history of Seattle forests. Field trip for students in UW's introductory biology course.

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<sup>1</sup>Undergraduate student mentee

## TEACHING & MENTORING

### Harvard University

#### **Mentor for undergraduate research, Department of Organismal & Evolutionary Biology**

2014- Advise 1 undergraduate major in her honors thesis

### Tufts University

#### **Mentor for graduate research, Biology Department**

2014- Advise/collaborate with 1 visiting graduate student on her dissertation

#### **Guest lectures, Biology Department**

2015 For Dr. Elizabeth Crone's Ecological Models & Data undergraduate & graduate course

### University of Washington, Seattle, WA

#### **Instructor, Biology Department**

2012 *Urban Ecology: Conducting & Communicating Science in the City*  
Developed & taught upper level undergraduate course.

#### **Mentor for undergraduate research credit, Biology Department**

2010-13 Advised 5 undergraduate biology majors in conducting research in the field & greenhouse.

#### **Graduate Teaching Assistant, Biology Department**

2010 *Plant Ecology*

2008 *Introductory Biology for Majors*

2009 *Community Ecology*

2007 *Foundations in Ecology*

## OTHER PROFESSIONAL EXPERIENCE

2011 Fellowship, The Nature Conservancy, Seattle, WA

Investigated, summarized, & analyzed characteristics of successful large-scale conservation efforts around the world, including leadership, participating partners, economics, & time to establishment.

PI: Dr. Jonathan Hoakstra. Science Director WA state office & Senior Scientist, Central Science Program

2004- Plant Conservation Volunteer Coordinator, New England Wild Flower Society, Framingham, MA

2007 Coordinated & led volunteers in rare plant monitoring & identification, managed seed bank & grassland restoration projects. Organized volunteer field trips & courses, wrote & implemented habitat management plans, & conducted botanical inventories & rare plant surveys.

## ACADEMIC & PROFESSIONAL SERVICE

2013- Grant reviewer, National Science Foundation

2011- Manuscript reviewer, *AoB PLANTS*, *Canadian Journal of Forest Research*, *Ecology*, *Ecology Letters*, *Global Ecology & Biogeography*, *Journal of Biogeography*, *Oecologia*, *Rhodora*.

2012 Grad student lead, NSF Distributed Graduate Seminar at UW (Topic: Citizen science & biodiversity research)

2011 Acquired competitive UW Student Technology Fee grant to obtain LiCor for Biology Department (\$60,350)

2010 Coordinated graduate seminar in R programming & statistics

2009 Co-hosted graduate student-invited speaker, Dr. Tiffany Knight

2009 Developed & led graduate seminar in environmental policy

2008 Hosted graduate student-invited speaker, Dr. Amy Angert

2008 Co-organized Graduate Student Symposium, Biology Department, UW

## PROFESSIONAL SOCIETIES

Ecological Society of America, George Wright Society, Northwest Science Association, American Association for the Advancement of Science, New England Wild Flower Society.

## SKILLS

**Certifications** American Red Cross First Aid & CPR, Wilderness First Responder, Commonwealth of Massachusetts Pesticide Applicator License, PADI Open water.

**Language** Spanish (Intermediate), French (Basic).

**Quantitative techniques** hierarchical models, multivariate analyses, survival analysis, population matrix modeling (implemented in R, JAGS & Stan).