

KATHERINE M. RENWICK

Postdoctoral Researcher, Montana State University
607-229-3179 · katie.renwick@gmail.com · katiierenwick.wordpress.com

Education

- 2015 **Ph.D.** Colorado State University, Fort Collins, CO
Graduate Degree Program in Ecology
Graduate Teaching Certificate
- 2007 **B.A.** Colby College, Waterville, ME
Double Major: Environmental Studies and Classics
summa cum laude

Professional Experience

- 2015–current **Montana State University**, Bozeman, MT
Postdoctoral Researcher, Dept. of Ecology
- 2015 **Colorado State University**, Fort Collins, CO
Instructor, School of Global Environmental Sustainability
- 2010–2015 **Colorado State University**, Fort Collins, CO
Research Assistant, Dept. of Ecosystem Science and Sustainability
- 2009–2010 **Cornell University**, Ithaca, NY
Research Assistant, Boyce Thompson Institute for Plant Research
- 2009 **Cary Institute of Ecosystem Studies**, Millbrook, NY
Project Assistant
- 2007–2008 **Medomak Valley Land Trust**, Waldoboro, ME
Outreach and Stewardship Specialist
- 2007 **Acadia National Park**, Bar Harbor, ME
Biological Science Technician
- 2006 **Colby College**, Waterville, ME
Undergraduate Research Assistant, Dept. of Environmental Studies

Fellowships and Awards

- 2014 NASA-MSU Professional Enhancement Award, Michigan State University
- 2013–2014 Sustainability Leadership Fellow, School of Global Environmental Sustainability, CSU
- 2013 Honorable Mention, Best Student Presentation, US-IALE
- 2012 Rocky Mountain Research Fellowship, Rocky Mountain Conservancy
- 2011 Research Ambassador Fellow, NSF and Evergreen State College
- 2011, 2012 Honorable Mention, NSF Graduate Research Fellowship Program
- 2010 Program of Research and Scholarly Excellence Fellowship, Colorado State University
- 2010 University Graduate Fellowship, Colorado State University

Teaching and Mentoring Experience

- 2016 Co-Instructor, Advances in Ecological Modeling, Montana State University
- 2015 Instructor, Global Environmental Sustainability, Colorado State University
- 2014 Co-Instructor, Multivariate Statistics, Colorado State University
- 2014 Teaching Assistant, Ecosystem Ecology, Colorado State University
- 2013, 2014 Research Mentor, Undergraduate Research Program, Colorado State University
- 2012, 2013 Field Skills Instructor, Undergraduate Research Program, Colorado State University
- 2012 Teaching Assistant, Forest Ecology, Colorado State University
- 2004–2007 Writing Instructor and Tutor, Colby College

Publications and Reports

- 2016 **Renwick, K.M.**, Rocca, M.E., and T.J. Stohlgren. Biotic disturbance facilitates range shift at the trailing but not the leading edge of lodgepole pine's altitudinal distribution. *Journal of Vegetation Science*, 27(4):780-788.

- 2015 **Renwick, K.M.** and M.E. Rocca. Temporal context affects the observed rate of climate-driven range shifts in tree species. *Global Ecology and Biogeography*, 24:44-51.
- 2012 **Renwick, K.M.**, and M.E. Rocca. Impacts of climate change and mountain pine beetle along forest ecotones. *Report to Rocky Mountain National Park*.
- 2011 **Renwick, K.M.**, and M.E. Rocca. Aspen recruitment in mixed aspen-lodgepole stands: will the mountain pine beetle outbreak benefit aspen? *Report to Rocky Mountain National Park*.
- In review **Renwick, K.M.**, and M.E. Rocca. The importance of non-climatic constraints on the distribution and migration potential of Rocky Mountain tree species. *Journal of Ecology*.
- In review Druckenbrod, D., Martin-Benito, D., Orwid, D., Pederson, N., Poulter, B., **Renwick, K.M.**, and H. Shugart. Redefining temperate forest response to climate and disturbance in eastern North America: new insights at the mesoscale. *Ecography*.

Selected Presentations

- 2016 **Renwick, K.M.**, Kleinhesselink, A.K., Curtis, C., Schlaepfer, D., Bradley, B., Poulter, B., and P. Adler. "Forecasting changes in the distribution and abundance of sagebrush under climate change," Sagebrush Ecosystems Conservation Conference, Salt Lake City, UT
- 2016 **Renwick, K.M.**, Rocca, M.E. "Impacts of climate-disturbance interactions on current and projected species distributions," Boise State University Biology Department Seminar, Boise, ID (*invited seminar*)
- 2016 **Renwick, K.M.**, Poulter, B., and P. Adler. "Forecasting changes in sagebrush distribution and abundance under climate change," USGS Snake River Field Station, Boise, ID (*invited seminar*)
- 2015 Poulter, B., Emmett, K., Joetzer, E., Ogunkoya, G, and **K.M. Renwick**. "Addressing spatial scales and new mechanisms in climate impact ecosystem modeling," AGU Fall Meeting, San Francisco, CA
- 2015 **Renwick, K.M.** and M.E. Rocca. "Incorporating non-climatic variables into species distribution models to improve forecasts of landscape-scale range shifts," Open Science Conference, Fort Collins, CO
- 2014 **Renwick, K.M.**, and M.E. Rocca. "Climate change impacts at the range margins of Rocky Mountain tree species: interactions with disturbance and implications for future forests," Mountain Climate Research Conference, Midway, UT
- 2014 **Renwick, K.M.**, and M.E. Rocca. "The relative importance of biotic variables in determining current and future tree species distributions," US-IALE Annual Symposium, Anchorage, AK
- 2013 **Renwick, K.M.**, and M.E. Rocca. "Interactive effects of climate and disturbance on landscape-scale range dynamics of Rocky Mountain tree species," US-IALE Annual Symposium, Austin, TX **Awarded Honorable Mention in the graduate student presentation competition*
- 2013 **Renwick, K.M.**, and M.E. Rocca. "Are Rocky Mountain tree species responding to climate change?" Front Range Student Ecology Symposium, Fort Collins, CO **Awarded 3rd place in the graduate student presentation competition*
- 2012 **Renwick, K.M.**, Nelson, K. and M.E. Rocca. "Will the mountain pine beetle outbreak benefit aspen?" Rocky Mountain National Park Research Conference, Estes Park, CO
- 2012 **Renwick, K.M.** and M.E. Rocca. "Recruitment patterns in mixed aspen-lodgepole stands: will the mountain pine beetle outbreak benefit aspen?" Front Range Student Ecology Symposium, Fort Collins, CO
- 2007 **Renwick, K.M.**, Sadanowicz, A., Dubuque, G., Becker, R., Thompson, C. and D. Garneau. "Small mammal assemblages under urban influence in central Maine," Northeast Regional Sigma Xi Conference, Ithaca, NY
- 2007 **Renwick, K.M.**, Harrison, D., Adelphio, A., Firmage, D., Garneau, D. and K. Ness. "Analysis of land-use patterns in the Long Pond watershed and effects on water quality," Maine Water Conference, Augusta, ME **Awarded 1st place in the undergraduate student presentation competition*

Leadership and Service

| | |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| present | Editorial Committee, Early Career Climate Forum |
| 2012–2014 | Newsletter Editor, Graduate Degree Program in Ecology |
| 2013–2014 | Outreach Chair, Front Range Student Ecology Symposium |
| 2012–2013 | Graduate Student Rep., Dept. of Ecosystem Science and Sustainability |
| 2011–2012 | President, Front Range Student Ecology Symposium |
| 2010–2011 | Fundraising Chair, Front Range Student Ecology Symposium |
| 2011 | Student Rep., Faculty Search Committee, Colorado State University) |
| 2005–2007 | President, Colby College Environmental Coalition |
| Reviewer | Global Ecology and Biogeography, Journal of Plant Ecology, Ecological Modeling |
| Professional Society Membership | Ecological Society of America, Early Career Ecologists Section International Association for Landscape Ecologists Association for Women in Science |

Skills and Interests

| | |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Research | Plant community dynamics, global change impacts, forest and rangeland management, ecosystem modeling, applied statistics |
| Teaching | general ecology, biology/biodiversity, forest ecology, botany, research methods, data analysis/statistics, environmental sustainability, science for non-majors |
| Programming | R · Markdown · JAGS · Shell · CDO · L ^A T _E X · Git · basic C++ <i>examples at https://github.com/krenwick</i> |