
PAIGE E. COPENHAVER-PARRY

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EDUCATION

- 2012-2016 Ph.D., Department of Botany and Program in Ecology, University of Wyoming
Advisor: Daniel Tinker
Scale-dependent contributions of abiotic and biotic factors to tree species composition patterns in the US Rocky Mountains
- 2009-2011 B.S., Department of Biology and Chemistry, George Fox University
Advisor: Donald Powers
Energetic cost of ejaculate production in red-sided garter snakes

PROFESSIONAL EXPERIENCE

- 2016-present **Assistant Professor of Biology**
Department of Biology, George Fox University
- 2018-present **Science Outreach Program Director**
George Fox University
- 2015-2016 **Instructor**
University of Wyoming Life Sciences Program
- 2012 **Biology Instructor**
Upward Bound Math Science Program
- 2010-2011 **Research Assistant**
Department of Biology and Chemistry, George Fox University

PUBLICATIONS

6. **Copenhaver-Parry, P.E.** & D.M. Bell. 2018. Species interactions weakly modify climate-induced co-occurrence patterns. *Journal of Vegetation Science* 29: 52-61.
5. **Copenhaver-Parry, P.E.**, B.N. Shuman & D.B. Tinker. 2017. Towards an improved conceptual understanding of North American tree distributions. *Ecosphere* 8:e01853.
4. **Copenhaver-Parry, P.E.**, S.E. Albeke & D.B. Tinker. 2016. Do community-level models account for the effects of biotic interactions? A comparison of community-level and species distribution modeling of Rocky Mountain conifers. *Plant Ecology* 217:533-547
3. ***Copenhaver-Parry, P.E.** & E. Cannon. 2016. The relative influences of climate and competition on tree growth along montane ecotones in the Rocky Mountains. *Oecologia*. 182: 13-25.
2. Friesen, C.R., D.R. Powers, **P.E. Copenhaver** & R.T. Mason. 2015. Size-dependence in non-sperm ejaculate production is reflected in daily energy expenditure and resting metabolic rate. *Journal of Experimental Biology* 218: 1410-1418.
1. **Copenhaver, P.E.** & D.B. Tinker 2014. Stand density and age affect tree-level structural and functional characteristics of post-fire lodgepole pine in Yellowstone National Park. *Forest Ecology and Management* 320:138-148.

* co-authored by undergraduate mentee(s) of P. Copenhaver-Parry

MANUSCRIPTS IN PREPARATION

1. *Stephens, E.Z., C.P. Murar, D.B. Tinker & **P.E. Copenhagen-Parry**. 2018. Environmental determinants of recruitment success of subalpine fir (*Abies lasiocarpa*) in a mixed-conifer forest. In Review. *Western North American Naturalist*.
2. **Copenhagen-Parry, P.E.**, M.V. Talluto, M.V. & C.J. Carroll. 2018. Cross-scale integration of recruitment and range dynamics in a changing climate. *Global Ecology and Biogeography*.

PRESENTATIONS

12. ***Copenhagen-Parry, P.E.** Seeing the forest for the trees: Using multi-scale inference to understand Western tree distributions. Lewis and Clark College Biology Seminar Series: September 2017.
11. **Copenhagen-Parry, P.E.**, M.V. Talluto, C.J.W. Carroll & P.H. Martin. Multi-scale inference of seedling range dynamics in Rocky Mountain Forests. Ecological Society of America Annual Meeting: August 2017.
10. **Parry, P.E.** & D.M. Bell. Disentangling local and regional influences on Rocky Mountain tree distributions with a Joint Species Distribution Model. Oregon Academy of Sciences: February 2017.
9. **Copenhagen, P.E.**, D.M. Bell & D.B. Tinker. Using co-occurrence patterns within a Bayesian Joint Species Distribution Model to disentangle the effects of climate and biotic interactions on the distributions of Rocky Mountain Trees. Ecological Society of America Annual Meeting: August 2015.
8. **Copenhagen, P.E.** Growth variation and diversity maintenance in a successional montane tree community. Front Range Student Ecology Symposium: February 25, 2015.
7. **Copenhagen, P.E.** Growth variation and diversity maintenance in a successional montane tree community. University of Wyoming Program in Ecology Student Research Symposium: February 20, 2015.
6. ***Copenhagen, P.E.**, D.M. Bell & S.E. Albeke. Evaluating Ecological Interactions across Spatial Scales. Wyoming Geographic Information Sciences Center Seminar Series: November 14, 2014.
5. ***Copenhagen, P.E.** Evaluating Interactions across Scales. Colorado State University Forest Ecology Seminar: November 5, 2014
4. **Copenhagen, P.E.**, D.B. Tinker, S.E. Albeke & D.M. Bell. Modelling the joint species distribution: simultaneous predictions of current distributions of three sympatric conifer species in the Central Rocky Mountains. Ecological Society of America Annual Meeting: August 2014.
3. **Copenhagen, P.E.** and Tinker, D.B. Structural and functional characteristics of young, post-fire lodgepole pine in Yellowstone National Park. University of Wyoming Botany Department Seminar Series; September 13, 2013.

*invited speaker

2. **Copenhaver, P.E.** and Powers, D.R. Energy investment in copulatory plug production by large vs. small Red-Sided Garter Snakes (*Thamnophis sirtalis parietalis*). Society for Integrative and Comparative Biology Annual Meeting, Charleston, S.C.; January 3-7, 2012. *Poster presentation.*
1. **Copenhaver, P.E.** and Powers, D.R. Thermal preference and habitat choice in the Rough-Skinned Newt (*Taricha granulosa*). Society for Integrative and Comparative Biology Annual Meeting, Charleston, SC: January 3-7, 2012.

PUBLISHED LESSONS

2. **Parry, P.** 2017. Modeling global temperature change in the 21st century. Quantitative Undergraduate Biology Education and Synthesis. doi: 10.25334/Q4PP4Z
1. **Parry, P.** 2017. Exploring the population dynamics of wintering bald eagles through a population model. Quantitative Undergraduate Biology Education and Synthesis. doi: 10.25334/Q4RP4K

GRANTS AND FELLOWSHIPS

- 2018 **Holman Research Grant**
Forest recruitment response to climate change in Western Oregon
- 2018 **George Fox University Faculty Development Research Grant**
Patterns and mechanisms of climate change resistance in western forests
- 2017 **Murdock Charitable Trust Research Start-up Grant**
- 2016 **National Science Foundation Postdoctoral Research Fellowship in Biology**
Multi-scale inference in Rocky Mountain forests: linking recruitment and population dynamics to range dynamics in a changing climate
*declined in favor of faculty position
- 2015 **Wyoming NSF EPSCoR Wyoming Women in Science and Engineering Travel Grant**
Using co-occurrence patterns within a Bayesian Joint Species Distribution Model to disentangle the effects of climate and biotic interactions on the distributions of Rocky Mountain trees
- 2014 **Science Posse Graduate Fellowship**, National Science Foundation
Graduate K-12 teaching fellowship
- 2014 **Wyoming NSF EPSCoR Wyoming Women in Science and Engineering Travel Grant**
Considering Competition: Including interspecific competitive interactions in species
- 2013 **Wyoming NASA Space Grant Consortium Graduate Research Fellowship**
The influence of competitive interactions on future distribution of Rocky Mountain conifers under novel climate conditions
- 2013 **C.L. Porter Summer Fellowship**, University of Wyoming Botany Department
Quantifying competition among Rocky Mountain conifers
- 2011 **Richter Undergraduate Research Fellowship**, George Fox University

TEACHING

- 2017, 2018 Ecology, *George Fox University*
- 2016, 2017, 2018 Environmental Science, *George Fox University*
- 2017 Statistical Methods in Biology, *George Fox University*
- 2016, 2018 Plant Biology, *George Fox University*
- 2015, 2016 Life Science, *University of Wyoming*
- 2015 Biology, Upward Bound Math Science Program, *University of Wyoming*
- 2013 Genetics, Teaching Assistant, *University of Wyoming*
- 2012 General Biology, Teaching Assistant, *University of Wyoming*

MENTORSHIP

- 2018 **Shelby Byerly**, George Fox University
Neighborhood structure modulates range-wide recruitment trends in Pacific Northwest forests
- 2018 **Claire Retter**, George Fox University
Contributions of climate and microsite to seedling recruitment patterns in Pacific Northwest forests
- 2017 **Elizah Stephens**, George Fox University
Disentangling the effects of light availability, soil fertility, and biotic interactions on seedling establishment patterns in Rocky Mountain forests.
- 2017 **Christopher Murar**, George Fox University
The relative effects of climate and disturbance on temporal patterns of tree establishment in a mixed-species forest in the Rocky Mountains.
- 2014 **Ellie Cannon**, Kalamazoo College
*Relative effects of climate and competition on annual growth of *Pinus contorta*, *Pinus ponderosa*, and *Pseudotsuga menziesii**

AWARDS AND HONORS

- 2017 **Outstanding Dissertation Award Finalist**, University of Wyoming
- 2016 **Knight Fellowship**, Botany Department, University of Wyoming
- 2016 **Highlighted Student Paper**, *Oecologia*
- 2015 **Graduate Assistantship Award**, Program in Ecology, University of Wyoming
- 2014 **Graduate Assistantship Award**, Program in Ecology, University of Wyoming
Declined in favor of NSF GK-12 fellowship
- 2014 **Outstanding Service Award**, Botany Department, University of Wyoming
- 2012 **Graduate Assistantship Award**, Botany Department, University of Wyoming
- 2009 **Presidential Scholarship**, George Fox University
- 2009 **Science Scholarship**, George Fox University

WORKSHOPS (INSTRUCTOR)

- 2018 Reducing Barriers to Teaching with R in Undergraduate Biology
Quantitative Undergraduate Biology Education and Synthesis Faculty Mentoring Network
- 2018 Grant Writing
George Fox University Fall Faculty Conference
- 2018 Exploring your Forest: Bringing Forest Ecology to the Classroom
Science Outreach Professional Development Workshop for K-12 Educators
- 2018 Teaching R and Data Analysis Interactively with Swirl
BioQUEST Summer Workshop
- 2016 Ecology 101
George Fox Evangelical Seminary
- 2015 Dendroecology
Wyoming Women in Science Conference
- 2014 Dendrology
Biodiversity Institute, University of Wyoming

SYNERGISTIC ACTIVITIES

- 2018 Faculty Mentoring Fellow, Quantitative Undergraduate Biology Education Synthesis
- 2018 Student Presentation Judge, Ecological Society of America Annual Meeting
- 2018 Presider, Ecological Society of America Annual Meeting
- 2018 NSF Review Panel, *STEM+C*
- 2018 Plant Services Director Search Committee, George Fox University
- 2018 Biomedical Engineer Search Committee, College of Engineering, George Fox University
- 2017-18 Idea Center Faculty Advisory Board, George Fox University
- 2017 Proposal Reviewer, *Murdock Charitable Trust*
- 2017 Reviewer, *Western North American Naturalist*
- 2017 Working group, Species range shifts in a warming world, National Institute for Mathematical and Biology Synthesis
- 2017 Faculty mentoring network, Quantitative Undergraduate Biology Education Synthesis
- 2016 Oral presentation judge, Murdock College Science Research Conference
- 2016 Invited speaker, Boy Scouts of America Troop 265
- 2015 Chair, Program in Ecology Outreach Committee, University of Wyoming
- 2014-2015 President, Program in Ecology Student Organization, University of Wyoming
- 2014-2015 Student Representative to the Faculty, Program in Ecology, University of Wyoming
- 2014-2016 Reviewer, *Forest Science*
- 2014 Volunteer, Wyoming Women in Science Conference
- 2014 Reviewer, *Journal of Forestry*
- 2013 NASA special awards judge, Wyoming State Science Fair
- 2013 Evolutionary Biologist Search Committee, Botany Department, University of Wyoming

PROFESSIONAL MEMBERSHIPS

- Ecological Society of America
- American Association for the Advancement of Science
- American Association of University Women
- Oregon Academy of Sciences
- Sigma Delta Epsilon - Graduate Women in Science