
PAIGE E. COPENHAVER-PARRY

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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

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

PUBLICATIONS

9. **Copenhaver-Parry, P.E.** 2019. Taking temperature with leaves: A semester-long structured inquiry research investigation for undergraduate Plant Biology. *The American Biology Teacher*. In Press.
8. **Copenhaver-Parry, P.E.**, C.J.W. Carroll, P.H. Martin & M.V. Talluto. 2019. Multi-scale integration of tree recruitment and range dynamics in a changing climate. *Global Ecology and Biogeography*. In Press.
7. *Stephens, E.Z., C.P. Murar, D.B. Tinker & **P.E. Copenhaver-Parry**. 2019. Environmental determinants of recruitment success of subalpine fir (*Abies lasiocarpa*) in a mixed-conifer forest. *Western North American Naturalist*. In Press.
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

PRESENTATIONS

13. **Copenhaver-Parry, P.E.** & M.V. Talluto. Integrating tree recruitment to improve predictions of climate-induced range shifts. Ecological Society of America Annual Meeting: August 2019.
12. ***Copenhaver-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. **Copenhaver-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. **Copenhaver, 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. **Copenhaver, P.E.** Growth variation and diversity maintenance in a successional montane tree community. Front Range Student Ecology Symposium: February 25, 2015.
7. **Copenhaver, 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. ***Copenhaver, 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. ***Copenhaver, P.E.** Evaluating Interactions across Scales. Colorado State University Forest Ecology Seminar: November 5, 2014
4. **Copenhaver, 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.

*invited speaker

3. **Copenhaver, 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.
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.

GRANTS AND FELLOWSHIPS

2019	Murdock Charitable Trust Natural Sciences Research Grant <i>Forest recruitment across the range: Early indicators of climate-induced range shifts in western forests</i>	\$77,420
2019	George Fox University Faculty Development Research Grant <i>Forest recruitment across the range: Early indicators of climate-induced range shifts in western forests</i>	\$4,600
2018	Holman Research Grant <i>Forest recruitment response to climate change in Western Oregon</i>	\$6,000
2018	George Fox University Faculty Development Research Grant <i>Patterns and mechanisms of climate change resistance in western forests</i>	\$4,650
2017	Murdock Charitable Trust Research Start-up Grant <i>Start-up research for new position in biology</i>	\$67,342
2016	National Science Foundation Postdoctoral Research Fellowship in Biology <i>Multi-scale inference in Rocky Mountain forests: linking recruitment and population dynamics to range dynamics in a changing climate</i> *declined in favor of faculty position	\$138,000
2015	Wyoming NSF EPSCoR Wyoming Women in Science and Engineering Travel Grant <i>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</i>	\$1,500
2014	Science Posse Graduate Fellowship , National Science Foundation <i>Graduate K-12 teaching fellowship</i>	\$24,000
2014	Wyoming NSF EPSCoR Wyoming Women in Science and Engineering Travel Grant <i>Considering Competition: Including interspecific competitive interactions in species distribution models</i>	\$1,500
2013	Wyoming NASA Space Grant Consortium Graduate Research Fellowship <i>The influence of competitive interactions on future distribution of Rocky Mountain conifers under novel climate conditions</i>	\$22,000

2013	C.L. Porter Summer Fellowship , University of Wyoming Botany Department <i>Quantifying competition among Rocky Mountain conifers</i>	\$5,000
2011	Richter Undergraduate Research Fellowship , George Fox University <i>Does the energetic investment in copulatory plug production impact fitness in the red-sided garter snake?</i>	\$5,000

MENTORSHIP

2019	Carmen Hixson , George Fox University <i>Spatiotemporal patterns of seed production and dispersal in two Pacific Northwest conifers</i>
2019	Joanna Gunther , George Fox University <i>Can forest canopies protect seedlings from drought-induced mortality?</i>
2018	Shelby Byerly , George Fox University <i>Neighborhood structure modulates range-wide recruitment trends in Pacific Northwest forests</i>
2018, 2019	Claire Retter , George Fox University <i>Contributions of climate and microsite to seedling recruitment patterns in Pacific Northwest forests, The spatial fingerprint of climate effects on forest recruitment</i>
2017	Elizah Stephens , George Fox University <i>Disentangling the effects of light availability, soil fertility, and biotic interactions on seedling establishment patterns in Rocky Mountain forests.</i>
2017	Christopher Murar , George Fox University <i>The relative effects of climate and disturbance on temporal patterns of tree establishment in a mixed-species forest in the Rocky Mountains.</i>
2014	Ellie Cannon , Kalamazoo College <i>Relative effects of climate and competition on annual growth of <i>Pinus contorta</i>, <i>Pinus ponderosa</i>, and <i>Pseudotsuga menziesii</i></i>

STUDENT GRANTS

2019	Richter Undergraduate Research Fellowship , Joanna Gunther <i>Into the understory: Can forest canopies protect seedlings from drought-induced mortality?</i>	\$4,600
2019	Richter Undergraduate Research Fellowship , Claire Retter <i>The spatial fingerprint of climate effects on forest recruitment</i>	\$4,600
2018	Richter Undergraduate Research Fellowship , Shelby Byerly <i>Biotic interactions as a mechanism of climate change resistance in Pacific Northwest forests</i>	\$5,000
2017	Richter Undergraduate Research Fellowship , Christopher Murar <i>Climate or disturbance? The relative effects of climate and disturbance on temporal patterns of tree establishment in a mixed-species forest in the Rocky Mountains</i>	\$1,250
2017	Richter Undergraduate Research Fellowship , Elizah Stephens <i>Disentangling the effects of light availability, edaphic factors, and biotic interactions on seedling establishment patterns in Rocky Mountain Forests</i>	\$1,250

TEACHING

2017-19	Ecology, <i>George Fox University</i>
2016-19	Environmental Science, <i>George Fox University</i>
2016-19	Plant Biology, <i>George Fox University</i>
2017	Statistical Methods in Biology, <i>George Fox University</i>
2015-16	Life Science, <i>University of Wyoming</i>
2015	Biology, Upward Bound Math Science Program, <i>University of Wyoming</i>
2013	Genetics, Teaching Assistant, <i>University of Wyoming</i>
2012	General Biology, Teaching Assistant, <i>University of Wyoming</i>

AWARDS AND HONORS

2017	Outstanding Dissertation Award Finalist , University of Wyoming
2016	Knight Fellowship , Botany Department, University of Wyoming
2016	Highlighted Student Paper , <i>Oecologia</i>
2015	Graduate Teaching Award , Program in Ecology, University of Wyoming
2014	Graduate Teaching Award* , Program in Ecology, University of Wyoming
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)

2019	Teaching with R in Undergraduate Biology <i>Quantitative Undergraduate Biology Education and Synthesis Faculty Mentoring Network</i>
2018	Reducing Barriers to Teaching with R in Undergraduate Biology <i>Quantitative Undergraduate Biology Education and Synthesis Faculty Mentoring Network</i>
2018	Grant Writing <i>George Fox University Fall Faculty Conference</i>
2018	Exploring your Forest: Bringing Forest Ecology to the Classroom <i>Science Outreach Professional Development Workshop for K-12 Educators</i>
2018	Teaching R and Data Analysis Interactively with Swirl <i>BioQUEST Summer Workshop</i>
2016	Ecology 101 <i>George Fox Evangelical Seminary</i>
2015	Dendroecology <i>Wyoming Women in Science Conference</i>
2014	Dendrology <i>Biodiversity Institute, University of Wyoming</i>

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

SYNERGISTIC ACTIVITIES

- 2019 Biology Search Committee, George Fox University
2019 Undergraduate Research Program Task Force, George Fox University
2019 Biomedical Engineer Search Committee, College of Engineering, George Fox University
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 National Science Foundation Review Panelist, *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*
2017-19 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