*CURRICULUM VITAE*

**Brian Matthew Connolly, Ph.D. Assistant Professor**

***CONTACT INFORMATION***

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 Ypsilanti, MI 48197

***PROFESSIONAL PREPARATION & POSITIONS***

Eastern Michigan University Assistant Professor, Biology 2017-present

University of Wisconsin, Madison Postdoctoral Associate, Integrative Biology 2014-2017

Washington State University Ph.D., Botany 2008-2013

Gonzaga University B.Sc., Biology 2003-2007

School for Field Studies, Australia - 2006

***OTHER PROFESSIONAL EXPERIENCE***

Plant Pathology Research Assistant, Harris Moran Seed Company (Davis, CA) 2007-2008

Research Assistant, Gonzaga University (Spokane, WA) 2006-2007

***PEER-REVIEWED PUBLICATIONS***

1. **Connolly**, **BM**, PW, Guideng, and JL Orrock (2020). Mycorrhizal inoculation mitigates damage from an intermediate, but not severe, frost event for a cool-season perennial bunchgrass. *Botany*. 98(2), 127-135. DOI: 10.1139/cjb-2019-0127. ***Editor’s Choice February 2020***
2. Guiden, PWg, **BM Connolly**, and JL Orrock (2019). Seedling responses to decreased snow depend on canopy composition and small-mammal herbivore presence. *Ecography*. 42, 780-790. DOI: 10.1111/ecog.03948
3. Guiden, PWg, **BM Connolly**, and JL Orrock (2018). Extreme cold consistently reduces seedling growth but has species-specific effects on browse tolerance in summer. *American Journal of Botany.* 105(12), 1-6. DOI: 10.1002/ajb.1203
4. **Connolly, BM** and JL Orrock (2018). Exogenous application of methyl jasmonate alters *Pinus resinosa* seedling response to simulated frost. *Botany*.96(10), 705-710.DOI: 10.1139/cjb-2018-0108
5. **Connolly**, **BM**, LM Carris, and RN Mack (2018). Soil-borne seed pathogens: contributors to the naturalization gauntlet in Pacific Northwest forest and steppe? *Plant Ecology*.219(4), 359-368. DOI:10.1007/s11258-018-0800-z
6. Orrock, JL, **BM Connolly**, W Choi, PW Guideng, SJ Swanson, and S Gilroy (2018). Cues from herbivorous snails cause induced plant defenses that alter growth of insect herbivores. *Oecologia.* 186, 703-710. DOI: https://doi.org/10.1007/s00442-018-4070-1
7. **Connolly, BM** and JL Orrock (2018). Habitat-specific capture timing of deer mice (*Peromyscus maniculatus*) suggests that predators structure temporal activity of prey. *Ethology.* 124, 105-112. DOI: 10.1111/eth.12708.
8. **Connolly**, **BM**, PW, Guideng, and JL Orrock (2017). Past freeze-thaw events on *Pinus* seeds increase seedling herbivory. *Ecosphere.* 8(3) e01748.
9. **Connolly**, **BM**, LK, Agnewu, and JL Orrock (2017). Interactive effects of fungicide and cold stratification on germination rate for five dominant tree species found in northern temperate forests. *Forest Science*. 63(3): 303-309.
10. **Connolly**, **BM**, JL Richardsu, and RN Mack (2017). Biotic constraints on the establishment and performance of native, naturalized, and invasive plants in Pacific Northwest (USA) steppe and forest. *Neobiota.* 34: 21-40.
11. Orrock, JL, **BM Connolly**, and AJ Kitchenu (2017). Plant induced defenses reduce herbivory by increasing cannibalism among herbivores. *Nature Ecology & Evolution.* 1: 1205-1207.
12. Penczykowski, RM, **BM Connolly**, and BT Barton (2017). Winter is changing: trophic interactions under altered snow regimes. *Food Webs*. 13: 80-91.
13. Orrock, JL, and **BM Connolly** (2016). Changes in trap temperature as a method to determine timing of capture of small mammals. *PLoS One.* e0165710.
14. **Connolly, BM**, JL Orrock, and MS Witter (2016). Soil conditions moderate the effects of herbivores, but not mycorrhizae, on a native bunchgrass. *Acta Oecologica*. 77: 100-108.
15. **Connolly, BM** and JL Orrock (2015). Climatic variation and seed persistence: freeze-thaw cycles lower survival via the joint action of abiotic stress and fungal pathogens. *Oecologia*.179: 609-616.
16. **Connolly**, **BM**, DE Pearson, and RN Mack (2014). Granivory of invasive, naturalized, and native plants in communities differentially susceptible to invasion. *Ecology*. 95: 1759-1769.
17. Beckstead, J, LE Miller, and **BM Connolly** (2012). Direct and indirect effects of plant litter on a seed-pathogen interaction in *Bromus tectorum* seed banks. *Seed Science Research*. 22: 135-144.
18. Beckstead, J, SE Meyer, **BM Connolly**, MB Huck, LE Street (2010). Cheatgrass facilitates spillover of a seed bank pathogen onto native grass species. *Journal of Ecology*. 98: 168-177.

*Authored with undergraduate (u) or graduate (g) student*

*“in press” and “in review” manuscripts available immediately for review upon request*

***OTHER PUBLICATIONS***

1. **Connolly, BM** (2014). Seed predation by small mammals in the Palouse Prairie. *Douglasia,* [Quarterly Publication of the Washington Native Plant Society], 38: 2-4.

***RESEARCH AND DEVELOPMENT FUNDING (ordered by award period)***

**Submitted Grants**

*Under Review* Amazon Literary Partnerships ($22,000) “Power to Write Program.” Collaborative outreach program funding between YpsiWrites and Mentor2Youth.

USDA-National Institute of Food and Agriculture ($498,150) “Trophic control of native

 tree regeneration in urban versus rural environments” (Co-PIs: B. Connolly, J. Orrock)

**Previous Grants**

2018-2020 Eastern Michigan University, James H. Brickley Endowment ($1,441) “Environment science meets the flipped classroom: leveraging ruggedized video technology to improve the accessibility of outdoor education.” (PI: B. Connolly)

2017-2020 Eastern Michigan University, eFellows program ($5,970) “Integrating environmental sensing into active science learning.” (PI: B. Connolly; Co-PI: C. Gellasch)

2018 Eastern Michigan University, Provost’s Office, Summer Research/Creative Activity Award ($12,000) “Warming woods: climate change, herbivores, and the fate of future forests.” (PI: B. Connolly)

2017 Michael Guyer Post-doctoral Fellowship, Department of Zoology, University of Wisconsin, Madison ($27,868) “Evaluating the interaction between winter climate change and consumers on temperate tree recruitment.” (PI: B. Connolly; Co-PI: J. Orrock)

2014-2017 USDA-National Institute of Food and Agriculture ($140,118) “Warming winters as the perfect storm: how the interaction between climate change and pathogens may fuel widespread juvenile tree recruitment failure.” (PI: B. Connolly; Co-PI: J. Orrock)

2008-2013 Betty W. Higginbotham Award, Washington State University ($12,500) “Gauging biotic resistance in eastern Washington/northern Idaho forest and steppe communities – impact of seed predators and pathogens on native and non-native plant establishment.” (PI: B. Connolly; Co-PI: R. Mack)

2011-2012 Palouse Audubon Society ($500) “Characterization of ecological factors to determining disparate native and invasive plant colonization between eastern Washington prairie and forests.” (PI: B. Connolly)

2011-2012 Washington Native Plant Society ($1,500) “Top-down effects on native, naturalized and invasive plant establishment in endangered Palouse prairie habitat and the prairie-ponderosa pine transition zone.” (PI: B. Connolly; Co-PI: R. Mack)

2011-2012 John W. Marr Fund, Colorado University ($800) “Biotic resistance to non-native plant establishment in northern Rocky Mountain forests: The role of post-dispersal seed predation.” (PI: B. Connolly; Co-PI: R. Mack)

***ORGANIZED WORKSHOPS AND FORUMS***

2018 “Iterative writing practice, the student toolbox, and novel inquiry in the classroom.”

 College of Natural Resources, University of Idaho

2018 “Ringing True: Tree growth estimates, environmental measurements and data management.” September 21st – 22nd, Fish Lake Environmental Education Center, Eastern Michigan University

***GRADUATE STUDENT ADVISING***

|  |  |  |
| --- | --- | --- |
| **Student** | **Period** | **Topic of Project** |
|  |
| *Eastern Michigan University – Ypsilanti, MI* |
| Scott Armstrong M.Sc. | 2019-2020 | Invasive shrubs, animal activity, and native tree recruitment |
| M.Sc. – indicates student is pursuing a Master of Science degree under my advisement  |

***UNDERGRADUATE STUDENT RESEARCH MENTORSHIP***

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| --- | --- | --- |
| **Student** | **Period** | **Topic of Project** |
|  |
| *Eastern Michigan University – Ypsilanti, MI* |
| Addison Babinski P | 2019-2020 | Shade and induced defense in invasive *Echinocystis lobata*  |
| Maggie McCollough P | 2019-2020 | Temporal variation in wild yeast capture for fermentation |
| Cori Carson P | 2019-2020 | Soil microtopography and plant-mutualist interactions |
| Jace Vael P | 2019-2020 | Invasive plant disruption of native seedling cold tolerance |
| Kathleen Gimmarro P | 2019-2020 | Ontogeny and leaf area in invasive *Echinocystis lobata* |
| Matthew Jackson P | 2019-2020 | Lethal temperature 50, ontogeny, and three native grasses |
| Rida Ali P | 2019-2020 | Escape from soil pathogens: the role of seed coat thickness |
| Jocelyn Marsack Aw, P | 2018-2020 | Plant and herbivore response to soil salinization |
| Wolfgang Ebersole P | 2018-2019 | Moon illumination, invasive shrubs, and seed predation |
| Molly Ripka P | 2018-2019 | Moon phase and seed removal in a degraded prairie |
| Lara Devine P | 2018-2019 | Costs of slow germination in con-specific neighborhoods |
| Paul Wozniak P | 2018-2019 | Shrubby invaders and small mammal activity profiles |
|  |
| *University of Wisconsin – Madison, WI* |
| Luke Maillefer Aw, P | 2016-2017 | Cold damage and consumption of temperate tree leaves |
| Julia Frangul | 2015-2016 | Seed age and seedling growth rate in *Picea glauca*  |
| Melissa Lyman G, P | 2015-2016 | Soil pathogens, cold damage, and *Pinus* spp. growth rate |
| Madeline Kubica | 2015-2016 | Freeze-thaw frequency and *Pinus resinosa* growth |
| Lily Huffman | 2015 | Freeze-thaw stress and root:shoot ratios in two conifers |
| Lauren Agnew At | 2014-2015 | Fungicide, stratification, and tree seed germination  |
| Anthony Kitchen At, G, P | 2014-2016 | Induced defense drives cannibalism in *Spodoptera exigua* |
| Maia Gumnit Aw | 2014 | Temperature and induction of plant defense  |
| Brian Schuh G | 2014 | Effects of seed density on germination in legumes |
|  |  |  |
| *Washington State University – Pullman, WA* |
| Jacqueline Harris Aw | 2012-2013 | Fungal parasites on invasive and native grass seeds |
| Stephen Johnson G | 2011 | Forest understory disturbance and light transmittance  |
| Jen Powers Aw, At, G, P | 2011-2012 | Effects of disturbance on invasive grass germination  |
|  |  |  |
| Aw- indicates student received monetary award to conduct their research under my supervisionAt - indicates student authored peer-review publication with me G - indicates undergraduate researcher pursued/is pursuing graduate or professional studiesP - indicates undergraduate presented their research (oral or poster) at an academic conference |

***TEACHING EXPERIENCE & PEDAGOGICAL DEVELOPMENT***

***Teaching Experience*** (student evaluation reports available upon request)

*Instructor of Record*

1. Writing in Ecology (Bio 311W [writing intensive course], Eastern Michigan University)

2. Introductory Biology II – Animal and Plant Diversity (Bio 120, Eastern Michigan University)

3. Introductory Biology II Lab – Animal and Plant Diversity (Bio 121, Eastern Michigan University)

4. Field Methods in Ecology (Bio 493/593, Eastern Michigan University)

*Lead Laboratory Instructor*

1. Introductory Biology (Washington State University)

2. General Ecology (Washington State University)

*Invited Lectures*

1. General Ecology, Washington State University, 2012. Instructor: Dr. Jesse Brunner

2. Community Ecology, Washington State University, 2013. Instructor: Dr. Richard Mack

3. Behavioral Ecology, University of Wisconsin – Madison, 2016. Instructor: Dr. John Orrock

***Pedagogical Development***

1. *Workshop*: “WAC: Writing Across the Curriculum” University and Community Writing Center. April-May 2019. Facilitators: A. Blakeslee and B. Sabo

2. *Workshop*: “Research-to-Class Studio: Assignment Design” DELTA Program – University of Wisconsin. Feb 2016. Facilitator: C. Freitag

3 *Class*: “Diversity in the College Classroom (EDP 690)” DELTA Program – University of Wisconsin, Madison. Sept – Dec 2015. Instructors: A. Huesmann and M. Holtzman

4. *Workshop*: “Teaching Philosophy Development” DELTA Program – University of Wisconsin, Madison. Feb 2015. Facilitator: Jessica Middlemis Maher

5. *Class*: “Teaching in Science and Engineering (EDP 654): The College Classroom” DELTA Program – University of Wisconsin. Jan – May 2015. Instructors: D. Fratta and J. Maher

6. *Workshop*: “Process Oriented Guided Inquiry Learning (POGIL).” Washington State University. Oct 2013. Facilitator: Laura Lavine

7. *Class*: “Undergraduate Instruction in Biology Laboratories.” Department of Biology – Washington State University. Sept – Dec 2008. Instructor: John Paznokas

***PROFESSIONAL DEVELOPMENT***

1. Climate Change Adaptation Workshop: “Preparing Wisconsin’s Plant Communities for an Uncertain Future.” Wisconsin Initiative on Climate Change Impacts (WICCI). University of Wisconsin, Madison. September 2016. Facilitators: Amy Staffen and Owen Boyle

2. Data Preparation and Visualization in R Workshop: “IGERT Data Visualization Workshop.” University of Wisconsin, Madison. Facilitators: Peter Guiden and Kara Cromwell

3. Experimental Design and Analysis Workshop: “An Introduction to Structural Equation Modeling” University of Wisconsin, Madison. April 2014. Instructor: Jim Grace (USGS)

***PROFESSIONAL MEETING PRESENTATIONS***

Marsack, JM and **BM Connolly** (2019). “*Soil salinization may mimic the effects of VOC emission for primary consumers*.” 104th Annual Meeting of the Ecological Society of America, Louisville, KY.

**Connolly, BM** (2016). “*Warming winters: the role of climate change, soil pathogens, and herbivores on tree recruitment dynamics*.” USDA-NIFA Project Director’s Meeting, Washington DC.

**Connolly, BM**, JL Orrock (2016). “*Effects of pathogens and freeze-thaw stress on the emergence of five temperate conifers*.” 101th Annual Meeting of the Ecological Society of America, Ft. Lauderdale, FL.

Orrock, JL, **BM Connolly**, M Sheriff (2016). *“Large-scale patterns in predator-mediated stress mitigated by local refuge habitats.”* Gordon Conference on Predator-Prey Interactions, Ventura, CA.

**Connolly, BM**, JL Orrock (2014). *“Climate change, small mammal distributions, and vector-borne diseases in the Wisconsin Northwoods.”* Science in the Northwoods, Boulder Junction, WI.

**Connolly, BM**, LE Carris, RN Mack (2014). *“Soil seed pathogens: initial and persistent inhibitors of plant naturalization in Pacific Northwest steppe and forest.”* 99th Annual Meeting of the Ecological Society of America, Sacramento, CA.

**Connolly, BM**, RN Mack, and DE Pearson (2012). *“Biotic resistance to non-native plant establishment in meadow steppe vs. xeric forests on the Columbia Plateau: The role of post-dispersal seed predation.”* 97th Annual Meeting of the Ecological Society of America, Portland, OR.

JL Richards, **BM** **Connolly**, and RN Mack (2012). “*Effects of competition on native and non-native plant germination in eastern Washington Ponderosa Pine forest and Palouse meadow steppe.”* Wiley Research Exposition, Washington State University, Pullman, WA. \*Awarded First Place Crimson Award

**Connolly, BM** (2011). *“Biotic Resistance: Can predation explain non-native plant distributions in Pacific Northwest forests and steppe?”* School of Biological Sciences Graduate Research Symposium, Washington State University, Pullman, WA.

***INVITED SEMINARS AND PRESENTATIONS***

**Connolly, BM** (2019). “*Invasive shrubs as unique barriers to native tree regeneration.*” Southeast Michigan Sierra Club, Detroit, MI.

**Connolly, BM** (2018). “*Identifying drivers and emerging obstacles in native plant recruitment.”* University of Idaho, Moscow, ID.

**Connolly, BM** (2017). “*Ecological factors governing plant recruitment: the role of global change*.” Eastern Michigan University, Ypsilanti, MI.

**Connolly, BM** (2016). “*Evaluating the effects of global change on native and non-native plant recruitment*.” California State University, Bakersfield, CA.

**Connolly, BM** (2015). “*Global change and vectors of disease.*” Carroll College, Helena, MT.

**Connolly, BM** (2014). “*Disease ecology: small mammals and vector-borne diseases.”* Trout Lake Research Station, Woodruff, WI. (University of Wisconsin – Madison)

**Connolly, BM** (2013). “*Gauging community resistance to invasion by biotic interactions.*” Exit Seminar. Washington State University, Pullman, WA.

**Connolly, BM** (2013). “*The impact of seed predation on native and non-native plants in meadow steppe and ponderosa pine forest.*” Washington Native Plant Society – Northeast Chapter, Spokane, WA.

**Connolly, BM** (2012). “*Consumer impacts on habitat invasibility: the role of post-dispersal seed predation*.” Gonzaga University, Spokane, WA.

***AWARDS & HONORS***

Graduate School Research Assistantship, Washington State University 2012

Rexford Daubenmire Award, Washington State University 2011

Hannah Aase Fellowship, Washington State University 2008

***PROFESSIONAL SERVICE***

***Graduate Student Committees***

Master Student Committee Member

 Julie Nims Major Advisor: Dr. Emily Grman

 Kelsey Mitchell Major Advisor: Dr. Katherine Greenwald

 Molly Dixon Major Advisor: Dr. Katherine Greenwald

 Dorothy Zahor Major Advisor: Dr. Jamie Cornelius

***Service Committees***

Library Liaison, EMU 2019-present

Environmental Science Assessment Committee, EMU 2018-present

Biology Student Assessment Committee, EMU 2018-present

Fish Lake Environmental Education Committee, EMU 2017-present

Graduate student representative to Biology Faculty Meetings, WSU2012-2013

 Biology Graduate Student Symposium, WSU 2010-2012

***Service Events and Groups***

YpsiWrites, Faculty Fellow and Outreach 2019-present

“Science and Design”, curated art exhibit, EMU 2019-present

 -Roundtable Discussion Leader

Contributor, iNaturalist Biodiversity Project 2019-present

***Leadership***

President, Biology Graduate Student Association (BGSA), WSU 2011-2012

 Committee Head, Biology Graduate Student Symposium, WSU 2012

***Affiliation with intramural and extracurricular programs***

Wisconsin Ecology, post-doctoral affiliate 2014-2017

Graduate and Professional Student Association (GPSA), WSU 2010-2013

Biology Graduate Student Association (BGSA), WSU 2010-2013

***Ad hoc Reviewer for Journals***

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| --- | --- |
| Journal of EcologyJournal of Vegetation Science Restoration EcologyAxios ReviewOecologiaEcologyScientific ReportsProc. Royal Society B – Biology | MycologiaBiological InvasionsPLoS ONEEcology and EvolutionThe Rangeland JournalJournal of Applied EcologyForest SciencePlant Ecology |

***Grant/Fellowship Reviews***

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| Graduate Women in Science (GWIS) Fellowship AwardsUSDA-Small Business Innovation Research |

***Society Memberships***

American Association for the Advancement of Science (AAAS) 2015-present

Ecological Society of America (ESA) 2009-present

Washington Native Plant Society (WNPS) 2010-2013