

JAMIE L. PEELER

Department of Geography
Penn State University
302 Walker Building
University Park, PA 16802

Email: peeler@psu.edu
Website: <https://jamiepeeler.com>

EDUCATION

- Ph.D. **Penn State University, University Park, PA. Expected 2021.** Geography.
Dissertation: Linking context to post-fire forest resilience in the Greater Yellowstone Ecosystem
Advisor: Dr. Erica Smithwick
Certification: Graduate School Teaching Certificate (completed in 2019)
- M.S. **Penn State University, University Park, PA. 2017.** Geography.
Master's paper: Exploring invasibility with species distribution modeling: how does fire promote cheatgrass (*Bromus tectorum*) invasion within lower montane forests?
Advisor: Dr. Erica Smithwick
- B.S. **Duke University, Durham, NC. 2012.** Biology.
Honors thesis: Trait plasticity of tree species in response to changing disturbance regimes in Kruger National Park, South Africa
Advisor: Dr. Justin Wright

RESEARCH INTERESTS

Disturbance dynamics and their effects on ecosystems; fire ecology; forest resilience; landscape ecology; environmental change; causes and consequences of spatial heterogeneity

GRANTS AND FELLOWSHIPS

External

- 2019 **NSF Doctoral Dissertation Research Improvement Award, \$18,000**
Project: Doctoral dissertation research: spatial resilience in forests recovering from fires
- Joint Fire Science Program Graduate Research Innovation Award, \$25,000**
Project: Scale-dependent effects of landscape context on post-fire forest regeneration in the Northern Rockies
- NASA Pennsylvania Space Grant Consortium Graduate Research Fellowship, \$5,000**
- 2018 **National Geographic Support for Women and Dependent Care Opportunity, \$3,585**
- 2017 **National Geographic Early Career Grant, \$5,370**
Project: Quadruple whammy: exploring indicators of forest resilience to multiple disturbances in the Greater Yellowstone Ecosystem
- NASA Pennsylvania Space Grant Consortium Graduate Research Fellowship, \$5,000**
- 2016 **NASA Pennsylvania Space Grant Consortium Graduate Research Fellowship, \$5,000**

Internal

- 2019 **Fogel Award, Earth and Environmental Systems Institute, Penn State University, \$2,000**
Center for Landscape Dynamics Graduate Research Award, Penn State University, \$540
- 2018 **C. Gregory Knight Academic Enrichment, Penn State University, \$600**
- 2017 **Center for Landscape Dynamics Graduate Research Award, Penn State University, \$1,000**

- 2016 **C. Gregory Knight Academic Enrichment**, Penn State University, \$350
Center for Landscape Dynamics Graduate Research Award, Penn State University, \$995
C. Gregory Knight Academic Enrichment, Penn State University, \$430
- 2015 **Fund for Excellence in Graduate Recruitment**, Penn State University, \$5,000
- 2010 **Undergraduate Scholarship in Marine Science**, Duke University Marine Lab, \$1,200

AWARDS AND HONORS

External

- 2017 **Honorable Mention**, NSF Graduate Research Fellowship Program
- 2014 **Honorable Mention**, NSF Graduate Research Fellowship Program

Internal

- 2019 **Best Ph.D. Proposal**, E. Willard Miller Award, Department of Geography, Penn State University
- 2018 **Best M.S. Paper**, E. Willard Miller Award, Department of Geography, Penn State University
- 2017 **Best M.S. Proposal**, E. Willard Miller Award, Department of Geography, Penn State University
- 2015 **Environmental Scholar**, Earth and Environmental Systems Institute, Penn State University
- 2012 **Graduation with Distinction**, Department of Biology, Duke University
Excellence in Plant Science, Department of Biology, Duke University
- 2010 **Rachel Carson Research Scholar**, Duke University Marine Lab

PUBLICATIONS

- Peeler JL** and Smithwick EAH. 2018. Exploring invasibility with species distribution modeling: how does fire promote cheatgrass (*Bromus tectorum*) invasion within lower montane forests? *Diversity and Distributions*, 24, 9, 1308-1320.
- Peeler JL** and Menges ES. 2018. Effects of fire history, tree age, and canopy seed bank size on serotiny of sand pine (*Pinus clausa*) in Florida scrub. *Florida Scientist*, 81, 1, 3-11.

PRESENTATIONS

- 2019 **Peeler JL** and Smithwick EAH. Scale-dependent effects of landscape context on post-fire forest regeneration in the Northern Rockies. American Geophysical Union Annual Meeting. San Francisco, CA. *Poster*.
- Peeler JL** and Smithwick EAH. Convergence research on landscape and seascape resilience in the Anthropocene. International Association for Landscape Ecology World Congress. Milan, Italy. *Talk*.
- 2018 Cabeza CA*, **Peeler JL**, and Smithwick EAH. Climate and topographic effect on wildfire burn severity in the Greater Yellowstone Ecosystem. American Geophysical Union Annual Meeting. Washington, DC. *Poster*.
- Peeler JL** and Smithwick EAH. Network theory and post-fire landscapes: linking connectivity to forest reorganization in the Greater Yellowstone Ecosystem. US Regional Association of the International Association for Landscape Ecology. Chicago, IL. *Poster*.

- 2017 **Peeler JL** and Smithwick EAH. Exploring invasibility with species distribution modeling: how does fire promote cheatgrass invasion within lower montane forests? Ecological Society of America. Portland, OR. *Talk.*
- Peeler JL** and Smithwick EAH. Exploring invasibility with species distribution modeling: how does fire promote cheatgrass invasion within lower montane forests? American Association of Geographer Annual Meeting. Boston, MA. *Talk.*
- 2014 **Peeler JL** and Menges ES. Effects of fire history and tree age on serotiny of sand pine (*Pinus clausa*) in Florida scrub. Research Intern Seminar, Archbold Biological Station. Venus, FL. *Talk.*
- Peeler JL** and Menges ES. Effects of fire regime on serotiny of sand pine (*Pinus clausa*) in Florida scrub. Florida Native Plant Society Annual Conference. Fort Myers, FL. *Talk.*
- 2012 **Peeler JL**, Vickers K, and Wright JP. Trait plasticity of tree species in response to changing disturbance regimes in the Kruger National Park. The Distinction in Biology Poster Symposium, Duke University. Durham, NC. *Poster.*
- 2011 **Peeler JL**. Trait plasticity of tree species in response to changing disturbance regimes in the Kruger National Park. REU Student Research Seminar, South Africa National Parks. Skukuza, South Africa. *Talk.*

* Denotes presenter other than Peeler JL

RESEARCH

- 2019 **Research assistant**, Department of Geography, Penn State University
Supervisor: Dr. Anthony Robinson
 Secured Institutional Review Board approval and designed/implemented a survey to beekeepers to improve a web tool called Beescape

TEACHING

- 2017 - 2020 **Graduate writing tutor**, College of Earth and Mineral Sciences, Penn State University
- 2015 - 2019 **Teaching assistant**, Department of Geography, Penn State University
Courses: Science Communication and Water Resources (EMSC 100), Introduction to Physical Geography (GEOG 10), Geography of Water Resources (GEOG 431 Web), Global Parks and Sustainability (GEOG 1), Geographic Perspectives on Sustainability and Human-Environment Systems (GEOG 30)
- 2018; 2017 **Instructor of Record**, Department of Geography, Penn State University
Courses: Geography of Water Resources (GEOG 431 Web)
- 2011 - 2012 **Co-director**, Introduction to Experiential Education House Course, Duke University

MENTORING

- 2019 **Mentor**, Undergraduate Research Opportunities Connection, Penn State University
Student and Project: Shelby Duncan (Penn State University); Mapping post-fire tree cover using object-based image analysis
- 2018 **Mentor**, NSF Research Experience for Undergraduates in Climate Science, Penn State University
Student and Project: Caroline Cabeza (Seattle University); Environmental heterogeneity in post-wildlife landscapes of the Greater Yellowstone Ecosystem

FIELDWORK

- 2015 **Field technician**, Western Forest Initiative
Supervisors: Dr. Arjan Meddens and Dr. Jim Lutz
 Completed Composite Burn Index surveys to characterize unburned islands within wildfire perimeters in the Pacific Northwest
- 2014 **Fire ecology intern**, Tall Timbers Research Station and Land Conservancy
Supervisor: Dr. Kevin Robertson
 Assisted a biennial census examining interacting effects of wind and fire on a beech-magnolia forest in northern Florida
- Research intern**, Plant Ecology Lab, Archbold Biological Station
Supervisor: Dr. Eric Menges
 Designed an independent project that investigated the effects of fire history, tree age, and canopy seed bank size on serotiny of sand pine in central Florida
- 2013 **Field technician**, Desert Research Institute
Supervisor: Dr. Adam Watts
 Completed Composite Burn Index surveys to evaluate post-fire mortality trends among pond cypress domes in Big Cypress National Preserve, Florida
- 2012 **Field technician**, Bioko Biodiversity Protection Program
Supervisor: Dr. Shaya Honarvar
 PIT-tagged and recorded reproductive output data on the nesting leatherback sea turtle population on Bioko Island, Equatorial Guinea
- Field technician**, Silviculture and Applied Forest Ecology Lab, University of Minnesota
Supervisor: Mitch Slater
 Conducted vegetation surveys to evaluate potential impacts of emerald ash borer on black ash wetlands of northern Minnesota
- 2011 **NSF Research Experience for Undergraduates Participant**, Organization for Tropical Studies
Supervisors: Karen Vickers and Dr. Laurence Kruger
 Designed an independent project that highlighted the functional responses of tree species to fire and herbivory in Kruger National Park, South Africa

SYNERGISTIC ACTIVITIES

Service for College of Earth and Mineral Sciences, Penn State University

- 2019 **Co-organizer**, Undergraduate Research Poster Exhibition
 Provided feedback to student presenters and organized 30 faculty judges for a poster exhibition highlighting undergraduate research in Earth and Mineral Sciences
- 2017-2019 **Co-organizer**, Professional Development Workshops for Undergraduates
Workshops: Resume/cover letters/interviews; Creating your scientific poster; Is graduate school right for me?
 Developed and implemented workshops to help undergraduates improve their communication skills, navigate career options, and secure job opportunities after Penn State
- 2018 **Co-developer**, Science Communication in Earth and Mineral Sciences
Website: https://guides.libraries.psu.edu/EMS_science_communication
 Developed content about writing styles that undergraduates may encounter in geography

Service for Department of Geography, Penn State University

- 2019 - 2020 **Vice President**, Graduate Students in the Department of Geography
Elected to represent graduate students and advocate for their interests during faculty meetings
- 2018 - 2019 **Graduate representative**, Coffee Hour Speakers Committee
Organized a weekly seminar series on topics related to geography
- 2016 - 2017 **Vice President**, Penn State Chapter of Supporting Women in Geography
Expanded participation in K-12 outreach events to engage young women with geography

Public Outreach

- 2016 - 2019 **Co-organizer and volunteer**, Supporting Young Women in Geography Day
Developed and implemented workshops to teach 30 middle school girls about spatial pattern, ecosystem services, and the Chesapeake Bay
- 2017 - 2019 **Mentor and volunteer**, ENVISION: STEM Career Day for Girls
Facilitated workshops to teach 30 middle and high school girls how scientists monitor land use change with remote sensing
- 2018; 2019 **Volunteer**, Penn State Girl Scout Saturday
Facilitated workshops to teach 25 middle and high school girls how scientists monitor land use change with remote sensing
- 2016 - 2017 **Volunteer**, Exploration-U: Community Science Night
Organized a tabletop activity to teach K-12 participants how tree rings inform scientists about historical fire activity

Membership in Professional Associations

Ecological Society of America

North American Regional Association of the International Association for Landscape Ecology

PROFESSIONAL SKILLS

Wilderness Experience

2017 - 2022 Certified Wilderness First Responder (80 hours of training with SOLO)

2009 - 2012 Backpacking leader, Project WILD (Wilderness Initiatives Learning at Duke), Duke University

Software Experience

ArcGIS, R, ENVI, Circuitscape, FRAGSTATS