

Lucas Harris

PO Box 914, Philmont, NY 12565 / 857-636-0612 / lbh146@psu.edu

EDUCATION

The Pennsylvania State University, University Park, Pennsylvania 2013-present
PhD candidate in Geography, ABD
Master of Science in Geography, 2014
University of Helsinki, Helsinki, Finland 2012-2013
Fulbright Student Grant
Hamilton College, Clinton, New York 2008-2012
Bachelor of Arts, graduated summa cum laude
Major in Environmental Studies, minor in Geoscience

RESEARCH EXPERIENCE

Department of Geography, The Pennsylvania State University
Research Assistant 2014-present

Advisor: Dr. Alan Taylor

- Characterizing interactions between fires in the Klamath Mountains, California using remote sensing, weather modeling and field data
- Spatial analysis and modeling of tree mortality in old-growth mixed-conifer forests in the Lake Tahoe Basin, California
- Studying fire effects on carbon dynamics in Yosemite National Park, California using remote sensing and field data
- Investigating the drivers of fire severity in Lassen Volcanic National Park, California using remote sensing and ground truthing
- Evaluating the influence of fire history on severity of recent fires in California
- Use of tree ring isotopes to evaluate ecosystem function in fire-prone forests
- Analyzing tree growth-climate relationships using dendroecological techniques

Master's Thesis Research 2013-2014

Advisor: Dr. Alan Taylor

- Evaluating drivers of fire severity in an old-growth mixed-conifer forest
- Combining remote sensing, field data and dendroecological approaches using statistical modeling

Department of Geography, University of Helsinki

Fulbright Student Grantee 2012-2013

Advisor: Dr. Miska Luoto

- Drivers of plant species distributions and abundances at a tree-line ecotone in sub-arctic Finland
- Identification of biotic interactions in data-poor systems
- Using plant-plant interactions to improve fine-scale species distribution models

Department of Biology, Hamilton College

Undergraduate Thesis Research 2011-2012

Advisor: Dr. William Pfitsch

- Impact of invasive plants and earthworms on leaf litter dynamics

- Edmund Niles Huyck Preserve**, Rensselaerville, New York
Odum Intern 2011
 Advisor: Dr. Susan Beatty
- Independent research in field biology
 - Forest change since 1980 in a northern hardwood forest and prospects for future dominance of oaks
- Organization for Tropical Studies**, Kruger Park, South Africa
South Africa Semester in African Ecology and Conservation 2010
- Coursework and research in several locations in South Africa
 - Focus on savanna ecology and fire ecology

HONORS AND AWARDS

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| • NSF Doctoral Dissertation Research Improvement award (\$15939) | 2017-2018 |
| • Ruby S. Miller Graduate Student Fellowship | 2017-2018 |
| • TREE grant to attend the Fire Ecology and Management Congress (\$375) | 2017 |
| • E. Willard Miller Award for PhD proposal in Geography (\$600) | 2017 |
| • Center for Landscape Dynamics Graduate Research Award (\$1000) | 2017 |
| • NASA Pennsylvania Space Grant Fellowship Award (\$5000) | 2015-2016 |
| • TREE grant to attend the Fire Ecology and Management Congress (\$750) | 2015 |
| • E. Willard Miller Award for Master of Science Paper in Geography (\$600) | 2015 |
| • Honorable mention in the NSF Graduate Research Fellowship Program competition | 2014 |
| • Chelius Graduate Fellowship from The Pennsylvania State University | 2013-2014 |
| • Fulbright grant to Finland to conduct research in Geography | 2012-2013 |
| • Inducted into Sigma Xi | 2012 |
| • Environmental Studies Award for senior thesis research | 2012 |

PUBLICATIONS

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- Harris L**, Taylor AH. 2017. Previous burns and topography limit and reinforce fire severity in a large wildfire. *Ecosphere* 8(11):1-21.
- Harris L**, Taylor AH. 2015. Topography, fuels, and fire exclusion drive fire severity of the Rim Fire in an old-growth mixed-conifer forest, Yosemite National Park, USA. *Ecosystems* 18:1192–208.

PRESENTATIONS

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- Harris L**, Taylor AH. 2018. Spatial variability in tree regeneration and fire-driven range shifts at a dry forest ecotone. Presentation at the 2018 US-International Association for Landscape Ecology Annual Meeting.
- Harris L**, Taylor AH. 2017. Previous burns and topography limit and reinforce fire severity in a large wildfire. Presentation at the 2017 American Association of Geographers annual meeting.
- Harris L**, Taylor AH. 2017. Spatial variability in tree regeneration and fire-driven range shifts at a dry forest ecotone. Presentation at the 2017 Fire Ecology and Management Congress.
- Harris L**, Beaty RM, Vandervlugt AM, Taylor AH. 2016. Competition and tree mortality from 1999-2010 in an old-growth forest, Lake Tahoe Basin, California. Presentation at the

- 2016 American Association of Geographers annual meeting.
- Taylor AH, Belmecheri S, **Harris L**. 2016. Fuel treatment effects on water use efficiency in western pine forests under fire suppression evaluated using tree ring carbon isotopes. Poster at the 2016 American Geophysical Union Fall Meeting.
- Harris L**, Taylor AH. 2015. Topography, fuels, and fire exclusion drive fire severity of the Rim Fire in an old-growth mixed-conifer forest, Yosemite National Park, USA. Presentation at the 2015 Fire Ecology and Management Congress.
- le Roux, PC, **Harris L**, Luoto M. 2013. Identifying biotic interactions to model species distributions. Presentation at the 56th Symposium of the International Association for Vegetation Science.
- Bruzzese D, Feinberg D, **Harris L**, Pfitsch W. 2012. Ecosystem and decomposer food web effects of garlic mustard in Hamilton College forests, Clinton, NY. Presentation at the Northeast Natural History Conference.

TEACHING AND LEADERSHIP EXPERIENCE

Department of Geography, The Pennsylvania State University

- Course Instructor, Introduction to Physical Geography* 2018
- Fieldwork and laboratory work supervisor* 2014-2017
- Planned and executed fieldwork in remote settings, leading undergraduate and graduate students and coordinating with the US Forest Service and Park Service
 - Coordinated and supervised laboratory work in dendroecology

Student Conservation Association, Charlestown, New Hampshire

- National Crew Leader* 2012
- Led high school students for one month, doing conservation work in the backcountry of Rocky Mountain National Park, Colorado