

# Erica A.H. Smithwick - Curriculum Vita

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## RESEARCH FOCUS

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My research focuses on how disturbances such as wildfire affect ecosystem carbon storage and nutrient cycling. I use field measurements and simulation models to determine how climate and disturbance influence ecosystem function at landscape scales. Current research is focused on the influence of these changes on socio-ecological resilience and sustainability, with special attention to protected area management in Africa and the U.S.

## APPOINTMENTS

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2019-present	Associate Director, Institutes of Energy and Environment, The Pennsylvania State University
2018-present	E. Willard and Ruby S. Miller Professor of Geography, Department of Geography, The Pennsylvania State University
2017-present	Director, The Ecology Institute, The Pennsylvania State University
2015- present	Founding Director, Center for Landscape Dynamics, Earth and Environmental Systems Institute, The Pennsylvania State University
2007- present	Graduate Faculty, Intercollege Graduate Degree Program in Ecology; Dual-Title Graduate Degree Program in Biogeochemistry; and, Human Dimensions of Natural Resources and the Environment, The Pennsylvania State University
2007-present	Faculty Associate, Earth and Environmental Systems Institute, College of Earth and Mineral Sciences, The Pennsylvania State University
2013-2018	Associate Professor of Geography, Department of Geography, The Pennsylvania State University
Jan-Jul 2016	Visiting Scientist/Fulbright Scholar, Rhodes University, South Africa
2007- 2013	Assistant Professor of Geography, Department of Geography, The Pennsylvania State University
2002 -2007	Postdoctoral Research Associate, University of Wisconsin-Madison, Landscape and Ecosystem Ecology Laboratory of Dr. Monica G. Turner

## EDUCATION

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Oregon State University	PhD	2002	Forest Science/Ecology
University of Montana	MS	1997	Forestry/Resource Conservation
Tufts University, <i>Cum laude</i>	BS	1995	Geology and Environmental Studies

## RESEARCH GRANTS

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### Current

National Science Foundation. NNA-Navigating the New Arctic Track 1: Pursuing Opportunities for Long-term Arctic Resilience for Infrastructure and Society (POLARIS). Senior Personnel. (Principal Investigator: Guangqing Chi), 1/1/2020-12/31/2025 (\$3,000,000)

National Science Foundation. NRT-INFEWS: Landscape-U, Impactful partnerships among graduate students and managers for regenerative landscape design. Principal Investigator, 2018-2023, (\$3,000,000).

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National Science Foundation. CNH-L: Visualizing forest futures under climate uncertainty: integrating indigenous knowledge into decision support tools for collaborative decision making. Principal Investigator, 06/01/2016 - 05/31/2021 (\$1,700,000)

USDI Joint Fire Sciences Program. Firescapes in the mid-Atlantic: mismatches between social perceptions and prescribed fire use. Principal Investigator, 08/01/2016- 07/31/2019, (\$327,726)

Penn State Human Health and Environment Seed Grant. From environmental change to left-behind children's well-being in rural highlands: the nexus of pasture productivity, family processes, labor migrants, and child development. Co-Principal Investigator (Principal Investigator: Guangqing Chi), 07/01/2017 – 6/30/2019, (\$50,000)

### **Past**

Penn State Institutes of Energy and Environment Seed Grant. Ecological migration in a large-scale quasi-experiment design in china: implications of climate change, landscape structure, ecosystem services, and government intervention. Co-Principal Investigator (Principal Investigator: Guangqing Chi), 07/01/2017 – 6/30/2018, (\$25,000)

College of Earth and Mineral Sciences, The Pennsylvania State University. Wilson Travel Grant. Principal Investigator, 2017-2018, (\$2000)

J. William Fulbright Research/Teaching Award to South Africa, Rhodes University. Measuring and monitoring forest carbon stocks and biodiversity. Principal Investigator, 1/1/2016 – 6/30/2016

The National Socio-Environmental Synthesis Center (SESYNC). Landscape diversity and dietary diversity. Co-Principal Investigator (Principal Investigator: Sarah Gergel), 03/01/2017 – 08/31/2017, (\$21,541)

Ecology Institute, The Pennsylvania State University. Virtual ecology. Co-Principal Investigator (Principal Investigator: Alexander Klippel), 2015-2017, (\$2,500)

Penn State Institutes of Energy and Environment Seed Grant. Mapping and measuring forests and wetlands with a UAS-based Lidar/multispectral system. Co-Principal Investigator (Principal Investigator: Doug Miller), 2016-2017, (\$25, 000)

Center for Online Innovation in Learning, Penn State University. Interactive videos in online learning. Principal Investigator, 7/1/15 to 6/30/16, (\$36,106)

2015/2016 Penn State Institute of Energy and Environment Seed Grant. Landscapes of fire and people: how climate, human values, and shifting ecologies will influence mid-Atlantic forest management. Principal Investigator, 3/15/16 – 6/30/15, (\$24,737)

The John Wesley Powell Center for Analysis and Synthesis. Forecasting forest response to N deposition: integrating data from individual plant responses to soil chemistry with a continental-scale gradient analysis. 1/1/2014 – 12/31/2015, Co-Principal Investigator, (\$167, 790)

The National Park Service. Identifying critical thresholds: relating soil solution and exchangeable chemistry to detrimental plant responses. Principal Investigator, 2/1/14- 12/31/15. (\$20,549)

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Penn State Institute of Energy and Environment Seed Grant. Sustainable intensification of grazing land to produce food and bioenergy. Principal Investigator, 1/1/13 – 12/31/14, (\$25,000)

The Sustainability Institute Reinvention Fund, Penn State. Building sustainable communities through the digital global classroom. Principal Investigator, 7/1/2014-6/30/2015, (\$36,500)

College of Earth and Mineral Sciences Gladys Snyder Educational Grant. Parks as stories: video learning tools to enhance landscape sustainability. Principal Investigator, 7/1/12 – 6/30/13, (\$5000)

NASA Research Opportunities in Space and Earth Sciences. Influence of disturbance and seasonality on regional carbon flux upscaling. Principal Investigator, 7/1/2011 to 6/30/2014, (\$883,605)

College of Earth and Mineral Sciences George H. Deike Jr. Research Grant. Pyrogeography: understanding complexity and resilience on African landscapes. Principal Investigator, 7/1/12 – 6/30/13, (\$50,000)

National Science Foundation-Division of Ecosystem Biology (EAGER). Spatial patterns of nutrient limitation and carbon storage in South African coastal lowland landscapes. Principal Investigator, 7/1/09-6/31/12, (\$150,675)

National Science Foundation-Division of Ecosystem Biology (REU-EAGER). Spatial patterns of nutrient limitation and carbon storage in South African coastal lowland landscapes. Principal Investigator, 8/1/10 – 7/31/12, (\$15,500)

Appalachian Trail Conservancy. Characterization of “elevational landscapes” along the Appalachian Trail Mega-Transect. Principal Investigator, 10/1/08 – 9/30/09, (\$20,000)

Department of Energy, National Institute of Climatic Change Research. Consequences of novel disturbance regimes on climate-induced biogeographic shifts along the Appalachian Trail. Principal Investigator, 4/1/09 – 3/31/11, (\$125,000)

United States Department of the Interior Joint Fire Science Program. Climate, fire and carbon: tipping points and landscape vulnerability in the Greater Yellowstone Ecosystem. Principal Investigator, 7/1/09-12/31/10, (\$140,653)

National Science Foundation. GK-12: Carbon education and research together for humanity. Co-Principal Investigator, (Principal Investigator: Renee Diehl), 3/15/10 – 2/28/15, (\$3,000,000)

National Science Foundation -Coupled Natural Human Systems. Climatic extremes, mining, and *Mycobacterium ulcerans*: a coupled systems approach. Co-Principal Investigator, (Principal Investigator: Petra Tschakert), 10/09- 8/31/14 (\$1,421,997)

National Science Foundation, Ecosystem Science Program. RCN: The Novus project for integrating paleo- and neo-ecosystem ecology. Participant, 2012-2017, (\$499,753)

National Science Foundation, Ecosystem Science Program. Ecosystem response to disturbance from decadal to millennial timescales: support for the PROBE workshop. Participant, 2011-2012, (\$29,917)

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## AWARDS AND RECOGNITION

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Wilson Award for Excellence in Research, College of Earth and Mineral Sciences, 2019

Journal of Geography Award from the National Council for Geographic Education as the best college/university article during 2019 for “Interactive Videos Enhance Learning about Socio-Ecological Systems.”

## PEER-REVIEWED PUBLICATIONS

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### In Review

Field, J., Richard T.L., Smithwick EAH, Cai H, Laser MS, LeBauer DS, Long, SP, Paustian K, Qin Z, Sheehan JJ, Smith, P, Wang MQL, Lynd L. 2019. The logic of greenhouse gas mitigation through cellulosic biofuel production is sound. *Nature Climate Change*, in review.

Gergel, S, Powell B, Wood S, Baudron F, Rhemtulla J, Kennedy G, Rasmussen L, Ickowitz A, Smithwick EAH, Wood S, Sunderland T. 2019. Conceptual linkages between landscape diversity and diet diversity: a roadmap for transdisciplinary research. *Bioscience*, revisions.

### Published or In Press

53. Young, C, Fritz H, Smithwick EAH, Venter J. 2019. The landscape-scale drivers of herbivore assemblage distribution on the central basalt plains of Kruger National Park. *Journal of Tropical Ecology*, in press.
52. Rasmussen LV, Fagan M, Ickowitz A, Wood S, Kiennedy G, Powell B, Baudron F, Gergel S, Jun S, Smithwick EAH, Sunderland T, Wood S, Rhemtulla J. 2019. Forest pattern, not just amount, influences dietary quality in five African countries. *Global Food Security*, Available online 31 October 2019, 100331.
51. Lucash, M, Ruckert KL, Nicholas RE, Scheller RM, Smithwick EAH. 2019. Complex interactions among successional trajectories and climate govern spatial resilience after sever windstorms in central Wisconsin, U.S.A., *Landscape Ecology*, accepted.
50. Baldwin, D\*, Manfreda S, Lin H, Smithwick EAH. 2019. Estimating spatial and temporal variation of root zone soil moisture across a temperate forested catchment with remote sensing data and simple hydrologic models. *Remote Sensing of Environment* 11(17), 2013, <https://doi.org/10.3390/rs11172013> .
49. Rochner, M, Masfield B, Jahi CM, Smithwick EAH, Romero A, Lane SA, Lave R, Biermann C. 2019. The Palgrave Handbook of Critical Physical Geography. *The AAG Review of Books* 7 (3): 203-213. DOI: 10.1080/2325548X.2019.1615327.
48. Smithwick EAH. 2019. Carbon stocks and biodiversity of coastal lowland forests in South Africa: implications for aligning sustainable development and carbon mitigation initiatives. *Carbon Management* 10 (4): 349-360. <https://doi.org/10.1080/17583004.2019.1620035>
47. Buma B, Harvey B, Gavin D, Kelly R, Loboda T, McNeil B, Marlon J, Meddens A, Raffa K, Shuman B, Smithwick EAH, & McLauchlan K. 2019. The value of linking short and long-term perspectives to understand spatially-explicit ecosystem resilience. *Landscape Ecology* (34): 17-33.

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46. Horn KJ, Thomas RQ, Pardo LH, Lawrence GB, Clark CM, Fenn ME, Lawrence GB, Perakis SS, Smithwick EAH, Baldwin DC\*, Braun S, Nordin A, Perry CH, Phelan JN, Schaberg PG, St.Clair SB, Warby R, Watmough S. 2018. Growth and survival relationships of 71 tree species with nitrogen and sulfur deposition across the conterminous U.S. *PLoS ONE* 13(10): e0205296. <https://doi.org/10.1371/journal.pone.0205296>
45. Moon, JB, Wardrop DH, Smithwick EAH, Naithani KJ. 2018. Fine-scale spatial homogenization of microbial habitats: a multivariate index of headwater wetland complex condition. *Ecological Applications* 29 (1), e01816, doi: 10.1002/eap.1816
44. Smithwick EAH, Baxter E, Kim K, Edel-Malizia S, Rocco S, Blackstock D. 2018. Interactive videos enhance learning about socio-ecological systems. *Journal of Geography* 117(1):40-49, DOI: /10.1080/00221341.2017.1374433
43. Peeler JL\*, Smithwick EAH. 2018. Exploring invasibility with species distribution modeling: How does fire promote cheatgrass (*Bromus tectorum*) invasion within lower montane forests? *Divers Distrib.* 00:1–13. <https://doi.org/10.1111/ddi.12765>
42. Averill KM\*, Mortensen DA, Smithwick EAH, Kalisz S, McShea WJ, Bourg NA, Parker JD, Royo AA, Abrams MD, Apsley DK, Blossey B, Boucher CH, Caraher KL, DiTommaso A, Johnson SE, Masson R, Nuzzo VA. 2018. A regional assessment of white-tailed deer effects on plant invasion. *AoB Plants* 10(1), plx047, doi:10.1093/aobpla/plx047
41. Taber ED\*, Hutchinson, ML, Smithwick EAH, Blanford JI. 2017. A decade of colonization: the spread of the Asian Tiger Mosquito in Pennsylvania and Implications for disease risk. *Journal of Vector Ecology* 42(1): 3-12.
40. Baldwin D\*, Manfreda S, Keller K, Smithwick EAH. 2017. Predicting root zone soil moisture with soil properties and satellite near-surface moisture data across the conterminous United States, *Journal of Hydrology* 546:393-404, <http://dx.doi.org/10.1016/j.jhydrol.2017.01.020>
39. Smithwick EAH, Baldwin DC\*, Naithani KJ\*. 2016. Grassland productivity in response to nutrient additions and herbivory is scale-dependent, *PeerJ* 4:e2745; DOI 10.7717/peerj.2745
38. Smithwick EAH. 2016. Build social costs into wildfire risks. *Nature (Correspondence)* 535 (7611): 231. doi:10.1038/535231b
37. Wu J\*, Smithwick EAH. 2016. Landscape fragmentation as a risk factor for Buruli ulcer disease. *American Journal of Tropical Medicine and Hygiene*, 95(1): 63-69. doi: 10.4269/ajtmh.15-0647
36. Averill KM\*, Mortensen DA, Smithwick EAH, Post E. 2016. Generalist herbivore feeding selectivity is plant species-specific, regardless of nature/introduced status. *Biological Invasions* 18(5): 1247-1263. DOI: 10.1007/s10530-016-1063-z
35. Tschakert P, Ricciardi V, Smithwick EAH, Machado M, Ferring D, Hausermann H, Bug L. 2016. Situated knowledge of pathogenic landscapes in Ghana: understanding the emergence of Buruli ulcer through qualitative analysis. *Social Science and Medicine* 150: 160-171. <http://dx.doi.org/10.1016/j.socscimed.2015.12.005>
34. Taber E\* and Smithwick EAH. 2015. Influence of protected areas on malaria prevalence in sub-Saharan Africa. *Applied Geography* 64:35-45. doi:10.1016/j.apgeog.2015.09.001
33. Wu, J\*, Tschakert P, Klutse E, Ferring D, Ricciardi V, H Hausermann H, Oppong J, Smithwick EAH. 2015. Buruli ulcer disease and its association with land cover in Southwestern Ghana. *PLoS Neglected Tropical Disease* 9(6):30003840. doi: 10.1371/journal.pntd.0003840

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32. Keane RE, McKenzie D, Falk DA, Smithwick EAH, Miller, C., Kellogg, L-K. B. 2015. Representing climate, disturbance, and vegetation interactions in landscape models. *Ecological Modelling* 309-310: 33-47. doi:10.1016/j.ecolmodel.2015.04.009
31. Hagarty J, Azanu D, Atosona B, Voegborlo R, Smithwick EAH, Singha K. 2015. Chemistry of natural waters and its relation to Buruli Ulcer in Ghana. *Journal of Hydrology: Regional Studies* 3: 457-472. doi:10.1016/j.ejrh.2015.03.006
30. McCormack, ML\*, Crisfield E, Raczka B, Schnekenburger F, Eissenstat DM, Smithwick EAH. 2015. Sensitivity of four ecological models to adjustments in fine root turnover rate. *Ecological Modelling* 297: 107-117. doi:10.1016/j.ecolmodel.2014.11.013
29. Smithwick, EAH, ML McCormack\*, M Lucash, G Sivandran. 2014. Improving the representation of roots in terrestrial models. *Ecological Modelling* 291: 193-204. doi:10.1016/j.ecolmodel.2014.07.023
28. McCormack ML\*, Adams TS, Smithwick EAH, Eissenstat DM. 2014. Variability in root production and root phenology alter estimates of fine root turnover rate. *Ecology* 95: 2224-2235. <http://dx.doi.org/10.1890/13-1942.1>
27. McLauchlan KK, Higuera PE, Gavin DG, Perakis SS, Mack MC, Alexander H, Battles J, Biondi F, Buma B, Colombaroli D, Enders S, Engstrom DR, Hu FS, Marlon JR, Marshall J, McGlone M, Morris JL, Nave LE, Shuman BN, Smithwick E, Urrego DH, Wardle DA, Williams CJ, Williams JJ. 2014. Reconstructing disturbances and their biogeochemical consequences over multiple timescales. *BioScience* 64(2): 105-116.
26. McCormack ML\*, Eissenstat DM, Prasad AM, Smithwick EAH. 2013. Regional scale patterns of fine root lifespan and turnover under current and future climate. *Global Change Biology* 19(6): 1697-1708. doi: 10.1111/gcb.12163
25. Smithwick EAH, Eissenstat DM, Lovett G, Bowden R, Rustad L, and Driscoll C. 2013. Root Stress and Nitrogen Deposition: Consequences and Research Priorities *New Phytologist* 197 (3): 712-719. doi: 10.1111/nph.12081
24. Smithwick EAH, Naithani KJ\*, Balser TC, Romme WH, and Turner MG. 2012. Fine-Scale Spatial Distribution of Microbial Communities and Soil Nitrogen Cycling Following Wildfire. *PLoS One*, 7(11):e50597. doi:. 10.1371/journal.pone.0050597
23. Hausermann H, Tschakert P, Smithwick EAH, Ferring D, Amankwah R, Klutse E, Hagarty J, Kromel L. 2012. Contours of risk: spatializing human behaviors to understand disease dynamics in changing landscapes. *EcoHealth* (9): 251-255, doi:10.1007/s10393-012-0780-8.
22. McCormack ML\*, Adams TS, Smithwick EAH, Eissenstat DM. 2012. Predicting fine root lifespan from functional traits in temperate trees. *New Phytologist* 195(4): 823-831. doi: 10.1111/j.1469-8137.2012.04198.x
21. Westerling AL, Turner MG, Smithwick EAH, Romme WH, Ryan MG. 2011. Continued warming could transform Greater Yellowstone fire regimes by mid-21st Century, *Proceedings of the National Academy of Sciences* 108: 13165-13170. doi: 10.1073/pnas.1110199108
20. Turner MG, Romme WH, Smithwick EAH, Tinker DB, Zhu J. 2011. Variation in aboveground cover influences soil nitrogen availability at fine spatial scales following severe fire in subalpine conifer forests. *Ecosystems* 14(7):1081-1095. doi: 10.1007/s10021-011-9465-3

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19. Cleveland MR\*, Smithwick EAH, Wardrop DH, Brooks RB. 2011. The wetland disturbance index: links with soil and water nitrate concentrations. *Wetlands* 31(5):853-863. doi: 10.1007/s13157-011-0200-9
18. Smithwick EAH. 2010. Pyrogeography: Lessons for future northeastern U.S. landscapes. *Penn State Environmental Law Review* 18(2): 101-121.
17. Turner MG, Smithwick EAH, Tinker DB, and Romme WH. 2009. Variation in foliar nitrogen and aboveground net primary production in young postfire lodgepole pine. *Canadian Journal of Forest Research-Revue Canadienne De Recherche Forestiere* 39:1024-1035.  
<https://doi.org/10.1139/X09-029>
16. Smithwick EAH, Kashian DM, Ryan MG, and Turner MG. 2009. Long-term nitrogen storage and soil nitrogen availability in post-fire lodgepole pine ecosystems. *Ecosystems* 12:792-806.  
<http://dx.doi.org/10.1007/s10021-009-9257-1>
15. Smithwick EAH, Ryan MG, Kashian DM, Romme WH, Tinker DB, and Turner MG. 2009. Modeling the effects of fire and climate change on carbon and nitrogen storage in lodgepole pine (*Pinus contorta*) stands. *Global Change Biology* 15:535-548. doi: 10.1111/j.1365-2486.2008.01659.x
14. Schoennagel T, Turner MG, and Smithwick EAH. 2008. Landscape heterogeneity following large fires: insights from Yellowstone National Park, USA. *International Journal of Wildland Fire* 17: 742-753. doi: 10.1071/WFO7146
13. Metzger KL, Smithwick EAH, Tinker DB, Romme WH, Balsler TC, and Turner MG. 2008. Influence of coarse wood and pine saplings on nitrogen mineralization and microbial communities in young post-fire *Pinus contorta*. *Forest Ecology and Management* 256:59-67.  
<https://doi.org/10.1016/j.foreco.2008.03.043>
12. Turner, MG, Smithwick EAH, Metzger KL, Tinker DB, and Romme WH. 2007. Inorganic nitrogen availability following severe stand-replacing fire in the Greater Yellowstone Ecosystem, inaugural paper, *Proceedings of the National Academy of Science* 104 (12): 4782-4789. doi: 10.1073/pnas.0700180104
11. Smithwick EAH. 2006. Editorial: Role of microbial communities in mediating ecosystem response to disturbance, Special Issue in *Plant and Soil* 289:1-3. doi:10.1007/s11104-006-9084-5
10. Smithwick EAH, Harmon ME, Domingo JB. 2006. Changing temporal patterns of forest carbon stores and net ecosystem carbon balance: The stand to landscape transformation, *Landscape Ecology* 22(1): 77-94. doi: 10.1007/s10980-006-9006-1
9. Smithwick EAH, Mack MC, Turner MG, Chapin III FS, Zhu J, Balsler TC. 2005. Spatial heterogeneity and soil nitrogen dynamics after severe fire in a black spruce (*Picea mariana*) forest, Alaska: Distinct controls at different scales. *Biogeochemistry* 76: 517-537. doi: 10.1007/s10533-005-0031-y

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8. Smithwick EAH, Turner MG, Mack MC, Chapin III, FS. 2005. Post-fire soil N cycling in northern conifer forests affected by severe, stand-replacing wildfires. *Ecosystems* 8: 163-181. doi: 10.1007/s10021-004-0097-8
7. Smithwick EAH, Turner MG, Metzger KL, Balser TC. 2005. Variation in NH<sub>4</sub><sup>+</sup> mineralization and microbial communities with stand age in lodgepole pine (*Pinus contorta*) forests, Yellowstone National Park (USA). *Soil Biology and Biochemistry* 37: 1546-1559. doi: 10.1016/j.soilbio.2005.01.016
6. Homann PS, Harmon ME, Remillard SM, Smithwick EAH. 2005. What the soil reveals: Maximum ecosystem C stores of the Pacific Northwest region, USA. *Forest Ecology and Management* 220: 270-283. doi: 10.1016/j.foreco.2005.08.035
5. Miller JM, Turner MG, Smithwick EAH, Dent LC, Stanley EH. 2004. Spatial extrapolation: the science of predicting ecological patterns and processes. *Bioscience* 54(4): 310-320 doi:10.1641/0006-3568(2004)054[0310:SETSOP]2.0.CO;2
4. Smithwick EAH, Harmon ME, Domingo JB. 2003. Modeling multi-scale effects of light limitations and edge-induced mortality on carbon stores in forest landscapes. *Landscape Ecology* 18(7): 701-721 doi: 10.1023/B:LAND.0000004254.94982.67
3. Korontzi S, Ward DE, Susott RA, Yokelson RJ, Justice CO, Hobbs PV, Smithwick EAH, Hao WM. 2003. Seasonal variation and ecosystem dependence of emission factors for selected trace gases and PM<sub>2.5</sub> for southern African savanna fires. *Journal of Geophysical Research* 108(D24), 4758. doi: 10.1029/2003JD003730
2. Smithwick EAH, Harmon ME, Acker SA, Remillard SM. 2002. Potential upper bounds of carbon stores in the Pacific Northwest. *Ecological Applications* 12(5): 1303-1317. doi: 10.1890/1051-0761(2002)012[1303:PUBOCS]2.0.CO;2
1. Hoffa EA (maiden name), Ward DE, Hao WM, Susott RA, Wakimoto RH. 1999. Seasonality of carbon emissions from biomass burning in a Zambian savanna. *Journal of Geophysical Research* 104: 13,841 – 13,853. doi: 10.1029/1999JD900091

### OTHER PUBLICATIONS

#### Conference Proceedings

- Blackstock, D., Edel-Malizia, S., Bittner, K., and Smithwick, E. 2017. Investigating Interactive video assessment tools for online and blended learning. *Proceedings of the International Conference on eLearning*, Orlando, FL, U.S.A.
- Smithwick, EAH, Westerling A L, Turner MG, Romme WH, Ryan MG. Vulnerability of Landscape Carbon Fluxes to Future Climate and Fire in the Greater Yellowstone Ecosystem.” In: Questioning Greater Yellowstone’s Future: Climate, Land Use, and Invasive Species. Proceedings of the 10th Biennial Scientific Conference on the Greater Yellowstone Ecosystem. October 11–13, 2010, Mammoth Hot Springs Hotel, Yellowstone National Park. C. Andersen, ed., 131–134. Yellowstone National Park, WY, and Laramie, WY: Yellowstone Center for Resources and University of Wyoming William D. Ruckelshaus Institute of Environment and Natural Resources

#### Book Chapters

- Smithwick, EAH. Nutrient Flows on Landscapes. 2019. *Routledge Handbook of Landscape Ecology*, Taylor and Francis, Group; Minor, E., Perry G., Francis R., Millington, J., eds. In review.

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- Smithwick, EAH, Caldwell C, Klippel A, Scheller R, Tuana N, Bird R, Keller K, Lucash M, Nicholas R, Olson S, Ruckert K, Oylar J, Helgeson C, Huang, J. 2018. Transdisciplinary collaborative learning for triangulating ways of knowing across traditional and Western knowledge systems concerning future climate and forests. In *Prep for Collaboration Across Boundaries*, Perz Stephen G., ed., Palgrave.
- Keane, RE, Loehman, R, Clark, J, Smithwick EAH, Miller C. 2015. Exploring interactions among multiple disturbance agents in forest landscapes: simulating effects of fire, beetles, and disease under climate change. Ch.8, pp 201-231, in *Simulation Modeling of Forest Landscape Disturbances*, Perera A., Remmel, R. and Buse L., eds., Springer International Publishing Switzerland, doi: 10.1007/978-3-319-19809-5\_8.
- Smithwick EAH. 2011. Pyrogeography and biogeochemical resilience, pp143-164 in *The Landscape Ecology of Fire*, eds. by D. McKenzie, D. Falk, C. Miller, Springer.
- Smithwick EAH. 2010. Disturbance ecology, biogeochemistry and resilience: three decades of inquiry. Organized Oral Session 34. *Bulletin of the Ecological Society of America* 91:80-93.

## Book Reviews

- Smithwick, EAH. 2018. Book review of *The Palgrave Handbook of Critical Physical Geography*, Lave R, Biermann C, Lane S N, eds. Palgrave., submitted. In review, AAG Review of Books.
- Smithwick EAH. 2006. Gentle introduction to complexity on landscapes. Book Review for *Ecology* 87(11):2954-2955, doi: 10.1890/0012-9658(2006)87[2954:GITCOL]2.0.CO;2

## Data Sets

- Wu, J\*, Smithwick EAH, Ferring D, Hausermann H, Oppong J, Ricciardi V, Tschakert P 2015. Buruli Ulcer (BU) and landscape disturbance in Ghana 2007-2010. Data set. Available online [<http://www.datacommons.psu.edu/>] at The Pennsylvania State University, University Park, Pennsylvania, U.S.A. doi:10.13014/D3G44N6X

## SYNERGISTIC ACTIVITIES

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### Science Community

- Invited Panel Chair, UC Laboratory Fees Research Program Wildfire Review Panel (Oct 2019)
- AAG Task Force on Climate and Inclusivity, 2018-present
- Invited External Peer Reviewer, Swedish Research Council Formas
- Invited External Peer Reviewer, Research Councils UK (RCUK)
- Invited External Reviewer, NSF NRT
- Invited External Peer Reviewer, NSF-Ecosystems (2x)
- Invited External Peer Reviewer, NSF-Geography and Spatial Sciences (4x)
- Invited Panelist, NSF-Ecosystems
- Invited Panelist, NASA ROSES Terrestrial Ecology
- Chair, Users Working Group, NASA/Oak Ridge National Laboratory Distributed Active Archive Center for Biogeochemical Dynamics (ORNL DAAC), 2014-2016
- Member, Users Working Group, NASA/Oak Ridge National Laboratory Distributed Active Archive Center for Biogeochemical Dynamics (ORNL DAAC), 2011-2016

### Journals

- Associate Editor, *Ecosystems*, 1/1/2015 – present
- Associate Editor, *Regional Environmental Change*, 1/1/2014 - 2018
- Editorial Advisory Board member, *Global Change Biology* 2008-2010
- Peer-reviewer:  
*Biogeochemistry*  
*Bioscience*

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- Canadian Journal of Forest Research*  
*Ecology*  
*Ecology and Society*  
*Ecological Modelling*  
*Ecosphere*  
*Ecosystems*  
*Ecological Applications*  
*Ecological Monographs*  
*Environmental & Ecological Statistics*  
*Forest Ecology and Management*  
*Geophysical Research Letters*  
*Global Change Biology*  
*Global Ecology and Biogeography*  
*International Journal of Applied Earth Observation and Geoinformation*  
*Journal of Biogeography*  
*Journal of Ecology*  
*Journal of Mountain Science*  
*Landscape Ecology*  
*Nature Climate Change*  
*New Phytologist*  
*PeerJ*  
*Physical Geography*  
*Plant and Soil*  
*PLoS ONE*  
*Proceedings of the National Academy of Sciences*  
*Science of the Total Environment*  
*Soil Biology and Biochemistry*  
*Soil Science Society of America Journal*
- Guest Editor for *Plant and Soil* Special Issue: Microbial communities and post-disturbance ecosystem function, 2006

## **Membership in Professional Associations**

- American Geophysical Union
- Ecological Society of America
- International Association of Landscape Ecology

## **Organized Conference Sessions/Symposia**

- Landscapes, Food and Diet Quality. Association of American Geographers Annual Meeting, Washington DC, April 2019 [co-organized with Bronwen Powell]
- Nutrient Geographies in the Anthropocene. Association of American Geographers Annual Meeting, Washington DC, April 2019 [co-organized with Russell Hedberg]
- Visualizing Ecosystem Futures – Live!, Symposium, International Association of Landscape Ecology, US-Chapter, Annual meeting, Chicago IL, April 2018 (co-organized with R.Scheller and R. Meetenmeyer).
- Visualizing indigenous forest futures. Resilience 2017, Stockholm, Sweden, August 2017
- Landscape Resilience to changing disturbance dynamics: bold approaches and solutions, International Association of Landscape Ecology – US Chapter, Annual Meeting, Newport RI, April 2012

## Erica A.H. Smithwick - Curriculum Vita

- Understanding Variability in Social Ecological Systems, American Association of Geographers Annual Meeting, Seattle WA, April 2011
- Disturbance and Disturbance Interactions, Association of American Geographers Annual Meeting, Washington DC, April 2010
- Disturbance ecology, biogeochemistry and resilience: three decades of inquiry, Ecological Society of America Annual Meeting, Albuquerque, NM, August 2009
- Role of microbial communities in mediating ecosystem response to disturbance, Ecological Society of America Annual Meeting, August 2006

### Organized Workshops

- Visualizing Forest Futures (VIFF) Community Workshop. December 2016, College of Menominee Nation, Keshena Wisconsin
- National Council for Science and the Environment: The Food-Energy-Water Nexus, 16<sup>th</sup> National Conference and Global Forum on Science, Policy and the Environment, January 2016, Washington D.C.
- Chequamegon Ecosystem Atmosphere Study: Observing and simulating carbon cycle impacts of forest management and climate variability in heterogeneous landscapes, June 2012, Kemp Natural Resources Station, Woodruff WI, co-organizer with Ankur Desai.
- Spatial Landscape Modeling, International Association of Landscape Ecology - US Chapter Annual Meeting, Madison WI, April 2008
- Introduction to Remote Sensing, LTER All-Scientists Meeting, Snowbird UT, 2000
- Career Planning, LTER All-Scientists Meeting, Snowbird UT, 2000

### Invited Workshop Participation

- National Academy of Sciences: A Century of Wildland Fire Research: Contributions to Long-term Approaches for Wildland Fire Management, March 2017
- Sante Fe Institute Workshop: Reinventing the Grid: Designing Resilient, Adaptive and Creative Power Systems, Santa Fe Institute, Santa Fe, New Mexico, April 2015
- KNAW Academy Colloquium. Climate models revisited: the biogeochemical consequences of mycorrhizal dynamics, Amsterdam, The Netherlands, April 2015
- Shifting Seasons: Building Tribal Capacity for Climate Change Adaptation Summit, Kenosha WI, October 2014
- NOVUS Workshop: Fort Collins Colorado USA, September 2014
- Global Sustainable Bioenergy and LACAf, Kruger National Park, South Africa, May 2014
- Global Sustainable Bioenergy and LACAf, Ititaba, Sao Paulo, Brazil, November 2013
- COMPASS Scientific Communication Workshop, Pennsylvania, September 2013
- Scaling root processes: Global Impacts Workshop, DOE, Washington DC, March 2012
- PROBE Workshop: Paleo Reconstructions of Biogeochemical Environments, NSF, Manhattan, KS, April 2012
- Living Laboratory Workshop, Eastern Cape South Africa, September 2011
- Steering Committee, Wild Coast Living Laboratory, South Africa, 2011-2013

### Elementary and High School Outreach

- WiSciFiles Live Chat (Facebook) with two middle school classrooms in PA, March 2016: <http://wpsu.psu.edu/live-wiscifiles/>
- Mentor, Summer Experience in Earth and Mineral Sciences (SEEMS), a research program for underrepresented high school students, "Pennsylvania Soils: From Landscape to Field Plots and Back Again," Penn State University, Summer 2012

## Erica A.H. Smithwick - Curriculum Vita

- Instructor, “Our breathing planet: Introduction to the Carbon Cycle”, MathOptions program for 7<sup>th</sup> grade girls, Penn State DuBois, DuBois, Pennsylvania, May 2011
- Participant and Speaker, Remote sensing of land use change and Buruli Ulcer, Penn State University, September 2013
- Participant and Speaker, Experiencing Authentic Science as Process, Penn State University, May 2011
- Participant and Speaker, Teacher Workshop and Kickoff Meeting for Ghana Buruli Ulcer project, Penns Valley High School, December 2010
- Speaker, Complex System Science: Yellowstone Ecosystem and Buruli Ulcer, Penns Valley High School, December 2010
- Participant and speaker, Penns Valley Teacher Workshop, Complex Systems Science, Penn State University, November 2010
- Instructor, “Seeing Through the Smoke: Understanding Fire in Yellowstone National Park” Environmental Issues in National Parks Lecture Series, public lecture and high school outreach program, Ashland University, Ashland, Ohio, April 2007
- Instructor and Mentor, Summer Experience in Earth and Mineral Sciences (SEEMS), a research program for underrepresented high school students, “Nitrogen Cycling in the Bald Eagle Watershed”, Summer 2008
- Instructor, “Our breathing planet: Introduction to the Carbon Cycle”, MathOptions program for 7<sup>th</sup> grade girls, Penn State DuBois, DuBois, Pennsylvania, May 2008

### Public service

- Panelist for Discussion of Documentary “The Most Unknown,” The Pennsylvania State University (Oct 2018)
- Panelist for Discussion of Documentaory “Managing Risk in a Changing Environment”, State Theatre (Spring 2017)
- Panelist for Discussion of Documentary “Before the Flood”, University Park, PA (Fall 2016)
- Pennsylvania State Wildlife Action Plan Revision Climate Change Committee, 2013 - 2015
- Pennsylvania Natural Resources Working Group for Climate Change Adaptation member, PA Department of Environment, The Nature Conservancy, others, 2010-2012
- Invited U.S. Senate Science Briefing: H.R. 4200 (salvage logging legislation), 2006
- Instructor Ecosystem Dynamics of Fire, USDA course for prescribed fire managers, sponsored by the Fish and Wildlife Service, Stevens Point, WI, 2007

### PRESS AND OUTREACH

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- Television, Videos and Documentaries
  - Invited expert guest, WPSU Conversation Live: Climate (TV and FM Radio), Thursday April 27<sup>th</sup> 2017
  - Interviewed and filmed for WPSU documentary “Managing Risk in a Changing Environment” <http://wpsu.psu.edu/changingclimate/>
  - WPSU documentary “ Carbon and Conservation in South Africa”, November 4, 2015, hosted on YouTube <https://www.youtube.com/watch?v=sqTdsCgaAGQ>
  - Featured in WPSU documentary (WiSciFiles) about Women in Science profiles <https://wpsu.psu.edu/digital/women-in-science-profiles/>
    - WiSciFiles video was featured on Penn State’s main home page (pennstate.edu)
- Featured in **Centre Daily Times**

## Erica A.H. Smithwick - Curriculum Vita

- “Erica Smithwick sets out on a ‘grand adventure’” March 11, 2017  
<http://www.centredaily.com/living/article138013778.html>
- “Penn State climatologists screen “before the flood”; talk climate change”, Nov 2, 2016  
<http://www.centredaily.com/news/local/education/penn-state/article112213327.html>
- Featured in **Penn State News**:
  - <https://news.psu.edu/story/578820/2019/07/08/academics/new-isee-leaders-mindful-energy-environmental-challenges>
  - <https://news.psu.edu/story/578453/2019/06/19/research/south-african-forests-show-pathways-sustainable-future>
  - <https://news.psu.edu/story/535549/2018/09/10/research/nsf-funds-3-million-graduate-training-program-focused-food-energy>
  - How land use affects the spread of disease, Sept 8, 2016  
<http://news.psu.edu/story/424659/2016/09/08/research/how-land-use-affects-spread-disease>
  - Professor awarded Fulbright to study tree carbon storage, teach in South Africa, October 30, 2015 <http://news.psu.edu/story/378044/2015/10/29/research/professor-awarded-fulbright-study-tree-carbon-storage-teach-south>
  - Local women in STEM-related professions to be highlighted in new WPSU web series, Feb 13, 2017 <http://news.psu.edu/story/450351/2017/02/13/public-events/local-women-stem-related-professions-be-highlighted-new-wpsu>
  - Climate change impacts on Menominee nation’s forest home focus of NSF funding:  
<http://news.psu.edu/story/431109/2016/10/10/climate-change-impacts-menominee-nations-forest-home-focus-nsf-funding>
  - Interactive videos used to explore complexities of conservation in online course:  
<http://news.psu.edu/story/372878/2015/10/05/academics/interactive-videos-used-explore-complexities-conservation-online>
  - “Taste test?” Deer preferences seem to help non-native invasive plants spread, April 25, 2016 <http://news.psu.edu/story/406166/2016/04/25/research/taste-test-deer-preferences-seem-help-non-native-invasive-plants>
  - “Interactive video quizzes prove successful for student engagement.” October 7, 2016,  
<http://tlt.psu.edu/2016/10/07/interactive-video-quizzes-prove-successful-for-student-engagement/>
- Quoted interview
  - “Northeast Christmas tree farmers get drought in their stockings” **Christian Science Monitor**, December 8, 2016,  
<http://www.csmonitor.com/Environment/Inhabit/2016/1208/Northeast-Christmas-tree-farmers-get-drought-in-their-sockings>
  - NSF Press Release: “NSF awards \$16.7 million for research on how humans, environment interact: [https://www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=189781](https://www.nsf.gov/news/news_summ.jsp?cntn_id=189781)
  - “Deer turn up their noses at some invasive species,” **Futurity**, April 16, 2016  
<http://www.futurity.org/deer-invasive-species-plants-1141442-2/>
  - “How fire could change the face of the West” **Wired Magazine**, July 6, 2012  
<https://www.wired.com/2012/07/western-fire-transformation/>
  - “Why Big, Intensive Wildfires are the New Normal.” **National Geographic**, August 30, 2013, <http://news.nationalgeographic.com/news/2013/08/130827-wildfires-yosemite-fire-firefighters-vegetation-hotshots-california-drought/>

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- “Climate change to increase Yellowstone wildfires dramatically,” July 25, 2011, **ScienceDaily** <https://www.sciencedaily.com/releases/2011/07/110725152847.htm>
- “Wildfire!” **WhyFiles**, July 7, 2011 <http://whyfiles.org/2011/wildfire-2/>

## TEACHING

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EMS First year Seminar: Global Conservation

Botany 301, Landscape ecology module, Rhodes University Spring 2016

Global Parks and Sustainability (GEOG097/296/001), resident, online, and hybrid

Landscape Ecology (GEOG 414, GEOG 311)

Graduate Seminar in Ecological Modeling (GEOG 510/597)

Advances in Ecology (ECLGY 597, 4 lecture module)

Perspectives in Landscape Ecology (GEOG 597E, Graduate Seminar, Fall 2008)

Landscape Genetics and Microbial Biogeography (ECOL 597B, Spring 2008)

Introduction to Physical Geography (GEOG 010)

Conservation and Climate: Ecosystem Change in Sub-Saharan Africa (GEOG 497U)

## INVITED SEMINARS, COLLOQUIA

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- 2019 Smithwick EAH, Zipp K, Wu H, Kaye M, Taylor A, Miller Z, Shr, Y-H, Zhao, A, Dems C, Newman P. Pyrogeography of the mid-Atlantic: how social and ecological processes shape regional fire management.” 6<sup>th</sup> Fire in Eastern Oak Forests Conference, State College PA [Invited Plenary]
- 2018 The Nature Conservancy, Maryland Chapter, September 11, 2018.
- 2017 Lehigh University, PA. September 29, 2017
- 2017 Digital Storytelling through interactive video. COIL Conversations Live, The Pennsylvania State University, University Park, PA, USA, March
- 2017 Molo to Muti: evolving adventures in transformative global engagement in South Africa. Fulbright Seminar Series, The Pennsylvania State University, University Park, PA, USA, 20 March
- 2017 Landscape ecology as a framework to understand socio-ecological systems. SCRiM Seminar Series, The Pennsylvania State University, University Park, PA, USA, March
- 2016 Recreation, Parks, and Tourism Management Seminar, The Pennsylvania State University, University Park, PA, USA 14 October
- 2016 Thinking spatially and socially: enhancing landscape management under rapid ecological change. Big Questions Ecology Colloquium, The Pennsylvania State University, University Park, PA, USA, 3 October
- 2016 Perceiving forest change: bridging indigenous knowledge and virtual ecology. Department of Environmental Studies, Rhodes University, South Africa, June 15
- 2016 Landscape ecology as a scientific framework to address socio-ecological systems in Africa. Department of Botany, Rhodes University, South Africa, March 2
- 2015 Linking plants and soils to understand ecosystem thresholds in response to nitrogen deposition. University of Maryland Center for Environmental Science, Appalachian Laboratory, February 12
- 2014 Scaled productivity response of nutrient additions in South African Grasslands, 2<sup>nd</sup> Africa-IALE webinar on Landscape Ecology, May 29
- 2014 Shifting geographies of resilience: fire, climate, and vegetation of Yellowstone National Park. Department of Botany, Rhodes University, Grahamstown, South Africa, April 7
- 2014 Shifting geographies of disturbance: managing for ecological resilience in a changing world. Department of Geography, Texas A & M University, College Station, TX, USA, 31 January
- 2013 Department of Forest Resources and Environmental Conservation Seminar, Virginia Tech University, Blacksburg VA, USA October 7

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- 2012 NE Chapter of Society of Restoration Ecology, New York, USA March 23 [**Keynote**]
- 2010 Fire in the Eastern U.S. Symposium, Penn State Environmental Law Review, The Pennsylvania State University, University Park, PA, USA April [Invited Panelist]
- 2010 Department of Geology and Geography, Colloquium, University of West Virginia, Morganton, WV, USA, April
- 2010 Department of Geosciences Colloquium speaker, The Pennsylvania State University, University Park, PA, USA November
- 2010 Department of Anthropology Colloquium, The Pennsylvania State University, University Park, PA, USA April
- 2009 Cary Institute for Ecosystem Studies Seminar Speaker, Millbrook NY, USA, February 12
- 2009 Department of Geography Seminar Series, The Pennsylvania State University, University Park, PA, USA March 20
- 2009 Department of Forest Resources Seminar Series, The Pennsylvania State University, University Park, PA, USA March 20
- 2008 “Unifying Concepts of Landscapes: Finding Common Ground.” Department of Biology Seminar Series, The Pennsylvania State University, University Park, PA, USA, September 30
- 2007 Ecosystem Dynamics of Fire, USDA course for prescribed fire managers, sponsored by the Fish and Wildlife Service, Stevens Point, WI, USA
- 2007 Seeing Through the Smoke: Understanding Fire in Yellowstone National Park. Environmental Issues in National Parks Lecture Series, public lecture and high school outreach program, Ashland University, Ashland OH, USA, April

### Workshop Presentations

- 2016 Visualizing forest futures. ViFF Workshop, College of Menominee Nation, November 30.
- 2015 Landscape disturbance and Buruli Ulcer. Ghana Teacher Symposium for reBUild (Research and Education on Buruli Ulcer, Inundations, and Land Disturbance), University Park, PA, USA.
- 2015 Improving the representation of mycorrhizal dynamics in terrestrial models. KNAW Academy Colloquium: Climate models revisited: the biogeochemical consequences of mycorrhizal dynamics, Amsterdam, The Netherlands, 8-10 April [Invited]
- 2015 “Flipping the switch: ecological perspectives on resilience” presented at Santa Fe Institute Workshop: Reinventing the Grid: Designing Resilient, Adaptive and Creative Power Systems, Santa Fe Institute, Santa Fe, NM, USA, 13-17 April [Invited]
- 2014 *Richard, T, Jacobson M, Smithwick EAH.* Energy security and human development: Pathways to Sustainability. Global Sustainable Bioenergy and LACAf, Kruger National Park, April 1 [Invited]
- 2014 What is the pace of changes in disturbance regimes and consequences for biogeochemical processes and ecosystem function? NOVUS Workshop: Fort Collins CO, USA 8 September [Invited]
- 2013 Smithwick EAH and Kemanian A. Global Sustainable Bioenergy and LACAf workshop, Itatiba/Sao Paolo, Brazil, November 12-14 [Invited]
- 2012 Nitrogen cycling in Yellowstone National Park. PROBE Workshop. Paleo Reconstructions of Biogeochemical Environments. Manhattan, Kansas, USA, April
- 2012 Smithwick EAH, \*Naithani KJ, and \*Baldwin DC. Incorporation of disturbance and seasonality in regional terrestrial carbon flux upscaling. The ChEAS 2012 Meeting, "Observing and simulating carbon cycle impacts of forest management and climate variability in heterogeneous landscapes", Kemp Natural Resources Station, Woodruff, WI, USA, 27 June
- 2012 Representation of roots/root processes in models: from ecosystem-scales to GCM DOE- funded workshop, Scaling Root Processes: Global Impacts, Washington DC March 7-9 [Invited]

# Erica A.H. Smithwick - Curriculum Vita

## PROFESSIONAL CONFERENCE PRESENTATIONS

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\*indicates Smithwick advisee or post-doc

- 2019 \*Peeler J, **Smithwick EAH**. Convergence research on landscape and seascape resilience in the Anthropocene. 10<sup>th</sup> International Association of Landscape Ecology (IALE) World Congress, University of Milano-Bicocca, Milan, Italy, July 1-5.
- 2019 Lucash M, Huang J, Keller K, Klippel A, Nicholas R, **Smithwick EAH**. Using robust decision-making and virtual reality to evaluate management tradeoffs under climate change. 10<sup>th</sup> International Association of Landscape Ecology (IALE) World Congress, University of Milano-Bicocca, Milan, Italy, July 1-5.
- 2019 **Smithwick EAH**. Impactful partnerships among graduate students and managers for regenerative landscape design. 10<sup>th</sup> International Association of Landscape Ecology (IALE) World Congress, University of Milano-Bicocca, Milan, Italy, July 1-5.
- 2019 Smithwick, E. 2019. Nutrient Flows in the Landscape. American Association of Geographers Annual Meeting, Washington D.C., April 5<sup>th</sup>.
- 2019 **Smithwick EAH**, Zipp K, Wu H, Kaye M, Taylor A, Miller Z, Shr, Y-H, Zhao, A, Dems C, Newman P. Firescapes in the mid-Atlantic: mismatches between social perceptions and prescribed fire use. Pennsylvania Prescribed Fire Council, Gettysburg PA, February 6. [Invited Plenary]
- 2019 \*Olson, S, **Smithwick EAH**, Lucash M. Shifts in forest structure and composition induced by emerald ash borer under a changing climate. US-IALE Annual Meeting, Fort Collins, CO, April 7-11.
- 2018 Keller, K. (presenter), **Smithwick EAH**, Klippel A, Nicholas R, Helgeson C, Lucash M, and Radke N. How do biodiversity and human values shape forest management under climate change? Some preliminary lessons from an interesting (read hard) problem. Invited talk at the Society for Decision Making Under Deep Uncertainty Meeting. Culvert City (CA), November 13 (2018)
- 2018 **Smithwick EAH**, Zipp K, Wu H, Kate M, Taylor A, Newman P, Shr Y-H, Zhao A, Dems C, Miller, Z. Firescapes in the mid-Atlantic: Mismatches between social perceptions and prescribed fire use. The Nature Conservancy, MD Chapter, September 11, 2018. [Invited]
- 2018 **Smithwick EAH** Panel Discussant: Sustain WHAT?: Wrestling with the Truths of Sustainability and Climate Science, The Humanities Institute, April, 2018 [Invited]
- 2018 **Smithwick EAH** Author Meets Critics Panel for Handbook of Critical Physical Geography. Association of American Geographers Annual Meeting, New Orleans, LA, April 11, 2018 [Invited]
- 2018 **Smithwick EAH**, Zipp K, Wu H, Kate M, Taylor A, Newman P, Shr Y-H, Zhao A, Dems C, Thurston E. Firescapes in the mid-Atlantic: Mismatches between social perceptions and prescribed fire use. Association of American Geographers Annual Meeting, New Orleans, LA, April 11, 2018
- 2018 **Smithwick EAH**, Zipp K, Wu H, Kate M, Taylor A, Newman P, Shr Y-H, Zhao A, Dems C, Miller, Z. Firescapes in the mid-Atlantic: Mismatches between social perceptions and prescribed fire use. Eastern States Section of the Combustion Institute annual meeting, The Pennsylvania State University, March 4-7, 2018 [Invited Plenary]
- 2017 **Smithwick EAH**. Dreaming about the future: integrating traditional and technological visualizations about future forests. Resilience 2017, Stockholm, Sweden, 22 August [Oral Presentation, Accepted]
- 2017 \*Peeler, J and **Smithwick EAH**. Exploring invisibility with species distribution modeling: how does fire promote cheatgrass invasion within lower montane forests? Ecological Society of America Annual Meeting, Portland OR, USA, 10 August [Oral Presentation, Accepted]

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- 2017 Hedberg II RJ, **Smithwick EAH**, White C. A soil health approach to phosphorus cycling and soil fertility resilience in a Mid-Atlantic local food system initiative. Ecological Society of America Annual Meeting, Portland OR, USA, 7 August [Oral Presentation, Accepted]
- 2017 Horn KJ, Thomas RQ, Pardo LH, Clark CM, Fenn ME, Larence GB, Perakis SS, **Smithwick EAH**, Baldwin D, Braun S, Nardin A, Perry CH, Phelan JN, Schaberg PG, St. Clair SB, Warby R, Watmough S. Continental scale impact of concurrent atmospheric sulfur and nitrogen deposition on individual tree species Ecological Society of America Annual Meeting, Portland OR, USA, 10 August [Oral Presentation, Accepted]
- 2017 **Smithwick EAH**. World on fire: using models to forecast ecosystem state change from human-climate-fire interactions. Ecological Society of America Annual Meeting, Portland OR, USA, 10 August [Oral Presentation, Invited]
- 2017 **Smithwick EAH** and Klippel A. Visualizing forest futures under climate uncertainty by integrating multiple ways of knowing. Exploring visualization tools for communicating Natural Resource Management Information, U.S. Forest Service, Portland OR, U.S.A. [Online Oral Presentation, Invited], 19 April
- 2017 **Smithwick, EAH**, Caldwell C, Klippel A, Scheller RM, Tuana N, Bird R, Keller K, Lucash M, Nicholas R. Visualizing Forest Futures under Climate Uncertainty by Integrating Multiple Ways of Knowing, American Association of Geographers Annual Meeting, Boston, MA, USA, 7 April [Oral Presentation, Invited]
- 2017 \*Peeler J, **Smithwick EAH**. Predicting spread of cheatgrass (*Bromus tectorum*) on a landscape scale in Shoshone National Forest, WY. American Association of Geographers Annual Meeting, Boston, MA, USA, 7 April [Oral Presentation, Accepted]
- 2016 Klippel A, Simpson M, Keller K, **Smithwick EAH**, Wallgrun JO, Garner G, Huang J, Oprean D, Bansal S. iVR for Climate Change Visualizations. Connecting Cognitive Science and Climate Science, British Computer Society, London, England, 10-11 November [Oral Presentation, Accepted]
- 2016 **Smithwick EAH**, \*Baldwin DC, \*Naithani KJ. Quantifying spatial patterns in grassland response to nutrient additions." Savanna Science Network Meeting, Kruger National Park, Skukuza, South Africa, 15 March [Oral Presentation, Accepted]
- 2016 Naithani KJ, Konzelman C, Tschakert P, and **Smithwick EAH**. Exploring the Buruli Ulcer Incidence across a socio-ecological landscape in Ghana. American Geophysical Union annual meeting, San Francisco, CA, USA, 12-16 December. [Poster, Accepted]
- 2016 Konzelman C, \*Wu J, Tschakert P, **Smithwick EAH**, and \*Naithani KJ. Exploring the Buruli Ulcer Incidence in Ghana in Response to Landscape Disturbance, Climate, and Social Factors. Arkansas Water Resources Center Annual Water Conference, Fayetteville AK, USA, 26 July. [Poster, Accepted]
- 2015 **Smithwick EAH**, \*Baldwin DC, Pardo LH, Thomas RQ, Horn KT, Lawrence GB, Bailey, DW, Brau S, Clar CM, Fenn M, Nordin A, Perakis SS, Perry CH, Phelan JN, Schaberg PG, St.Clair S, Warby R, Watmough S. Linking plants and soils to understand ecosystem thresholds in response to N deposition at a continental level. Ecological Society of America Annual Meeting, Baltimore MD, USA, 13 August [Invited, symposium]
- 2015 \*Baldwin DC, Lin H, Manfred S, **Smithwick EAH**. Downscaling satellite data for predicting catchment-scale root zone soil moisture with ground-based sensors and an ensemble Kalman filter. American Geophysical Union, San Francisco, CA, USA, December [Oral Presentation, Accepted]
- 2015 \*Baldwin DC, Lin H, Manfred S, **Smithwick EAH**. Mapping high resolution catchment-scale root zone soil moisture content with ground-based sensor and satellite data. Soil Science Society of America Annual Meeting Minneapolis MN, USA November [Oral Presentation, Accepted]
- 2015 \*Wu J, Tschakert P, Kluste E, Ferring D, Ricciardi V, Hausermann H, Oppong J, **Smithwick**

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- EAH.** Land cover and Buruli ulcer disease in southwest Ghana. American Association of Geographers Annual Meeting, Chicago, IL, USA, April [Oral Presentation, Accepted]
- 2015 \*Taber E, Smithwick EAH. Do protected areas influence malaria prevalence in sub-Saharan Africa? American Association of Geographers Annual meeting, Chicago IL, USA, April [Oral Presentation, Accepted]
- 2015 \*Naithani KJ, Davis K, Keller K, **Smithwick EAH.** Incorporation of landscape disturbance in probabilistic upscaling of CO<sub>2</sub> fluxes and associated uncertainties. Ecological Society of America Annual Meeting, Baltimore MD, USA 15 August [Oral Presentation, Accepted]
- 2015 \*Baldwin DC, \*Aaron D, **Smithwick EAH.** How regional patterns of soil moisture are correlated with inter-annual climate variability. American Association of Geographers Annual meeting, Chicago IL, USA, April [Oral Presentation, Accepted]
- 2015 \*Davis E, Kemanian A, **Smithwick EAH.** Ecological Society of America Annual Meeting, Baltimore MD, USA, 13 August [Oral Presentation, Accepted]
- 2015 Moon JB, Wardrop DH, \*Naithani KJ, Fennessy MS, **Smithwick EAH.** Effects of human-induced stressors on microbial community landscapes in forested headwater wetlands: are their clear links to process? Ecological Society of America Annual Meeting, Baltimore MD, USA 13 August [Oral Presentation, Accepted]
- 2015 \*Averill K, Mortensen D, **Smithwick EAH.** Influence of white-tailed deer and forest fragmentation on invasive introduced plants. Ecological Society of America Annual Meeting, Baltimore MD, USA 13 August [Oral Presentation, Accepted]
- 2015 \*Naithani KJ, Kennedy RE, Davis KJ, Keller D, Baldwin D, Masek J, Xiao J, **Smithwick EAH.** Understanding and quantifying uncertainties in upscaling CO<sub>2</sub> fluxes and its implications for carbon management. NACP PI Meeting. Washington DC, USA, 27 January, [Oral Presentation, Invited, Plenary talk]
- 2014 \*Naithani KJ, Kennedy RE, Davis KJ, Keller D, \*Baldwin D, Masek J, **Smithwick EAH.** Incorporation of landscape disturbance in probabilistic upscaling of CO<sub>2</sub> fluxes and associated uncertainties. Ecological Society of America Annual Meeting, Sacramento CA, USA, 10-15 August [Oral Presentation, Accepted]
- 2014 **Smithwick EAH,** \*Baldwin DC, Horn KJ, Pardo LH, Thomas RQ. Integrating plant responses with soil chemistry at a continental scale, North American Deposition Program: The global connection of air and water, Indianapolis, IN, USA, 21-24 October [Oral Presentation, Accepted]
- 2014 \*Baldwin DC and **Smithwick EAH.** Improving estimates of root-zone soil water content using soil physical properties and remotely sensed soil moisture, American Association of Geographers Annual Meeting, Tallahassee FL, USA, 9 April [Oral Presentation, Accepted]
- 2013 \*Baldwin DC, Miller D, Singha K, Davis KJ, and **Smithwick EAH.** Improving estimates of root-zone soil water content using soil hydrologic properties and remotely sensed soil moisture. American Geophysical Union Annual Meeting, San Francisco CA, USA, December [Oral Presentation, Accepted]
- 2013 **Smithwick EAH,** Kennedy R, Naithani K, Davis K, Keller K, Parker L, MacEachren A. Influence of landscape disturbance patterns on modeled carbon fluxes and associated uncertainty. American Geophysical Union Annual Meeting, San Francisco CA, USA, December [Oral Presentation, Accepted]
- 2013 \*Naithani KJ, \*Baldwin DC, **Smithwick EAH,** Davis KJ, Keller K, Kennedy RE, and Masek JG. Incorporation of disturbance and seasonality in terrestrial carbon flux upscaling. Postdoctoral Research Exhibition, The Pennsylvania State University, University Park, PA, USA, 12 September [Poster, Accepted]
- 2013 \*Naithani KJ, Davis K, Keller K, **Smithwick EAH.** Comparison of three probabilistic approaches to upscale CO<sub>2</sub> fluxes and associated uncertainties. American Geophysical Union Annual Meeting, San Francisco CA, USA, December [Oral Presentation, Accepted]

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- 2013 \*Naithani KJ, \*Baldwin DC, **Smithwick EAH**, Davis KJ, Keller K, Kennedy RE, and Masek JG. Incorporation of disturbance and seasonality in terrestrial carbon flux upscaling. CarbonEARTH Conference, The Pennsylvania State University, University Park, PA, USA, 23 February [Poster, Accepted]
- 2013 \*Wilberding S and **Smithwick EAH**. Modeling municipal level green infrastructure runoff mitigation using EPA SUSTAIN. Ecological Society of America Annual Meeting, Minneapolis, MN, USA, 7 August [Oral Presentation, Accepted]
- 2013 **Smithwick EAH**, \*Crisfield EA. Bridging paleo- and neo-perspectives in conservation management: a tale of two mountain landscapes. Ecological Society of America Annual Meeting, Minneapolis, MN, USA, 6 August [Oral Presentation, Invited]
- 2013 **Smithwick EAH**, \*Naithani KJ, Davis KJ, Kennedy RE, Bianchetti R., Parker L, \*Baldwin DC, Keller K, Masek JG. Incorporating disturbance and associated uncertainty into diagnostic terrestrial carbon flux upscaling. 2013 NASA Terrestrial Ecology Science Team Meeting, La Jolla, California, USA April 30-May 2 [Poster, Accepted]
- 2013 \*Naithani KJ, \*Baldwin DC, **Smithwick EAH**, Davis KJ, Keller K, Kennedy RE, and Masek JG. Incorporation of disturbance and seasonality in terrestrial carbon flux upscaling. The 4<sup>th</sup> NACP All-Investigators Meeting, Albuquerque, NM, USA. 4-7 February [Poster, Accepted]
- 2012 \*Crisfield EA and **Smithwick EAH**. Predicting Fire-Climate Feedbacks and Changing Forest Composition in the Appalachian Mountains, U.S.A. In Symposium entitled Forest Regeneration and Climate Change, organized by M Kaye and F Valladares, EcoSummit, Columbus, Ohio, USA, 1-5 October [Oral Presentation, Accepted]
- 2012 \*Naithani KJ, \*Baldwin DC, **Smithwick EAH**, Davis KJ, Keller K, Kennedy RE, and Masek JG. Incorporation of disturbance and seasonality in terrestrial carbon flux upscaling. American Geophysical Union Fall Meeting, San Francisco, California, USA, December [Oral Presentation, Accepted]
- 2012 \*McCormack ML, Adams TS, **Smithwick EAH**, and Eissenstat DM. Fine Root Turnover: A Story of Root Production and Root Phenology. American Geophysical Union Fall Meeting, San Francisco, California, USA, December [Oral Presentation, Accepted]
- 2012 \*Hanson, S and **Smithwick EAH**. Psidium Guajava: Spatial Distribution of Invasive Guava along Roadways and Trail Ways within the Dwesa-Cwebe Nature Reserve. Ecological Society of America Annual Meeting, Portland, Oregon, USA, 5-10 August [Poster, Accepted]
- 2012 \*Bulick SM, **Smithwick EAH**, and Crane RG. Scientific Engagement within Informal and Transformative Learning Environments in a Global Context. Ecological Society of America Annual Meeting, Portland, Oregon, USA, 5-10 August [Poster, Accepted]
- 2012 \*McCormack ML, \*Crisfield EA, Raczka B, Pritchard SG, Eissenstat DM, and **Smithwick EAH**. Fine Root Lifespan and Turnover at Ecosystem and Landscape Scales: Sensitivity of Four Ecological Models and New Strategies for Model Incorporation. Ecological Society of America Annual Meeting, Portland, Oregon, USA, 5-10 August [Oral Presentation, Accepted]
- 2012 \*Naithani KJ, **Smithwick EAH**, Davis KJ, Keller K, Kennedy RE, and Masek JG. Incorporation of Disturbance and Seasonality in Regional Terrestrial Carbon Flux Upscaling. ForestSAT, Oregon State University, Corvallis, Oregon, USA, 11-14 September [Oral Presentation, Accepted]
- 2012 \*Naithani KJ, **Smithwick EAH**, Davis, KJ, Keller K, Kennedy RE, and Masek JG. Incorporation of Disturbance in Regional Terrestrial Carbon Flux Upscaling. Ecological Society of America Meeting, Portland, Oregon, USA, 5-10 August [Poster, Accepted]
- 2012 Clay N, **Smithwick EAH**, Tschakert P, Hausermann H, Ferring D. Landscape Disturbance and disease emergence: thresholds of spatial and temporal interaction. Annual Meeting of the US-Chapter of the International Association of Landscape Ecology, Newport RI, USA, 9 April [Oral Presentation, Accepted]

## Erica A.H. Smithwick - Curriculum Vita

- 2012 **Smithwick EAH**, Turner MG, Westerling AL, Romme WH, Ryan MG. Modeling carbon tipping points in the Greater Yellowstone Ecosystem: Lessons Learned. Annual Meeting of the US-Chapter of the International Association of Landscape Ecology, Newport RI, USA, 11 April [Oral Presentation, Accepted]
- 2012 \*Crisfield EA, **Smithwick EAH**. Integrating a DGVM (MC<sub>1</sub>) with a statistical habitat suitability model (DISTRIB) to explore feedbacks between fire, climate change, and tree species composition. Annual Meeting of the US-Chapter of the International Association of Landscape Ecology, Newport RI, USA, 11 April [Oral Presentation, Accepted]
- 2012 \*Crisfield EA, **Smithwick EAH**. Topographic Complexity in the Appalachian Mountains (U.S.) with Implications for Biodiversity Conservation and Climate Change Adaptation. Annual Meeting of the US-Chapter of the International Association of Landscape Ecology, Newport RI, USA, 9 April [Oral Presentation, Accepted]
- 2011 Hagarty J, Voegborlo R, **Smithwick EAH**, and Singha K. Land Use, Water Quality, and Incidence of Buruli Ulcer in Gold-Mining Regions of Ghana. American Geophysical Union Fall Meeting, San Francisco, California, USA, 7 December [Oral Presentation, Accepted]
- 2011 Keane RE, Loehman RA, **Smithwick EAH**. Climate Change Effects on Multiple Disturbance Interactions: Wildland Fire, Mountain Pine Beetles, and Blister Rust Simulations on a Yellowstone National Park Landscape. American Geophysical Union Fall Meeting, San Francisco, California, USA, 7 December [Oral Presentation, Accepted]
- 2011 **Smithwick EAH**. The Cultivation and Conservation of Biological Diversity, Part I. Panelist. American Association of Geographers Annual Meeting, Seattle, Washington, USA, April [Oral Presentation, Accepted]
- 2011 **Smithwick EAH**. Quantifying Environmental and Landscape Drivers of Disease Emergence: Buruli Ulcer in Ghana. American Association of Geographers Annual Meeting, Seattle, Washington, USA, April [Oral Presentation, Accepted]
- 2011 **Smithwick EAH**, Hagarty J, Voegborlo R, Singha K. Coupled Socio-Ecological Drivers of Carbon Storage in South African Coastal Lowland Landscapes. American Geophysical Union Fall Meeting, San Francisco, California, USA, 9 December [Oral Presentation, Accepted]
- 2011 **Smithwick EAH**, \*Naithani KJ, Davis KJ, Keller K, Kennedy RE, Masek JG. Influence of Disturbance and Seasonality on Regional Carbon Flux Upscaling. NASA Carbon Cycle & Ecosystems Joint Workshop, Alexandria, Virginia, USA 3-7 October [Poster, Accepted]
- 2011 **Smithwick EAH**, \*Naithani KJ, Balsler TC, Romme WH, and Turner MG. Fine-Scale Spatial Distribution of Microbial Communities and Soil Nitrogen Cycling Following Wildfire. 1st Conference on Spatial Statistics, Enschede, The Netherlands, 23-25 March, [Oral Presentation, Accepted]
- 2010 \*Naithani KJ and **Smithwick EAH**. A Boolean Network Model to Test Ecosystem Resilience under Elevated Nitrogen Deposition and Drought. International Forestry and Environment Symposium, Nugegoda, Sri Lanka, 17-26 November [Oral Presentation, Accepted]
- 2010 **Smithwick EAH**, Westerling AL, Turner MG, Romme WH, and Ryan MG. Fire, Vegetation, Climate Interactions in the Greater Yellowstone Ecosystem: Tipping Points and Landscape Vulnerability. American Geophysical Union Fall Meeting, San Francisco, California, USA December [Oral Presentation, Accepted]
- 2010 Moon JB, Wardrop DH, and **Smithwick EAH**. Impacts of Surrounding Land Cover on Headwater Wetland Edaphic Habitat Types and Their Associated Microbial Communities. American Geophysical Union Fall Meeting, San Francisco, California, USA, December [Oral Presentation, Accepted]
- 2010 Ryan MG, Kashian DM, Romme WH, Turner MG, **Smithwick EAH**, and Tinker DB. Fire and Carbon Cycling for the Yellowstone National Park Landscape. American Geophysical Union Fall Meeting, San Francisco, California, USA, December [Oral Presentation, Accepted]

## Erica A.H. Smithwick - Curriculum Vita

- 2010 **Smithwick EAH**, Westerling AL, Turner MG, Romme WH, and Ryan MG. Vulnerability of Landscape C Fluxes to Future Climate and Fire in the Greater Yellowstone Ecosystem. The 10th Biennial Scientific Conference on the Greater Yellowstone Ecosystem: Questioning Greater Yellowstone's Future: Climate, Land Use, and Invasive Species, Mammoth Hot Springs Hotel, Yellowstone National Park, Wyoming, USA 11 October [Oral Presentation, Accepted]
- 2010 Westerling AL and **Smithwick EAH**. Fire Regime Effects of Anthropogenic Changes in Rocky Mountains Climate and Hydrology. The 10th Biennial Scientific Conference on the Greater Yellowstone Ecosystem: Questioning Greater Yellowstone's Future: Climate, Land Use, and Invasive Species, Mammoth Hot Springs Hotel, Yellowstone National Park, Wyoming, USA, 11 October [Oral Presentation, Accepted]
- 2010 \*Naithani KJ and **Smithwick EAH**. Nitrogen Dynamics: A Graph-Theoretic Approach. Ecological Society of America Annual Meeting, Pittsburgh, Pennsylvania, USA, 2-8 August [Oral Presentation, Accepted]
- 2010 Israel A and **Smithwick EAH**. Teaching General Education Ecological Science: The Importance and Impact of Experiential Activities. Ecological Society of America Annual Meeting, Pittsburgh, Pennsylvania, USA, 2-8 August [Oral Presentation, Accepted]
- 2010 \*McCormack ML, Eissenstat D, and **Smithwick EAH**. Estimating Current and Future Fine Root Turnover Rates at Landscape Scales. Ecological Society of America Annual Meeting, Pittsburgh, Pennsylvania, USA, 2-8 August [Poster, Accepted]
- 2010 **Smithwick EAH**, Keane R, McKenzie D, Loehman R, Simard M, Miller C, Falk D, and Westerling, A. Climate Impacts on Multiple Disturbance Interactions, Yellowstone National Park: Consequences for Resilience. Association of American Geographers Annual Meeting, Washington, D.C., April [Oral Presentation, Accepted]
- 2010 \*Crisfield EA and **Smithwick EAH**. Predicting the Response of Vegetation in New England to Projected Future Climate Change. Association of American Geographers Annual Meeting, Washington, D.C., USA, April [Oral Presentation, Accepted]
- 2009 **Smithwick EAH** and Harmon, ME. Interaction of Fire Regimes and Post-Fire Regeneration on Carbon Storage in the Pacific Northwest. Association for Fire Ecology 4th International Fire Congress, Savannah, Georgia, USA, 30 November [Oral Presentation, Accepted]
- 2009 Westerling AL, **Smithwick EAH**, Turner MG, Romme WH, Das T, and Lubetkin K. Fire Regime and Ecosystem Effects of Climate-Driven Changes in Rocky Mountains Hydrology. American Geophysical Union Fall Meeting, San Francisco, California, December [Oral Presentation, Accepted]
- 2009 **Smithwick EAH**, Keane R, McKenzie D, Simard M, Loehman R, Miller C, Kashian D, and Falk D. Climate Impacts on Multiple Disturbance Interactions, Yellowstone National Park: Consequences for Resilience. Ecological Society of America Annual Meeting, Albuquerque, New Mexico, USA, 6 August [Oral Presentation, Accepted]
- 2009 \*Crisfield, EA and **Smithwick EAH**. Topographic Complexity Governs Cumulative Area-Elevation Gradients in Appalachian Landscapes. Ecological Society of America Annual Meeting, Albuquerque, New Mexico, USA. 6 August [Oral Presentation, Accepted]
- 2009 **Smithwick EAH**, Balsler TC, Zhu J, and Turner MG. Spatial Distribution of Microbial Communities and Nitrogen Mineralization in Two Forest Communities Following Fire in the Greater Yellowstone Ecosystem. International Association of Landscape Ecology - US Chapter Annual Meeting, Snowbird, Utah, USA, April [Oral Presentation, Accepted]
- 2009 \*Oyler JW, **Smithwick EAH**, and Mack MC. The Effect of Burn Severity on Short-Term Post-Fire Boreal Vegetation Recovery in Interior Alaska. Association of American Geographers Annual Meeting, Las Vegas, Nevada, USA, March [Oral Presentation, Accepted]
- 2009 **Smithwick EAH**, Balsler TC, Zhu J, and Turner MG. Spatial Distribution of Microbial Communities and Nitrogen Mineralization in Two Forest Communities Following Fire in the

## Erica A.H. Smithwick - Curriculum Vita

- Greater Yellowstone Ecosystem. International Association of Landscape Ecology - US Chapter Annual Meeting, Snowbird, Utah, USA, April, [Oral Presentation, Accepted]
- 2008 \*Oyler JW, **Smithwick EAH**, and Mack MC. The Effect of Burn Severity on Short-Term Post-Fire Boreal Vegetation Recovery in Interior Alaska. American Geophysical Union Fall Meeting 2008, San Francisco, California, December [Oral Presentation, Accepted]
- 2008 **Smithwick EAH**, Ryan MG, Kashian DM, Romme WH, Tinker DB, and Turner MG. Post-Fire Spatial and Temporal Complexity in Yellowstone: What Does It Mean for Climate Change Forecasts? International Association of Wildland Fire, The '88 Fires: Yellowstone and Beyond, Jackson Hole, Wyoming, USA, September 22-27 [Oral Presentation, Accepted]
- 2008 **Smithwick EAH**, Kashian DM, Ryan MG, and Turner MG. Broad-Scale Patterns of Ecosystem Nitrogen Stocks and Soil Nitrogen Availability in Post-Fire Lodgepole Pine Ecosystems. Ecological Society of America Annual Meeting, Milwaukee, Wisconsin, USA, August [Oral Presentation, Accepted]
- 2008 \*Oyler JW, **Smithwick EAH** and Mack MC. The Effect of Wildfire Severity on Post-Fire Boreal Vegetation Productivity in Interior Alaska. United States Regional Association of the International Association for Landscape Ecology Meeting, Madison, Wisconsin, USA, April
- 2008 \*Oyler JW, **Smithwick EAH**, and Mack MC. The Effect of Wildfire Severity on Post-Fire Boreal Vegetation Productivity in Interior Alaska. No Boundaries Graduate Conference, University Park, Pennsylvania, March, [Oral Presentation, Accepted]
- 2007 **Smithwick EAH**, Ryan MG, Kashian DM, Romme WH, Tinker DB, and Turner MG. Modeling the Effects of Fire and Climate Change on Carbon and Nitrogen Storage in Lodgepole Pine. Joint Fire Sciences Program, Yellowstone National Park Managers Conference, June, [Oral Presentation, Accepted]
- 2006 **Smithwick EAH**, Ryan M, Kashian DM, Romme WH, Tinker DB, and Turner MG. Modeling the Effects of Changing Climate and Fire Regimes on Productivity, Carbon Storage and Nitrogen Fluxes in Lodgepole Pine Forest Stands." 3rd International Fire Ecology and Management Congress, San Diego, CA, USA, November [Oral Presentation, Accepted]
- 2005 **Smithwick EAH**. Understanding Post-Fire Spatial and Temporal Heterogeneity in Microbial Community Composition Using a Landscape Approach. Ecological Society of America Annual Meeting, Montreal, Canada, August [Oral Presentation, Accepted]
- 2004 **Smithwick EAH**, Mack MC, Turner MG, Chapin III FS, Zhu J, and Balser TC. Spatial Heterogeneity of Ecosystem Processes after Severe Fire in a Black Spruce (*P. Mariana*) Forest, Alaska (USA). Ecological Society of America Annual Meeting, Portland, OR, USA, August [Oral Presentation, Accepted]
- 2003 **Smithwick EAH**, Turner MG, Metzger KL, and Balser TC. Variation in Gross Nitrogen Mineralization and Microbial Communities along a Chronosequence of Lodgepole Pine (*Pinus contorta*) Stands, Yellowstone National Park. American Geophysical Union Fall Meeting, San Francisco, CA, USA, December [Oral Presentation, Accepted]

### SERVICE

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#### Department Committee

- 2019-2020 Geography Coffee Hour Colloquium, Co-organizer
- 2015-present Geography Promotion and Tenure Committee
- 2017-2019 Geography Department Graduate Student Ombudsperson
- 2016-17 Undergraduate Curriculum Committee
- 2015-16 Awards committee
- 2013-14 Miller Fellowship Committee
- 2011-12 Geography Faculty Search Committee (Energy Policy)

# Erica A.H. Smithwick - Curriculum Vita

2011-12	Graduate Programs Committee
2011-12	Future Directions Working Group
2011-12	Undergraduate Curriculum Committee
2011-12	Society for Women in Geography Fellowship Committee
2010-11	Geography Coffee Hour Colloquium, Co-organizer
2010-11	Miller Lecture Committee
2009-10	Faculty Advisory Committee, Department of Geography, Member
2009-10	SWG Fellowship Committee Chair
2009-10	Miller Lecture Committee
2008-09	Geography Faculty Search Committee (GIScience)
2008-09	Geography Graduate Admissions Committee
2008-09	Miller Lecture Committee
2007-08	Geography Graduate Admissions Committee
2007-08	Miller Lecture Committee

## College Committee

2016-2019	Earth and Environmental Systems Institute Advisory Committee
Fall 2015	Search Committee, Associate Dean for Educational Equity
2013-16	College of Earth and Mineral Sciences Faculty Advisory Committee
Fall 2015	Organizer, EESI Earth Talks, The Next 100 Years of Conservation
2012-14	Geosciences Faculty Search Committee (Hydrogeology)
2011-12	EESI Frontiers in Earth Systems Ecology Annual Lecture Committee
2010-11	EESI Earth Talks Lecture Series Committee, Member “Embracing Change: Resilience and Adaptation in Turbulent Times”
2010-11	Ad Hoc, EMS Committee on Research Infrastructure, Member
2009	EMEX Geography Faculty Representative
2008-09	EESI Earth Talks Lecture Series Committee, Member “Quenching the Thirst: Water Resources for a Changing Planet”

## Campus Committee

2019-2020	Anthropology/Archaeology Faculty Search Committee
2017-present	Member, Strategic Steering Committee, Human Dimensions of Natural Resources and Environment (HNDRE)
2017-present	Graduate Faculty, HNDRE
2014-present	Member, Intercollege Graduate Degree Program in Ecology, Program Committee
2014-present	Steering Committee, Ecology Institute, The Pennsylvania State University
2009-17	Intercollege Graduate Degree Program in Ecology, Candidacy Committee
2014-15	Member, Deployable Energy and Environmental Sustainability Laboratory Committee
2012-14	Chair, Intercollege Graduate Degree Program in Ecology, Candidacy Committee
2012-13	LIME (Laboratory for Isotopes and Metals in the Environment) Advisory Board

## University Committee

2016-present	Member, Stewarding Resources Subcommittee for University Strategic Plan
2016-present	EMS Senate Council Representative to University Faculty Senate
2016-present	Vice-chair, Benefits Subcommittee, University Faculty Senate
2010-present	Faculty Senator, University Faculty Senate
2015-16	Member, Benefits Subcommittee, University Faculty Senate
2013-14	Presidential Task Force on University Child Care member
2013-14	Vice Chair, Undergraduate Education Subcommittee

# Erica A.H. Smithwick - Curriculum Vita

2013-14	Chair, Undergraduate Education Subcommittee on Academic Standards
2010-14	Member, Undergraduate Education Subcommittee of the University Faculty Senate
2010-14	Member, Undergraduate Education Subcommittee on Academic Standards
2009-10	Ad Hoc, Global Community Engagement GEN Taskforce, Member, Office of Global Programs

## Graduate Advisors

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Ronald Wakimoto, (M.S. Advisor), University of Montana  
Mark Harmon and Warren Cohen (Ph.D. co-major advisors), Oregon State University  
Monica G. Turner (postdoctoral advisor), University of Wisconsin

## Graduate Advisees

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### Current

Susan Kotikot, PhD (Geography), 2019-present  
Jamie Peeler, PhD (Geography), 2017-present

### Past

Stacey Olsen, MS (Geography), 2017-2019. "Modeling Forest Futures: Simulating the Impacts of Emerald Ash Borer Invasion and Climate Change Using LANDIS-II." August 2019.  
Ethan Davis, PhD (Ecology). "The Potential Impact of Food and Energy Choices on Global Land Use Patterns and Greenhouse Gas Emissions." Summer 2017  
Jamie Peeler, MS (Geography). "Exploring invisibility with species distribution modeling: how does fire promote cheatgrass invasion within lower montane forests?" Summer 2017  
Doug Baldwin PhD (Geography). "Influence of climate change and disturbance on coupled water-carbon fluxes and variability at landscape scales," Spring 2016  
Eric Taber, MS (Geography), Spring 2015  
Kristine Averill, PhD (Ecology), Co-Advisor with Dave Mortensen (Crop and Soil Science) "The Roles of Herbivore Selectivity and Landscape Context in Exotic Plant Invasion", June 2014  
Elizabeth Crisfield, PhD (Geography). "Factors and Conditions Affecting Climate Adaptation in Appalachian Forests," Fall 2012  
Luke McCormack, PhD (Ecology/Dual-Title Graduate Degree in *Biogeochemistry*), Co-Advisor with David Eissenstat (Ecosystem Science and Management). "Measuring and Modeling Fine Root Dynamics in Temperate Forests." Fall 2012  
Jared Oyler, MS (Geography). "The Effect of Burn Severity on Short-Term Post-Fire Boreal Vegetation Recovery in Interior Alaska," May 2009  
Michelle Williams-Tober, MS (Ecology). "Relative Nitrogen Availability along a Condition Gradient in Headwater Wetlands in the Upper Juniata Watershed, Pennsylvania," June 2009

### Post-doctoral

Jianyong Wu, 2012 – 2013, current position: Researcher, Environmental Protection Agency  
Kusum Naithani, 2010-2014, current position: Assistant Professor, University of Arkansas