

**JULIA I. BURTON**

Associate Professor  
College of Forest Resources and Environmental Science  
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**EDUCATION:**

- Ph.D. 2011 University of Wisconsin-Madison: Forest Ecology  
Dissertation: *Pattern, process, and diversity in ground-layer plant communities of north temperate forests*. Advisor: David J. Mladenoff
- M.S. 2004 University of Minnesota: Forest Biology, Ecology, Conservation & Management  
Thesis: *A comparison of primary old-growth and second-growth northern hardwood forests on the North Shore of Lake Superior, Minnesota, USA*. Co-advisors: Lee E. Frelich and Eric K. Zenner
- B.S. 2002 University of Wisconsin-Stevens Point, Forest Ecosystem Management and Restoration, Minor in Conservation Biology  
Undergraduate research: *Near-term vegetation response to severe windthrow and salvage logging*. Advisor: Alan Haney

**APPOINTMENTS:**

- Aug. 2021: Associate Professor, College of Forest Resources & Environmental Sciences, Michigan Technological University
- 2021-present: Adjunct Associate Professor, Dept. of Sustainable Resources Management, State University of New York College of Environmental Science & Forestry
- 2019-2021: Assistant Professor, Dept. of Sustainable Resources Management, State University of New York College of Environmental Science & Forestry
- 2016- 2019: Research Assistant Professor, Dept. of Wildland Resources, Utah State University
- 2011-2016: Faculty Research Associate (post-doc), Department of Forest Ecosystems & Society, Oregon State University, Advisor: Klaus J. Puettmann

2004-2010: Graduate Research Assistant, Dept. of Forest & Wildlife Ecology, UW-Madison

2003-2004: Graduate Teaching Assistant, Dept. of Forest Resources, U of MN

2002-2003: Graduate Research Assistant, Dept. of Forest Resources, U of MN

### **PUBLICATIONS (\*=MENTORED STUDENT AUTHOR):**

23 peer reviewed publications (20 journal articles, 1 book chapter, 2 technical reports)

\*=graduate student advisee

†=graduate student collaborator (other lab)

§=field technician I supervised

*IF*=2-year journal ISI impact factor in year of

publication

### **Refereed Journal Articles:**

1. **Burton, J.I.**, D.J. Mladenoff, J.A. Forrester and M.K. Clayton. 2021. Effect of forest gap dynamics on community heterogeneity in the ground-layer depends on deer – evidence from a controlled experiment. *Journal of Vegetation Science* 32(1) e12969 [*IF* = 2.698]
2. Pettit, J.M.\* , Voelker, S.L., DeRose, R.J. & **J.I. Burton**. 2020. Spruce beetle outbreak was not driven by drought stress: Evidence from a tree-ring iso-demographic approach indicates temperatures were more important. *Global Change Biology*, 26, 5829-5843. [*IF* = 8.555]
3. **Burton, J.I.**, Perakis, S.S., Brooks, J.R. & K.J. Puettmann, K.J. 2020. Trait integration and functional differentiation among co-existing plant species. *American Journal of Botany*, 107, 628-638. [*IF* = 2.841]. Featured in issue highlights: <https://bsapubs.onlinelibrary.wiley.com/doi/full/10.1002/ajb2.1464>
4. Pettit, J.M.\* , **J.I. Burton**, R.J. DeRose, J.N. Long and S.L. Voelker. 2019. Epidemic spruce beetle outbreak changes drivers of Engelmann spruce regeneration. *Ecosphere* 10: e02912. [*IF* = 2.255]
5. Olson, D.H. and **J.I. Burton**. 2019. Climate associations with headwater streamflow in managed forests over 16 years and projections of future dry headwater stream channels. *Forests* 10 (11) 968. [*IF* = 1.922]
6. Sabo, A.E.†, J.A. Forrester, **J.I. Burton**, P.D. Jones, D.J. Mladenoff, and E.L. Kruger. 2019. Ungulate exclusion accentuates increases in woody species richness and abundance with canopy gap creation in a temperate hardwood forest. *Forest Ecology and Management* 433:386-395. [*IF* = 3.169]

7. Fahey, R.T., B. Alveshere<sup>†</sup>, **J.I. Burton**, A.W. D'Amato, Y.L. Dickinson, W.S. Keeton, C.C. Kern, A.J. Larson, B.J. Palik, K.J. Puettmann, C.R. Webster, J.W. Atkins, C.M. Gough, B.S. Hardiman, M.R. Saunders. 2018. Shifting conceptions of complexity in forest management and Silviculture. *Forest Ecology and Management* 421: 59-71. [*IF* = 3.169]
  
8. Webster, C.R., Y. Dickinson, **J.I. Burton**, M. Jenkins, C. Kern, P. Raymond, M. Saunders, M. Walters, J.L. Willis. 2018. Seeing the forest through the understory: promoting and maintaining diversity in contemporary hardwood forests. *Forest Ecology and Management* 421: 98-108. [*IF* = 3.169]
  
9. **Burton, J.I.**, S.S. Perakis, S. McKenzie<sup>§</sup>, C.E. Lawrence<sup>§</sup> and K.J. Puettmann. 2017. Intraspecific variability and reaction norms of forest understory plant species traits. *Functional Ecology* 31: 1881-1893. [*IF* = 5.491]
  
10. Kern, C.C. \*\*, **J.I. Burton**<sup>‡</sup>, P.A. Raymond<sup>‡</sup>, A.W. D'Amato, W.S. Keeton, A.A. Royo, M.B. Walters, C.R. Webster and J.L. Willis. 2017. Challenges facing gap-based silviculture and possible solutions. Invited Review- *Forestry*. [*IF* = 2.44, <sup>‡</sup>co-lead authors, \*\* **Awarded the 2019 Percy Stubbs, John Bolton King and Edward Garfitt Prize for Silviculture** for the publication]
  
11. Puettmann, K.J., A. Ares, **J.I. Burton** and E.K. Dodson. 2016. Restoration treatments in Douglas-fir forests: lessons from western Oregon. *Forests* 7(12): 310. [*IF* = 1.922]
  
12. **Burton, J.I.**, D.H. Olson and K.J. Puettmann. 2016. Effects of riparian buffer width on wood loading in headwater streams. *Forest Ecology and Management* 372: 247-257. [*IF* = 2.826]
  
13. **Burton, J.I.**, L.M. Ganio and K.J. Puettmann. 2014. Multi-scale spatial controls of understory vegetation in Douglas-fir – western hemlock forests of western Oregon, USA. *Ecosphere* 5(12): article 151. [*IF* = 2.255]
  
14. **Burton, J. I.**, D. J. Mladenoff, J. A. Forrester, and M. K. Clayton. 2014. Experimentally linking disturbance, resources and productivity to diversity in forest ground-layer plant communities. *Journal of Ecology* **102**:1634-1648. [*IF* = 5.69]
  
15. Dodson, E.K., **J.I. Burton** and K.J. Puettmann. 2014. Multi-scale controls on natural regeneration dynamics after partial overstory removal in Douglas-fir forests in western Oregon, USA. *Forest Science* 60(5): 953-961. [*IF* = 1.683]
  
16. Olson, D.H. and **J.I. Burton**. 2014. Effects of repeated thinning and riparian buffer width on stream and riparian headwater vertebrate communities and habitat. *Forests* 5(11), 2703-2729. [*IF* = 1.569]

17. Sabatini, F.M<sup>\*</sup>, **J.I. Burton**, R.M. Scheller, K.L. Amatangelo and D.J. Mladenoff. 2014. Functional diversity of ground-layer plant communities in old-growth and managed northern hardwood forests. *Applied Vegetation Science* 17(3): 398-407. [*IF* = 2.548]
18. **Burton, J.I.**, A. Ares, D.H. Olson and K.J. Puettmann. 2013. Management trade-off between above-ground carbon storage and understory plant species richness in temperate forests. *Ecological Applications* 23(6): 1297-1310. [*IF* = 4.126]
19. **Burton, J.I.**, D.J. Mladenoff, M.K. Clayton and J.A. Forrester. 2011. The roles of environmental filtering and colonization in the fine-scale spatial patterning of ground-layer plant communities in north temperate deciduous forests. *Journal of Ecology* 99(3):764-776. [*IF* = 5.66]
20. Foster, J.R., **J.I. Burton**, J.A. Forrester, F. Liu, J.D. Muss, F.M. Sabatini, R.M. Scheller and D.J. Mladenoff. 2010. Evidence for a recent increase in forest growth is questionable. *Proceedings of the National Academy of Sciences* 107(21): E86-E87. doi:10.1073/pnas.1002725107. [*IF* = 9.771]
21. Dyer, J.H., S.T. Gower, J.A. Forrester, C.G. Lorimer, D.J. Mladenoff and **J.I. Burton**. 2010. Effects of selective tree harvests on aboveground biomass and productivity of a second-growth northern hardwood forest. *Canadian Journal of Forest Research* 40:2360-2369. [*IF* = 1.574]
22. **Burton, J.I.**, E.K. Zenner, L.E. Frelich, and M.W. Cornett. 2009. Patterns of plant community structure within and among primary and second-growth northern hardwood forest stands. *Forest Ecology and Management* 258:2556 – 2568. [*IF* = 1.95]
23. **Burton, J.I.**, E.K. Zenner and L.E. Frelich. 2008. Frost crack incidence in northern hardwood forests of the southern boreal – north temperate transition zone. *Northern Journal of Applied Forestry* 25:133-138. [*IF* = 0.527]
24. Lain E.J., A. Haney, J.M. Burris and **J. Burton**. 2008. Response of vegetation and birds to severe wind disturbance and salvage logging in a southern boreal forest. *Forest Ecology & Management*. 256:863-871. [*IF* = 2.11]

#### **Book Chapter:**

25. Nelson, M.P., Gosnell, H., Warren, D., Batavia, C., Betts, M., **Burton, J.I.**, Davis, E.J., Friesen, C., Perakis, S., Schulze, M., and C. Segura. 2017. An Integrated Social-Ecological-Ethical Approach to Enhancing Public Trust in Federal Forest Management. *In* Van Horne, B. and D.H. Olson, editors. People, Forests, and Change: Lessons from the Pacific Northwest. Island Press.

#### **Peer Reviewed Technical Reports (2):**

26. **Burton, J.I.**, A. Ares, S.E. Mulford, D.H. Olson, and K.J. Puettmann. 2013. Above-ground carbon storage, down wood, and understory plant species richness after thinning in western Oregon.

In Paul Anderson and Kathryn Ronnenberg, Eds. Gen. Tech. Rep. PNW-GTR-880. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. p. 91-100.

27. **Burton, J.I.**, D.H. Olson and K.J. Puettmann. 2013. Headwater stream flow, climate variation, and riparian buffers with thinning in western Oregon. In Paul Anderson and Kathryn Ronnenberg, Eds. Gen. Tech. Rep. PNW-GTR-880. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. p. 239

## **HONORS/AWARDS:**

Travel Fellowship, UW-Madison, Dept. of Forest and Wildlife Ecology (2008, 2010)

Garden Club of America Fellowship in Ecological Restoration (2006)

Graduate Student Fellowship, U of MN, Department of Forest Resources (2003)

The Chancellor's Leadership Award, UW-Stevens Point (2002)

Scott Iron Treehaven Scholarship, UW-Stevens Point (2000)

## **GRANTS & FELLOWSHIPS:**

### **Pending:**

Enhancing health, ecosystem services, productivity, resilience and utilization of forests by increasing use of data and climate-adapted management. W.H. Livingston, 22 others and **J.I. Burton** and R.H. Germain. AFRI Sustainable Agricultural Systems. \$9,982,000 (\$1,138,111 to SUNY ESF).

### **Funded (>\$400,000 total):**

Fostering Adaptive Capacity Through Silviculture: A gradient-based experimental framework for evaluating climate change adaptation strategies across northern hardwood forest ecosystems. **J.I. Burton** (Lead PI), Co-PIs: R. H. Germain, J. E. Drake and C. M. Beier. USDA McIntire-Stennis, SUNY ESF, \$41,387, 2020-2021.

Using trait-based models to project forest response to climate change. **J.I. Burton** (Lead PI), J.E. Drake and M. Dovciak. USDA McIntire-Stennis, SUNY ESF. \$64,441. 2020-2022.

Strengthening Education and Employment for Diverse Students (SEEDS) Program Paid, Mentored Work Experiences. **J.I. Burton** and K. Hickam. \$3,240. Oregon State University, College of Forestry. 2015-2016.

Managing understory plant communities to accommodate climate change with specific emphasis on: cultural resources, early-seral habitat, and species with low mobility. **J.I. Burton**. \$153,000. USDI Bureau of Land Management. 2016-2020.

Managing understory plant communities to accommodate climate change with specific emphasis on: cultural resources, early-seral habitat, and species with low mobility. **J.I. Burton** and K.J. Puettmann. \$147,000. USDI Bureau of Land Management. 2015-2016.

Water availability in western Oregon headwaters: effects of density management and riparian buffers, USDA Forest Service, Pacific Northwest Research Station, \$48,151, K.J. Puettmann, **J.I. Burton** and D.H. Olson. 2014-2015.

Near-term effects of canopy gaps & deer exclusion on understory plant diversity & productivity. USDA McIntire-Stennis, \$138,621, **J.I. Burton** (lead author) and D.J. Mladenoff (PI). 2007-2010.

Restoration of old-growth forest biodiversity and ecosystem function in second-growth stands. Garden Club of America Fellowship in Ecological Restoration (competitive, ~two awards per year), \$8,000, **J.I. Burton**. 2006-2007.

Undergraduate Research, UWSP, \$500, **J.I. Burton**. 2002.

#### **INVITED PRESENTATIONS:**

College of Forest Resources and Environmental Science, Michigan Technological University, 4/2021

Department of Forest & Natural Resources Management, SUNY- College of Environmental Science and Forestry, 2/2019

Department of Wildland Resources, Utah State University, 11/2018

College of Natural Resources, University of Wisconsin – Stevens Point, Keynote Address at Undergraduate Research Symposium, 4/2017

College of Natural Resources, University of Wisconsin – Stevens Point, Research Presentation for Student Chapter of Society of American Foresters and Fire Crew, 4/2017

Intermountain Society of American Foresters, Keynote Address at spring meeting, 3/2017

Department of Forest and Wildlife Ecology, University of Wisconsin-Madison, 2/2017

Utah Division of Wildlife Resources, 2/2017

College of Natural Resources, Utah State University, 9/2016

School of Forest Resources & Conservation, University of Florida, 12/2015

Department of Natural Resources & the Environment, University of New Hampshire,  
12/2015

Department of Forest, Rangeland & Fire Science, University of Idaho, 2/2015

Forest Resources & Environmental Science, Michigan Technological University, 4/2014

Department of Forest & Rangeland Stewardship, Colorado State University, 4/2014

Environmental Sciences & Management, Portland State University, 10/2011

## **CONFERENCE PARTICIPATION:**

### **Sessions organized:**

Sustaining forest goods and services in a time of change: the role of harvest gaps in northern temperate forest regeneration and diversity. 2013. Ecological Society of America, Minneapolis, MN. Co-organized with Christel Kern and Patricia Raymond.

Preserving & Enhancing Biodiversity in Temperate Deciduous Forests: Response of the Herb Layer to Anthropogenic Disturbance Regimes. 2011 Ecological Society of America, Austin, TX. Co-organized with Frank Gilliam. [Endorsed by the ESA Vegetation Section]

### **Presentations in organized sessions:**

Burton, J.I., S.S. Perakis, J.R. Brooks and K.J. Puettmann. 2019. Scaling effects of climate change-management interactions on ecosystem services in forest understories using trait-based models. Presented in organized session entitled “Saving the Critical Pieces: Maintaining the Resilience and Function of Forests in the Face of Change” Ecological Society of America, Louisville, KY

Burton, J.I. 2017. The rest of the story: measuring and managing complexity in understory plant communities. North American Forest Ecology Workshop in Edmonton, Alberta, Canada

Burton, J.I. 2017. Does gap-based silviculture accelerate the development of old-growth characteristics? North American Forest Ecology Workshop in Edmonton, Alberta, Canada

Sabo, A.E. †, J. Forrester, K. Frerker, S. Larson, J. Burton, D. Bronson, A. Royo, T. Van Deelen, S. Paskewitz, D. Waller, D. Mladenoff and E. Kruger. White-tailed deer

influence assembly of forest understory communities. 2015. Ecological Society of America, Baltimore, MD

Burton, J.I., and K.J. Puettmann. 2014. Is silviculture terminology used consistently within and across disciplines? Given in “Silviculture Terminology: A Panel Discussion”, Society of American Foresters National Convention, Salt Lake City, UT

Burton, J.I., L.M. Ganio and K.J. Puettmann. 2013. Pattern of forest overstory retention, broad-scale environmental variation and species traits influence spatial patterning of understory vegetation after thinning. Ecological Society of America, Minneapolis, MN

Burton, J.I., Forrester, J.A., Mladenoff, D.J. and M.K. Clayton. 2011. Constraints to the restoration of old-growth characteristics to ground-layer plant communities in younger second-growth stands. Ecological Society of America, Austin, TX

**Contributed presentations (\*=mentored students):**

Hecking, M.J.\*, J.I. Burton, J.M. Zuskewitz, J.E. Drake and M. Dovciak. 2021. Persistence of the leaf economic spectrum across the temperate-boreal ecotone in New York and Northern New England. Ecological Society of America (Virtual)

Voelker, S.L., Burton, J.I., O'Keefe, K., Dangerfield, C. and K.A. McCulloh. 2019. Lake-effect climate increases summer drought impacts on the growth and physiology of sugar maple and white spruce in temperate to boreal ecotone forests. Ecological Society of America, Louisville, KY

Burton, J.I., S.S. Perakis, J.R. Brooks and K.J. Puettmann. 2018. Linking response of understory communities to effects on ecosystem services using trait-based models. Society of American Foresters National Convention, Portland, OR, USA

Burton, J.I., S.S. Perakis, J.R. Brooks, C.E. Lawrence<sup>§</sup>, S.C. McKenzie<sup>§</sup> and K.J. Puettmann. 2018. The devil is in the details: intraspecific variability and interspecific integration in trait-based models of plant communities. International Association for Vegetation Science Meeting. Bozeman, MT, USA

Burton, J.I., A.N. Gray, T.A. Spies, R.J. Pabst and S.L. Voelker. 2016. Effects of canopy openings on drought stress in forest ecosystems: a 26 year study – A proposal. H.J. Andrews Experimental Forest and LTER Symposium, Corvallis, OR

Hickam, K.\* and J.I. Burton. 2016. Understory dispersal mechanism response to patterns of forest thinning. Celebration of Undergraduate Excellence. Oregon State University, Corvallis, OR

Burton, J.I., D.J. Mladenoff, J.A. Forrester and M.K. Clayton. 2015. Effects of canopy gap size and deer herbivory on tree seedling dynamics and diversity in a north temperate deciduous forest. Ecological Society of America, Baltimore, MD



- Burton, J.I., D.H. Olson and K.J. Puettmann. 2015. Effects of thinning buffer width and fluvial geomorphology on down wood in headwater streams. Ecological Society of America, Baltimore, MD
- Burton, J.I., L.M. Ganio and K.J. Puettmann. 2014. Multi-scale spatial controls of understory vegetation in Douglas-fir – western hemlock forests of western Oregon, USA. XXIV IUFRO World Congress, Salt Lake City, UT
- Burton, J.I., A. Ares, S. E. Mulford, D. H. Olson, and K. J. Puettmann. 2012. Trade-offs among carbon storage, sequestration, and plant species richness in managed forests of western Oregon, USA. Ecological Society of America, Portland, OR
- Olson, D.H., Burton, J.I. and K.J. Puettmann. 2011. Forest Headwater Stream Characteristics as Influenced by Interannual Climate Variability, North American Forest Ecology Workshop, Roanoke, Virginia and Ecological Society of America, Austin TX
- Burton, J.I., Forrester, J.A., Mladenoff, D.J. and M.K. Clayton. 2011. Near-term effects of experimental canopy gap & white-tailed deer exclosure treatments on tree seedling dynamics North American Forest Ecology Workshop, Roanoke, VA
- Burton J.I., D.J. Mladenoff and J.A. Forrester. 2010. Diversity and productivity in north-temperate forest understories – an experimental test of the predictions of the intermediate disturbance hypothesis. Ecological Society of America, Pittsburgh, PA
- Baker, T.M.\* and J.I. Burton. 2010. Effects of deer exclosures and canopy gaps on the performance of four native perennial herb species in northern Wisconsin. Ecological Society of America, Pittsburgh, PA
- Guo, J.S.,\* J.I. Burton, M.I. Palmer and D.J. Mladenoff. 2010. Inter- and intra-specific functional trait response to environmental change in an herbaceous forest understory. Ecological Society of America, Pittsburgh, PA
- Burton J.I., D.J. Mladenoff, M.K. Clayton and J.A. Forrester. 2010. Assembly of ground-layer plant communities along environmental gradients in northern hardwood forests. Wisconsin Ecology Symposium. Madison, WI
- Zenner, E.K., Burton, J.I. and L.E. Frelich. 2009. Structural and compositional resilience in second-growth relative to primary northern hardwood stands. North American Forest Ecology Workshop, Logan, UT
- Burton, J.I., D.J. Mladenoff and J.A. Forrester. 2008. Near-term spatial responses of forest herbs to a range of canopy gap sizes in a second-growth northern mesic forest in Wisconsin. Ecological Society of America, Milwaukee, WI

Burton, J.I., D.J. Mladenoff and J.A. Forrester. 2008. Hierarchical spatial patterning of forest herb diversity. IALE meeting. Madison, WI

Burton, J.I., D.J. Mladenoff and J.A. Forrester. 2007. Hierarchical spatial patterning of forest herb diversity. ESA Meeting. San Jose, CA

Burton, J., Frelich, L. and E. Zenner. 2004. Old-growth and second-growth northern hardwood forests: factors influencing forest composition, structure and diversity. ESA meeting. Portland, OR

### **PRESS AND OUTREACH:**

[Wildfires in the West are fueling changes in forests](#), interview with Alison Snyder, Axios, 10 September 2020

[Examining plant traits to discover strategies of coexisting plants](#), USGS News, April 3 2020

[Head to Head: Buffer Benefits Along Headwater Streams, Science Findings](#), USDA Forest Service October 2015

Field trip presenter at HJA Day, public outreach event at HJ Andrews Experimental Forest and LTER site, OR, 6/2015

Density Management in the 21<sup>st</sup> Century – West Side Story. Thinning Workshop for Forest Managers, Corvallis, OR. 10/2011

Garden Club of America Zone XI Meeting, Eagle, WI, 9/2006

### **TEACHING EXPERIENCE:**

#### **Instructor of record:**

*FW3010, Practice of Silviculture, Michigan Technological University, Fall 2021*

*FW 3012, Survey of Silviculture, Michigan Technological University, Fall 2021*

*FOR 334/534, Silviculture, SUNY ESF, Fall 2020:* The practice of silviculture in managing stands to serve various landowner interests. Field trips and exercises provide opportunities to see examples of silvicultural methods under different management scenarios, and to learn and practice techniques for analyzing forest stands and developing prescriptions for their treatment

*FOR 433/796, Advanced Silviculture, SUNY ESF, Spring 2020, 2021:* Two hours of lecture and three hour field/computer exercises. Advanced study of silviculture in managing stands to serve a variety of landowner objectives. Enhanced problem solving skills related to stand analysis and prescription making. Field and computer exercises provide practical experience in implementing

and evaluating silvicultural prescriptions.

*FOR 321/521, Forest Ecology and Silviculture, Co-taught with Dr. Christopher Nowak, SUNY ESF, Fall 2019:* Two hours of classroom lecture with weekly three-hour trips and labs to forests across Central New York. Survey of forest tree and stand ecology (silvics) and silviculture concepts, applications and implications for treatment of forest stands for various values. Experiential learning emphasized through a strong field component of assessing vegetation, site quality and land use history variables, and treatment alternatives to create different forest conditions.

*Forest Assessment and Management, Utah State University, Spring 2018, 2019:* Detailed analysis of forest stand composition, structure and growth. Development of silvicultural prescriptions to meet specific objectives. Analysis of costs and benefits of alternative management strategies using simulation models. Emphasizes forest management to achieve a broad range of management objectives. Flipped format.

*Principles of Silviculture, Oregon State University, Spring 2012:* Biological and operational dimensions of forestry, defined as: the art and science of manipulating forests to meet an objective. This course examines natural tree and stand development with fundamentals of stand dynamics, site productivity, stand density, and tree growth/architecture. Fully responsible for 3 lecture periods + 1 field lab per week.

#### **Teaching Assistant:**

*Managing Forest Ecosystems/Silviculture, University of Minnesota, Spring 2004:* Methods used to blend the maintenance of biodiversity in forest ecosystems with extraction of commodities under new paradigms of New Forestry/Ecosystem Management/Ecological Forestry.

*Ecological Vegetation Management, University of Minnesota, Spring 2004:* Management of ecosystems primarily composed of plant communities.

*Dendrology, University of Minnesota, Fall 2003:* Introduction to the distinguishing characteristics of North American tree species (field and lab identification), systematics and silvics. Responsible for instructing 2-3 lab sections per week.

#### **Guest lecturing:**

Orientation Seminar, SUNY ESF, Sustainable Resources Management, FOR 132 (Fall 2019, 2020)

Forest Ecology, SUNY ESF, Sustainable Resources Management, FOR 332 (Fall 2019, 2020)

Natural Resources Professional Orientation, 2018

Wildland Resource Techniques, Field trip, 2018

Monitoring and Assessment in Natural Resource and Environmental Management, Field trip and lab, 2018

Forest Assessment and Management, Utah State University, 2017

Disturbance Ecology, Utah State University, 2016

Principles of Silviculture, Oregon State University, 2014

Exploration of special topics related to forests (freshman level), 50-min, Oregon State University, 2012

Principles of Landscape Ecology, UW-Madison, Dept. Forest & Wildlife Ecology, 2010  
Managing Forest Ecosystems, University of Minnesota Dept. of Forest Resources, 2004

Dendrology, University of Minnesota Department of Forest Resources, 2003

#### **ADVISING AND MENTORING:**

Faculty Advisor for Forest Resources Management major (2019-2021)

Utah State University Undergraduate Forestry Club – Faculty Advisor (2018 – 2019)

Faculty Advisor for all forestry majors at Utah State University (2018 – 2019)

#### **Committee Chair:**

Leah Prudent, SUNY ESF, Ph.D., 2021 – present (co-advised with Martin Dovciak)

Christopher Barger, SUNY ESF, M.F., 2020-2021

Keenan Rivers, SUNY ESF, M.S., 2020 – present

Garrett Evans, SUNY ESF, M.S., 2020 – present (co-advised with John Drake)

Matthew Hecking, SUNY ESF, M.S., 2019-2021

Jessika Pettit, Utah State University, M.S., 2016-2018

#### **Committee Member:**

Arianna Wills, SUNY ESF, M.S., 2020

Ry Patton, SUNY ESF, M.S., 2019 – 2021

Anna Sweeney, SUNY ESF, M.S., 2020 - present

Jordon Tourville, SUNY ESF, Ph.D., 2020- present

Sara Goeking, Utah State University, Ph.D. Candidate, 2017-present

Anuli Onwumelu, SUNY ESF, M.S., 2020

Margaret Roberts, SUNY ESF, Ph.D. 2020

Katherine Livingston, SUNY ESF, M.S. 2021

Erika Blomdahl, Utah State University, M.S., 2016-2018

Elizabeth Simpson, Utah State University, Ph.D. Student, 2018-2019

**Other Mentoring:**

Francesco Sabatini 2010-2014

Caitlin Lawrence 2015

Sean McKenzie 2015

Autumn Sabo 2010-2019

**Undergraduate Mentoring:**

Matt Murray, SUNY ESF 2020-2021

Madeleine Derochers, SUNY ESF, 2020

Jordan Westrick, SUNY ESF, 2020

Jennifer Kotary, SUNY ESF, 2020

Elise Riley, Utah State University, Laboratory Volunteer Research Assistant, 2018- present

Sierra Oxborrow, Utah State University, Laboratory Assistant, 2017

Kaitlyn Hickam, Oregon State University, College of Forestry SEEDS program, 2015-2016

Lucas Leandro Fontes, Oregon State University, Research Intern as part of Brazilian study abroad program, 2015

Alex Hughan, Oregon State University, Research Intern, 2015

Jessica Guo, Inter- and intra-specific functional trait response to environmental change in an herbaceous forest understory, Columbia University, senior thesis, 2008-2010\.

Tamara Baker, Effects of deer exclusion on plant height and reproductive allocation of four species of forest herbs. University of Wisconsin-Stevens Point, senior thesis, 2009-2010

Karen Lackerman, Scripps College, Relationships between environmental gradients within forests, host density and rust infection of two forest herb species Flambeau Experiment Internship Project, 2008

Angela Rein, Edgewood College, Partitioning of forest soil moisture gradients by fern species. Flambeau Experiment Internship Project, 2008

Katie Pratt, Michigan Technological University, Relationships between microhabitats and avian species composition and richness. Flambeau Experiment Internship Project, 2008

Christine Dahlheimer, UW-Eau Claire, Plasticity of plant functional traits across a canopy openness gradient. Flambeau Experiment Internship Project, 2007

Melissa Faigeles, University of Pittsburgh, Effects of gaps on reproductive allocation of forest herbs. Flambeau Experiment Internship Project, 2007

#### **PROFESSIONAL AND DEPARTMENTAL SERVICE:**

**Search Committee** – Ranger School faculty position 2020, 2021

**Adhoc Committee** – Forest Resources Management 2019

**Intermountain Society of American Foresters**, Continuing Forestry Education Coordinator,

**Restoring the West Conference**, Organizational Committee, 2017

**North American Forest Ecology Workshop**, Organizational Committee: 2017-present

**Society of American Foresters Dictionary of Forestry Board**: 2015-2016

**Graduate Program Development Committee**, Oregon State University, Dept. of Forest Ecosystems & Society Faculty: Review graduate programs at similar universities, assess needs for departmental course offerings, develop new courses and coordinate faculty retreat. 2014-2015

**Associate editor**: Canadian Journal of Forest Research (guest editor for a special issue on Mixedwood Forest Ecology and Management)

**Manuscript review** (58 reviews in 25 journals since 2011, or ~7 per year): Acta Oecologica (1), American Midland Naturalist (1), Applied Vegetation Science (3), BMC Ecology (1), Canadian Journal of Botany (1), Canadian Journal of Forest Research (4), Community Ecology (1), Ecological Research (2), Ecological Applications (3), Ecology and Evolution (1), Ecosphere (4), Ecosystems (1), Forest Ecology & Management (3), Forests (2), Forest Science (1), iForest – Biogeosciences and Forestry (3), Frontiers in Ecology & the Environment (1), International Journal of Forest Research (1), Journal of Applied Ecology (2), Journal of Ecology (1), Journal of Plant Ecology (3), Journal of Vegetation Science (8), Landscape Ecology (6), Nature Plants (2), Northeast Naturalist (1), New Phytologist (1), Northern Journal of Applied Forestry (2), Plant Ecology (1)

**Proposal review:** European Science Foundation (1) National Science Foundation, Division of Environmental Biology (2), Utah Agricultural Experiment Station (2), Minnesota Invasive Terrestrial Plants and Pests Center (1)

**Technical report review:** Washington Department Natural Resources (1)

## **PROFESSIONAL DEVELOPMENT:**

**Silviculture Instructors Tour:** Utah, Minnesota-Wisconsin, Oregon 2014, 2016, 2018

**The College Classroom:** Teaching in Science and Engineering- basics of learning theory and effective teaching methods at the forefront of ideas in college education. Developed and applied teaching philosophy, course curriculum and lesson plans, and learning assessment, UW-Madison, Delta Program/CIRTL Network (NSF), 2010

### **Seminars:**

Write winning grant proposals, USU Office for Research & Grad. Studies	2016
Foundations of USU Teaching	2016
The Science of Learning: Tech, Big Data & Transformation in Higher Ed	2015
Inclusive Teaching in a Diverse Classroom, Center for Teaching and Learning	2014

## **PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS:**

Society of American Foresters (since 1999)

Ecological Society of America (since 2004)

International Association for Vegetation Science (2018)