

Jacob J. Muller, Ph.D.
University of Kentucky
College of Food, Agriculture, and Environment
Department of Forestry and Natural Resources
204 T.P. Cooper Building, Lexington, KY 40546
Phone – 859-257-5666
Email – jacob.muller@uky.edu

EDUCATION

- Ph.D. University of Minnesota – Twin Cities, MN** **2019**
Natural Resource Science and Management
Advisor – Dr. Linda Nagel; Co-Advisor – Dr. Brian Palik
Dissertation title – *Vegetation Response to Adaptive Silviculture Treatment Aimed at Climate Change in Northern Minnesota, USA*
- M.S. University of Montana – Missoula, MT** **2014**
Forestry, Forest Management
Advisor – Dr. John Goodburn
Thesis title – *Strategies to Initialize Landscape-Scale Vegetation Maps from FIA Data to Enhance Resolution of Species-Size Cohort Representation in Forest Modeling*
- B.S. University of Montana – Missoula, MT** **2007**
Forestry, Forest Management

ACADEMIC AND PROFESSIONAL EXPERIENCE

- Assistant Professor of Hardwood Silviculture Extension** **2020-Present**
University of Kentucky, Department of Forestry and Natural Resources
College of Food, Agriculture and Environment, Lexington, KY
- Instructor** **2017-2019**
Colorado State University, Department of Forest and Rangeland Stewardship
Warner College of Natural Resources, Fort Collins, CO
- Graduate Research Assistant** **2014-2019**
University of Minnesota, Department of Forest Resources
College of Food, Agriculture, and Natural Resources, St. Paul, MN
- Research Technician** **2010-2013**
Rocky Mountain Research Station, Forest & Woodland Ecosystems
USDA Forest Service, Missoula, MT
- Graduate Research Assistant** **2011-2012**
University of Montana, Department of Forest Management,
College of Forestry and Conservation, Missoula, MT
- Research Technician – Crew Leader** **2007-2011**
Inland Northwest Growth and Yield Cooperative, University of Montana, Missoula, MT

GRANTS AWARDED (Total = \$1,079,037.50)

2020-2021

Co-Project Director: (\$439,448.50) Stringer, J.W., **J.J. Muller**. 2021-2024. Upland Oak Sustainability & Management in the Central Hardwood Region Phase II. Landscape Scale Restoration Competitive Program. USDA Forest Service Region 8.

Project Director: (\$10,000.00) **Muller J.J.** 2021-2022. Recruiting and Training Tree Farm Inspectors in Kentucky. American Forest Foundation. Outcome-based Grant Awards.

Project Director: (\$60,000.00) **Muller, J.J.** 2021-2023. Increasing Resiliency in Forestlands Across Kentucky. Landscape Scale Restoration Competitive Program. USDA Forest Service Region 8.

Co-Project Director: (\$499,400.00) Ochuodho, T.O., **J.J. Muller**, W.R. Thomas, and J.M. Lhotka. 2020-2023. Enhancing the Awareness, Knowledge, and Understanding of Sustainable Maple Syrup Production Practices Among Current and Potential Maple Syrup Producers. U.S. Department of Agriculture (USDA), Agricultural Marketing Service (AMS), Acer Access Development Program (ACER)

Project Director: (\$28,760.00) **Muller, J.J.** 2020-2021. Developing Innovative Online Tools to Recruit and Educate Woodland Stewards and Future Tree Farmers. USDA U.S. Forest Service. Forest Stewardship Grant.

Project Director: (\$15,000.00) **Muller, J.J.** 2020-2021. Forest Stewardship, Publicity, and Training for Natural Resource Professionals. Kentucky Division of Forestry. Forest Stewardship Funding.

Co-Project Director: (\$26,429.00) **Muller, J.J.**, J.M. Lhotka, J.W. Stringer. 2020-2021. US Forest Service National Advanced Silviculture Program (NASP) - Session 4 Advanced Silviculture Module for NASP 14 (2020-2021) sub-award.

TEACHING EXPERIENCE

Instructor (2 credits, ~15 Students) **2021-Present**
FOR 357 Inventory and Measurements II (*In-person*)
University of Kentucky, Forest and Natural Resources
College of Agriculture, Food, and Environment, Lexington, KY

Instructor (4 credits, ~25 Students) **2020-Present**
FOR 250 Measurements and Statistics (*In-person*)
University of Kentucky, Forest and Natural Resources
College of Agriculture, Food, and Environment, Lexington, KY

Course Developer **2019**
F 572 Advanced Silviculture (*Online*)
Colorado State University, Forest and Rangeland Stewardship
Warner College of Natural Resources, Fort Collins, CO

Instructor and Course Developer (4 credits, ~15 Students) **2017-2019**
F 526 Multiple Resource Silviculture (*Online*)
Colorado State University, Forest and Rangeland Stewardship
Warner College of Natural Resources, Fort Collins, CO

TEACHING EXPERIENCE (Continued)

- Instructor** (4 credits, 41 Students) **2013**
FOR 349 Silvicultural Practices (*In-person*)
University of Montana, Department of Forest Management
College of Forestry and Conservation, Missoula, MT
- Graduate Teaching Assistant** (3 Credit Hours, 53 Students) **2012**
FOR 202 Forest Mensuration (*In-Person*)
University of Montana, Department of Forest Management
College of Forestry and Conservation, Missoula, MT

PUBLICATIONS

- Muller, J. J.**, Nagel, L.M., & Palik, B.J. (2021). Comparing long-term projected outcomes of adaptive silvicultural approaches aimed at climate change in red pine forests of northern Minnesota, USA. *Canadian Journal of Forest Research*. (*In Press*). <https://doi.org/10.1139/cjfr-2021-0097>
- Muller, J. J.**, Nagel, L.M., & Palik, B.J. (2019). Forest adaptation strategies aimed at climate change: Assessing the performance of future climate-adapted tree species in a northern Minnesota pine ecosystem. *Forest Ecology and Management*, 451, 117539. [10.1016/j.foreco.2019.117539](https://doi.org/10.1016/j.foreco.2019.117539)
- Muller, J.J.** (2019) Vegetation Respond to Adaptive Silviculture Treatments Aimed at Climate Change in Northern Minnesota, USA. University of Minnesota. <https://hdl.handle.net/11299/211786>
- Muller, J.J.** (2014). Developing strategies to initialize landscape-scale vegetation maps from FIA data to enhance resolution of individual species-size cohort representation in the landscape disturbance model, SIMPPLLE. *University of Montana* 4361. <https://www.fs.usda.gov/treearch/pubs/48012>
- Muller, J. J.**, Nagel, L.M., & Palik, B.J. Can Silvicultural Treatments Aimed at Climate Change Adaptation Promote Favorable Microsite Conditions? (*In Preparation*)
- Muller, J. J.**, Nagel, L.M., Russell, M.B., & Palik, B.J. Developing species climate-sensitivities in the Forest Vegetation Simulator for the eastern U.S. (*In Preparation*)

PRESENTATIONS

- Muller, J.J.** (February 2021). Taking action in your woodlands. Woodland Stewards Webinar Series. Southern Regional Extension Forestry. Session 4. Virtual Presentation.
- Muller, J.J.** (December 2020). Considerations for a Sustainable Management Strategy. Kentucky Woodland Owners Association. Annual Meeting. Virtual Presentation.
- Muller, J.J.** (November 2020). ACER Grant Updates and Producer Opportunities. Kentucky Maple School. Virtual Presentation.
- Muller, J.J.** (October 2020) Silviculture: Back to the Basics. Kentucky Association of Consulting Foresters Fall Meeting.
- Muller, J.J.** (September 2020). Managing Your Woodlands for the Future. 2020 Woodland Owners Short Course. Virtual Presentation.

PRESENTATIONS (Continued)

Muller, J.J. (September 2020). The Basics of Woodland Management. Woodland Owners Short Course. Virtual Presentation.

Muller, J.J. (September 2020). Managing for the Future: Consideration for Long-Term Sustainable Management. Eastern Kentucky SAF. Virtual Presentation.

Palik, B.J., **Muller, J.J.**, Nagel, L.M., D'Amato, A.W. (September 2020). Adaptive Silviculture for Climate Change in Minnesota Red Pine Woodlands. The Natural Conservancy Virtual Science Summit.

Muller, J.J. Nagel, L.M., & Palik, B.J. (July 2019). Forest response to adaptive silviculture treatment in northern Minnesota: assessing variations in below-canopy microclimate conditions. North American Forest Ecology Workshop, Flagstaff, AZ.

Muller, J.J., Nagel, L.M., & Palik, B.J. (October 2018). Assessing the Performance of Eight Future Climate-Adapted Species in Northern Minnesota. Society of American Foresters National Convention. Portland, OR.

Muller, J.J., Nagel, L.M., & Palik, B.J. (January 2018). Seedling Response to Adaptive Silviculture Treatments Aimed at Climate Change in Northern Minnesota. Sustainable Forests Education Cooperative, Forestry and Wildlife Research Review. Cloquet, MN.

Muller, J. J., Nagel, L.M., & Palik, B.J. (October 2017) Assessing Seedling Response to Adaptive Silviculture Treatments in Red Pine Forests of Northern Minnesota. Society of American Foresters National Convention. Albuquerque, NM.

Muller, J.J. (October 2017) Short- and Long-term Research Efforts on the Adaptive Silviculture for Climate Change Project in Northern Minnesota. Silviculture Instructors Tour. Chippewa National Forest, MN.

Muller, J.J. & Nagel, L.M. (July 2017) Assessing Seedling Response to Adaptive Silviculture Treatments in Red Pine Forests of Northern Minnesota. National Silviculture Workshop. Flagstaff, AZ. (poster presentation)

Muller, J. J. & Goodburn, J.M. (October 2015) Enhancing Resolution of Landscape Scale Vegetation Projections to Characterize Species-Size Cohort Dynamics. Society of American Foresters Annual Conference. Baton Rouge, LA. (poster presentation)

INVITED SPEAKER

NR 326 Forest Vegetation Management. Colorado State University. (September 2019) Addressing future challenges in forest management through an adaptive silviculture lens. Fort Collins, CO. *Guest lecturer.*

Colorado Forest Research Institute – Science Friday. (March 2019). Forest response to adaptive silviculture treatment: assessing variations in below-canopy microclimate conditions. Fort Collins, CO. Guest Speaker.

NR 326 Forest Vegetation Management. Colorado State University. (October 2018) Adaptive Management aimed at Future Environmental Change. Fort Collins, CO. *Guest lecturer.*

INVITED SPEAKER (Continued)

Forest and Rangeland Stewardship Departmental Seminar Series. Colorado State University. (February 2018) Seedling Response to Adaptive Silviculture Treatments Aimed at Climate Change in Northern Minnesota. Fort Collins, CO. *Guest speaker.*

NR 326 Forest Vegetation Management. Colorado State University. (October 2017) Assessing Forest Response to Adaptive Silviculture Treatments in the Face of an Uncertain Future. Fort Collins, CO. *Guest lecturer.*

FNRM 8107 Forest Resources - Graduate Seminar. University of Minnesota. (April 2016) From Macroclimate to Microclimate: An Assessment of Adaptive Silviculture Strategies Aimed at Climate Change Across Multiple Forest Types. St. Paul, MN. *Guest speaker.*

GEOG8270 The Art of Scientific Presentations. University of Minnesota. (April 2016) Adaptive Silviculture: What is it and why should we care? *Guest speaker.*

GRAD8101 Teaching in Higher Education. University of Minnesota. (March 2016) Translation of Forest Science in an Approachable Way that Effectively Communicates Critical and Complex Topics. Minneapolis, MN. *Guest speaker.*

FOR 447 Advanced Silviculture. University of Montana (October 2012) Simulating Landscape Scale Patterns and Processes to Aid in Forest Management Decision-making. Missoula, MT. *Guest lecturer.*

CURRENT EXTENSION EFFORTS

State Projects:

Kentucky Woodlands Magazine, Editor and Contributor
Kentucky Maple School, Co-Organizer
From the Woods Today, Contributor
Kentucky Invasive Woodland Plants Program, Co-Leader and Contributor
Kentucky Tree Farm Committee, Member
Kentucky Joint Forestry Team, Member
Urban Forestry Initiative, Working Group Member

Regional Projects:

Woodland Stewards Regional Education Program, Co-Organizer and Contributor

National Project:

National Advanced Silviculture Program, Co-Organizer and Instructor
Forest-Climate Working Group, Partner
Adaptive Silviculture for Climate Change, Partner

Extension Videos

Forestry 101 –

The Practical Forester: An Introduction to Forestry
The Basics: Ecology of Forests and Woodlands
Talking to a Forester: Forestry Terms and Definitions
Forest Management: How to Inventory Your Woodland
The Practices and Applications of Silviculture
The Engaged Woodland Steward: Developing a Management Plan
Managing Your Woodland for the Future: A Look through an Adaptive Management Lens

Extension Videos (Continued)

Woodland Invasive Plant Program –
Wintercreeper
Bush Honeysuckle
Autumn Olive

InTregued-

Jacob Muller – University of Kentucky
Jared Calvert – Daniel Boone National Forest

PROFESSIONAL SERVICE

Chair-Elect, Department of Forestry and Natural Resources Seminar Series Committee 2021-2022.
Chair, Instructional Planning Team (2020)

GRADUATE STUDENTS

Scott Culbert (M.S. Student – Beginning Fall 2021)

GRADUATE STUDENT COMMITTEES

Brook Guitherie (Current M.S. Student)
Steven Nevels (Current M.S. Student)
Benjamin Rhodes (Current M.S. Student)

PROFESSIONAL ORGANIZATIONS

University of Kentucky (Current Affiliations)

2020 – Present – Society of American Foresters (Kentucky/Tennessee)
2020 – Present – Kentucky Woodland Owners Association
2020 – Present – Association of Natural Resource Extension Professionals

Colorado State University (2016-2019)

2016 – 2019 – Society of American Foresters (Colorado/Wyoming)
2016 – 2019 – Ecological Society of American (ESA)
2017 – 2019 – Forest Adaptation Journal Club (Founder and Member)

University of Minnesota (2014-2019)

2014 – 2019 – Society of American Foresters (UMN Chapter)
2014 – 2019 – Natural Resource Association of Graduate Students (NRAGS)

University of Montana (2005-2007 & 2011-2014)

2005 – 2007 – Forestry Club
2010 – 2014 – Society of American Foresters (UM Student & Missoula Chapters)

Silviculture Instructors Tour Member

2012 – Western Montana, participant and aide
2015 – South Louisiana, participant
2016 – Minnesota-Wisconsin, participant and aide

National Advanced Silviculture Program (NASP)

2014 – Cloquet, MN. Program support
2015 – Cloquet, MN. Program support
2021 – Robinson Forest, KY. Organizer and instructor