

Curriculum Vitae

Dr. Kutcher Kyle Cunningham

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Professional Summary

Senior forestry leader with extensive experience in state and regional forest management, applied research, and Extension programming. Proven ability to integrate science, policy, and operational forestry to address complex landscape-scale challenges including wildfire risk, forest health, and sustainable resource management. Strong background in collaborative leadership across federal, state, academic, and private-sector partners.

Current Position

State Forester

Arkansas Department of Agriculture, Forestry Division

July 2023 - current

- Lead Arkansas forestry programs including wildfire response, forest management, tree improvement and nursery production, urban forestry, forest health and landowner assistance
 - Oversee agency operations, personnel, and budget allocation
 - Coordinate with federal partners including the U.S. Forest Service on shared priorities
 - Advance forest resilience, workforce development, and cross-boundary management initiatives
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Previous Experience

Associate Professor of Forestry (Research & Extension)

University of Arkansas Division of Agriculture

July 2020 – June 2023

- Conducted applied research in forest management and ecosystem sustainability
- Delivered statewide Extension programming to private landowners and stakeholders
- Secured and managed competitive grant funding (including US Forest Service SPTF and McIntire-Stennis Cooperative Forestry Research Program support)
- Published and presented applied forestry research to academic, practitioner, and small forest landowner audiences
- Class lectures and laboratories; served on graduate research committees at the College of Forestry, Agriculture and Natural Resources at the University of Arkansas at Monticello.

Assistant Professor of Forestry (Research and Extension)

University of Arkansas Division of Agriculture

June 2014 – June 2020

- Conducted applied research in forest management and ecosystem sustainability
- Delivered statewide Extension programming to private landowners and stakeholders
- Secured and managed competitive grant funding (including US Forest Service SPTF and McIntire-Stennis Cooperative Forestry Research Program support)
- Published and presented applied forestry research to academic, practitioner, and small forest landowner audiences

Extension Forestry Instructor

University of Arkansas Division of Agriculture

April 2004 – June 2014

- Delivered statewide Extension programming to private landowners and stakeholders
- Developed a hardwood management education program for Arkansas
- Published and presented applied forestry research to academic, practitioner, and small forest landowner audiences

Graduate Research Associate

Mississippi State University

May 2001-2003

- Forest herbicide research
- Statistical analysis
- Silviculture lecture

Forestry Field Inventory Specialist

Mississippi State University

January 1999 – May 2001

- Field data collection
- Pilot project that developed into the Mississippi Institute for Forest Inventory

Education

PhD Applied Science – emphasis forest ecophysiology

University of Arkansas at Little Rock

MS Forest Management – emphasis hardwood ecology and management

Mississippi State University

BS Forestry – emphasis forest management

Mississippi State University

Leadership & Professional Service

- **National Association of State Foresters,**
 - Forest Resources Management Committee
 - Liaison to Cooperative Extension
 - **Society of American Foresters**
 - National Continuing Education Coordinator
 - Chair - Ouachita Society of American Foresters
 - **Southern Silvicultural Research Conference,** Steering Committee
 - **USDA NRCS Forestry Subcommittee,** member
 - **Arkansas Urban Forestry Council,** President
 - **Arkansas Forest and Drinking Water Steering Committee,** member
 - **Arkansas Forestry Association Education Committee** member,
 - **Arkansas Tree Farm Program,** committee member
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Research, Grants & Funding

- Served on the USDA RREA grant selection panel
 - Principal Investigator / Co-PI on projects related to:
 - Vegetation management
 - Ecology and management of oak systems
 - Restoration of shortleaf pine systems
 - Wildfire assessment and mitigation
 - Decision support tools for forest landowners
 - Experience managing federal and state funding streams including:
 - US Forest Service SPTF LSR Grants
 - McIntire-Stennis Cooperative Forestry Research Program (NIFA)
 - USDA Natural Resources Conservation Service
 - Private entities
 - Demonstrated success translating research into operational application
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Key Competencies

- Applied Forestry Research and Education
 - Forest Policy & Governance
 - Wildland Fire Management
 - Forest Health & Resilience
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Publications & Presentations

Selected Research Publications

- Adedapo, S.M., Zurqani, H.A., McAlpine, J.F., Blazier, M.A. and Cunningham, K., 2024, June. Early detection of pine needle diseases in Southeast US forests: a deep learning approach using UAV imagery. In *2024 International Conference on Smart Computing, IoT and Machine Learning (SIML)* (pp. 256-261). IEEE.

- Clay, N.A., McGowan, M. and Cunningham, K., 2024. Effects of Midstory Removal Timing on Natural Oak Regeneration in Arkansas, USA.
- Cunningham, K.K. and Stuhlinger, C., 2018. A comparison of Nuttall oak establishment methods using improved and unimproved seedlings, seedling treatments, and site preparation intensity in the Lower Mississippi Alluvial Valley. In *In: Kirschman, Julia E., comp. 2018. Proceedings of the 19th biennial southern silvicultural research conference. e-General Technical Report SRS-234. Asheville, NC: US Department of Agriculture Forest Service, Southern Research Station.* (Vol. 2018, pp. 184-189).
- Cunningham, K.K., 2015. Third-year response of oak natural reproduction to a shelterwood harvest and midstory competition control in the Arkansas Ozarks. In *Proceedings of the 17th biennial southern silvicultural research conference. e-Gen. Tech. Rep. SRS-203. Asheville, NC: US Department of Agriculture, Forest Service, Southern Research Station.* 8 p. (Vol. 2015, pp. 21-28).
- Cunningham, K.K., 2014. Linking photosynthesis physiology of upland hardwood reproduction to ecology and silviculture in the Arkansas Ozarks. University of Arkansas at Little Rock.
- Cunningham, K.K., Peairs, S.E., Ezell, A.W., Belli, K.L. and Hodges, J.D., 2011. Understory light conditions associated with partial overstory removal and midstory/understory control applications in a bottomland hardwood forest. *Forests*, 2(4), pp.984-992.
- Cunningham, Kyle & Ezell, Andrew & Belli, Keith & Hodges, John & Schultz, Emily. 2011. A Decision-making Model for Managing or Regenerating Southern Upland Hardwood Forests. *Southern Journal of Applied Forestry*. 35. 184-192. 10.1093/sjaf/35.4.184.
- Cunningham, K.K., McGowan, M.S. and Stuhlinger, H.C., 2016. The influence from combinations of prescribed fire, herbicide injection, and partial overstory removal on restoration of natural oak stands in the Arkansas Ozarks. In *Proceedings of the 18th biennial southern silvicultural research conference. e-Gen. Tech. Rep. SRS-212. Asheville, NC: US Department of Agriculture, Forest Service, Southern Research Station.* 614 p (Vol. 212, pp. 170-175).
- Subedi, P.B., Zurqani, H.A., Blazier, M.A., Yáñez, M. and Cunningham, K., 2025, April. Comparison of Supervised Machine Learning Algorithms for Extracting Tree Canopy Cover using High-Resolution Imagery and Google Earth Engine. In *2025 IEEE Conference on Technologies for Sustainability (SusTech)* (pp. 1-8). IEEE.

Selected Extension Publications

- Cunningham K.K., The White Oak Resource in Arkansas and the Gulf Region, FSA5035-PD-5-2022N, UA Division of Agriculture
- Cunningham K.K., Using Natural Regeneration to Promote Oaks in Upland Hardwood Stands, FSA5010R-PD-8-21R, UA Division of Agriculture

- Cunningham, K.K., Managing Loblolly Pine Stands from A to Z, FSA5023R-PD-8-21N, UA Division of Agriculture
- Cunningham K.K., Taylor, E., Barber, B., Holley, G. and Blazier, B., 2019. Forestry Herbicide Prescriptions for the Western Gulf Region. MP553, UA Division of Agriculture

Selected Presentations

- **Society of American Foresters Annual Convention**, 2024, Loveland, CO, plenary panel host “Regional challenges and perspectives on managing our forest resources”
- **18th Biennial Southern Silvicultural Research Conference**, 2016, Knoxville, TN, “The influence from combinations of prescribed fire, herbicide injection, and partial overstory removal on restoration of natural oak stands in the Arkansas Ozarks”
- **Ecological Society of America**, 2014, Sacramento, CA, “Using chlorophyll fluorescence to evaluate light reactions of photosynthesis for hardwood advanced reproduction in varying understory sunlight environments”
- **North American Forest Ecology Workshop**, 2013, Bloomington, IN, “Using Chlorophyll Fluorescence to Evaluate Light Reactions of Photosynthesis for Hardwood Advanced Reproduction in Varying Understory Sunlight Environments”
- **Association of Natural Resources Extension Professionals**, 2010, Fairbanks, AK “Wildfire risk assessment in wildland urban interface environments”

Awards & Honors

- **Forest Policy Enhancement Award**, Ouachita Society of American Foresters – 2024
 - **Technology Transfer Award**, Ouachita Society of American Foresters – 2022
 - **Technology Transfer Award**, Ouachita Society of American Foresters - 2019
 - **Early Career Extension Excellence Award**, UA Division of Agriculture – 2007
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